

3779

Indian
medical Journal

Vol. 12

1-3

Jan 15th 1948 - March 15, 1948

12
1-3
1-3
1-3

Indian Medical Journal.

Vol. 42 no. 1-3.
1948.

158-0-1-3

129142

INDIAN
MEDICAL JOURNAL



(Journal of the All-India Medical Licentiates' Association with which the Agra Medical Club Journal is incorporated)
(WITH MEDICO-POLITICAL SUPPLEMENT)

Vol. 42, No. 1 January 15, 1948	Editorial and Publishing Office 32, Sullivans Garden St., Mylapore, Madras 4.	Annual Subscription: Members Rs. 4-0 Non-Members " 6-0 Foreign " 7-8
------------------------------------	--	---

641

Intravenous Anaesthesia

INTRAVAL SODIUM

TRADE MARK

BRAND

soluble thiopentone

It is generally accepted that the most efficient agent at present available for induction and anaesthesia by the intravenous route is the thiobarbiturate - soluble thiopentone.

INDICATED

- 1 As a general anaesthetic for operative procedures of short duration when anaesthesia from 5-20 minutes is required.
- 2 For longer operations not requiring deep muscular relaxation either alone or together with nitrous oxide and oxygen.
- 3 For the induction of anaesthesia to be followed by an inhalation, local or spinal anaesthetic agent.

Soluble Thiopentone may also be administered rectally as a basal anaesthetic.

'INTRAVAL SODIUM' is supplied in :

Ampoules of 0.50 and 1.0 gramme singly and in boxes of 6 and 25 with one 10 c.c. and 20 c.c. ampoule respectively of sterile distilled water with each ampoule of 'Intraval Sodium.'

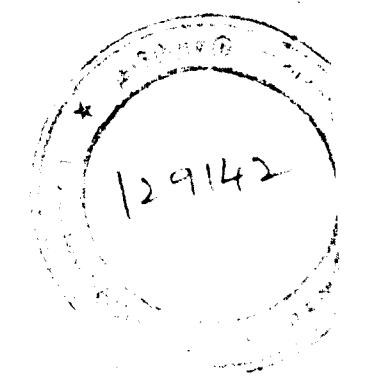


MANUFACTURED BY

MAY & BAKER LTD.

MAY & BAKER (INDIA) LTD., P.O. BOX 693, BOMBAY, INDIA

9075A



IN AMOEBIC DYSENTERY

ENTERO-VIOFORM —

Most effective amoebicide and reliable prophylactic against the common gastroenteric disturbances.

Entero-Vioform combines highest therapeutic activity with extremely low toxicity.



CIBA (INDIA) LIMITED

Pharmaceutical Department

P. O. Box No. 1123.

BOMBAY.

Announcing

Antistine

a new **ANTI-HISTAMINE** preparation

For the
treatment
of

Bronchial Asthma
Urticaria
Anaphylactic shock
Pruritus etc.



CIBA (INDIA) LIMITED

PHARMACEUTICAL DEPT.

P. O. Box No. 1123.

BOMBAY

EDITED AND PUBLISHED BY DR. A. VISWANATHAN, NO. 82, SULLIVANS GARDEN STREET, MYLAPORE, MADRAS.
ON BEHALF OF THE ALL-INDIA MEDICAL LICENTIATES' ASSOCIATION. PRINTED BY MR. M. R. THIRASURYWALA,
AT GORDON PRESS, 768-770, HIGH ROAD, TRIPLIKANE, MADRAS.

An Angel reveals a
"Medicinal plant to
the Emperor Charle-
magne."

This picture of a
Medieval Artist shows
how the people accepted
remedies as gifts from
Heaven.

Modern pharma-
ceutical research
has confirmed
and improved the medicinal qualities of ancient drugs.



T.C.F. Rubismide

A standardised preparation of
Kurchi Bismuth Iodide.

The contribution of Indian Research
to specific treatment of amoebic dysentery.
Safe and effective, considerably less toxic
than emetine.

In bottles of 25, 100, 500 and 1000 tablets.

TEDDINGTON CHEMICAL FACTORY LTD.
BOMBAY



Sole Distributors:
W.T. SURÉN & CO
P. O. BOX 229, BOMBAY 1

Branches:
Calcutta: P.O. Box 672
Madras: 12 Sunkurama Chetty St. George Town
Karachi: 54 Forbes Bldg., Bunder Road
Lahore: Nehru Park, Bearden Road

INDIAN MEDICAL COUNCIL ACT, 1933

THE SECOND SCHEDULE

Recognised medical qualifications granted by medical institutions outside British India.

COUNTRY	QUALIFICATIONS		
UNITED KINGDOM	Registrable qualifications admitting primarily to the Medical Register granted by licensing bodies in the United Kingdom, as shown in Table 'F' set out in the Medical Register printed and published from time to time under the direction of the General Council of Medical Education and Registration of the United Kingdom in pursuance of the Medical Acts, 1958 and 1886.		
OTHER COUNTRIES	REGISTRABLE QUALIFICATIONS		Abbreviations
	Title	Nature of qualifications as stated on diplomas	
AUSTRALIA—			
New South Wales— University of Sydney (d)	M.B. M.D. Ch. M., B.S.	Medicine and Surgery	U. Sydney
South Australia— University of Adelaide (a) (d)	M.B., B.S. M.D. M.S.	Do.	U. Adelaide
Victoria— University of Melbourne (b)	M.B. M.D., B.S. M.S.	Do.	U. Melbourne
BURMA— University of Rangoon	M.B., B.S.	Do.	U. Rangoon
CANADA—			
Alberta— College of Physicians and Surgeons of the Province of Alberta (b).	Member	Do.	C. P. and S. Alta
University of Alberta (b).	M.D.	Do.	U. Alberta
College of Physicians and Surgeons of the Province of Manitoba (b).	Member	Do.	C. P. and S. Man.
University of Manitoba (b).	M.D., M.D., C.M.	Do.	U. Man.
North-West Territories— College of Physicians and Surgeons of the Province of North-West Territories (b).	Member	Do.	C. P. & S.N.W. Terr.
(When held in conjunction with Licence of the College of Physicians and Surgeons of the Province of Saskatchewan or the Province of Alberta)			
Nova Scotia— Nova Scotia Provincial Medical Board (a) (b).	L.M.S.	Do.	N. Scotia P. M.Bd.
Dalhousie University (a) (a).	M.D., C.M.	Do.	Dalhousie U.
Prince Edward Island— Prince Edward Island Medical Council (b).	L.M.S.	Do.	M. Co. P.E.I.

THE SECOND SCHEDULE—continued

OTHER COUNTRIES	REGISTRABLE QUALIFICATIONS		Abbreviations
	Title	Nature of qualifications as stated on diploma.	
CEYLON—			
Ceylon Medical College (a) (d)	L.M.S.	Medicine and Surgery	Ceylon M. Coll.
HONG KONG—			
University of Hong Kong (a) (d)	M.B., B.S. M.D., M.S.	Do.	U Hong Kong
ITALY—			
All Royal Italian Universities (c) (e)	M.D.	Do.	...
JAPAN—			
All Imperial Universities (c) (f)	M.B. (Igakushi) M.D. (Igaiku Hakushi)	Do.	...
Any Government or Prefectural special colleges designated by a Minister of Education of Japan (c) (f).	M.B. (Igakushi)	Do.	...
MALTA—			
Royal University of Malta	M.D.	Do.	U. Malta
NEWFOUNDLAND—			
Newfoundland Medical Board (b)	L.M.S.	Do.	Nfld. M. Bd.
NEW ZEALAND—			
University of New Zealand	M.B., Ch. B. Ch. M., M.D.	Do.	U. N. Zealand
UNION OF SOUTH AFRICA—			
University of South Africa (b)	M.B., Ch. B.	Do.	U. S. Africa
University of Cape Town (a) (d)	M.B., Ch. B. M.D., Ch. M.	Do.	U. Cape Town
University of the Witwatersrand, Johannesburg (a) (d)	M.B., Ch. B. M.D., Ch. M.	Do.	U. Witwatersrand
STRAITS SETTLEMENTS AND FEDERATED MALAY STATES			
The King Edward VII College of Medicine, Singapore (a) (d)	L.M. & S.	Do.	Singapore Med.

- (a) The qualification must be included in Table (I) of the British Medical Register as published from time to time by the General Council of Medical Education and Registration of the United Kingdom.
- (b) When granted on or before the 31st. October, 1937.
- (c) The qualification must be included in Table (J) of the British Medical Register as published from time to time by the General Council of Medical Education and Registration of the United Kingdom.
- (d) When granted on or before the 31st March, 1942.
- (e) When granted on or before the 10th October, 1940.
- (f) When granted on or before the 8th December, 1941.

January, 1948]

ASSOCIATION NOTES

ASSOCIATION NOTES

Branch Report No. 42 (a)
(Karimganj Branch, Dt. Sylhet)

The annual meeting of the branch was held on 24-9-47. Nine members were present. In the election held, following were elected as office-bearers for 1947-48:

President:—Dr. P. K. Gaba.

Secretary:—Dr. S. K. Das.

Dr. S. K. Das was also elected as delegate to the annual conference to represent the branch. Provincial Standing Committee:

Dr. S. K. Dey.
Dr. B. De.

After the elections Dr. S. Barikyer read a paper on "A febrile case of Cerebro Spinal Meningitis", which evinced great interest and discussion.

Branch Report No. 42 (b)
(Dibrugarh Branch, Assam)

In the emergent meeting of the branch held on 17-8-47 the following resolutions were passed:

1. Resolved that as all the I.M.S. Civil Surgeons have been replaced by members of the Assam Medical Service (Senior) and thereby increased their promotion cent per cent, this Association demands that promotion of Assam Medical Service (Junior) be increased to 50 per cent likewise and prays to the authority for due consideration and to give immediate effect to it.

2. The members of this Association as directed by the All-India High Command, are willing to join in the proposed "Direct Action" when lodged by the authorities.

In the monthly meeting held on 30-9-47 the following two members were elected as delegates to the annual conference:

1. Dr. S. C. Barooah.
2. Dr. K. L. Ghosh.

Branch Report No. 43
(Lumding Branch, Assam)

The annual meeting was held on 6-10-47 and the following business was transacted. Dr. T. M. Dhar was in the chair:

- (1) The annual report was read and unanimously adopted.
- (2) Following office-bearers were elected for the year 1947-48:

President:—Dr. J. K. Paul,
Secretary:—Dr. R. N. Chanda,
Prov. St. Com.:—Dr. R. N. Chanda,
Dr. S. B. Sen,

M. N. Ghosal was elected as delegate for the annual

Branch Report No. 44
(Rajkot Branch)

Meeting of this branch following were elected to the five posts for the year 1947-48:

President:—Rao Sahib Dr. Lalubhai,
Secretary:—Dr. M. G. Vasavada,

and Drs. Subedar Vasavada and Badheka were elected as delegates to represent at the annual conference.

Branch Report No. 45
(Bombay Branch)

Annual Report—Period 1-10-46 to 12-10-47.
During the period under report seven general meetings and similar number of the managing committee meetings were held. The membership of the branch is 163. In the election held the following were elected as office-bearers for the year 1947-48:

President:—Dr. A. D. Mastakar,
Jt. Secretaries:—Dr. A. D. Patel,
Dr. N. P. Shah,
Prov. St. Committee:—Dr. A. D. Patel,
Dr. M. S. Sonkholkar,

Two members of the branch, Dr. Mastakar and Dr. Patel were selected to work on the co-ordination committee of the several conferences that are being to be held in Bombay.

Among other resolutions the meeting unanimously congratulated Dr. U. B. Narayanrao on his success in the Bombay Medical Council election and recorded with appreciation the services rendered by Dr. V. D. Sathaye as the General Secretary in discharging his duty in a well-organised and disciplined way and congratulated him for the same.

Branch Report No. 46
(Gujrat Branch)

Annual report of the working of the Gujrat Branch A. I. M. L. A. for the year 1946-47.

Branch puts on record the sad demise of one of its members Dr. I. C. Dalal and sends its condolence to the members of his bereaved family.

Working of the branch was greatly disturbed by the communal trouble during the first quarter of the year. Our branch sent four delegates to attend the 34th annual conference at Poona. The delegates also attended the Bombay Provincial Conference held during the same period at Poona and partook all the deliberations of both the conferences. The delegates also attended both the subjects committees and shared the discussions on various resolutions. Our delegates also put our demand for a separate provincial branch for Gujrat and Kathiawar for a better working of the Province and efficient co-ordination of work but the same was not accepted by the house on technical grounds.

Our members fully co-operated with the Ahmedabad Medical Society, a branch of the Indian Medical Association in organising the First Gujrat Kathiawar Provincial Conference of I.M.A. during the month of April 1947.

Branch also joined the celebrations of the Independence Day on the 15th August 1947 along with the other medical bodies and also attended the Flag-hoisting ceremony in the premises of the Ahmedabad Medical Society.

Branch had in all five general meetings and five managing committee meetings. No separate clinical meetings were held as all clinical meetings and demonstrations organised by the Ahmedabad Medical Society are open to all members of the medical profession.

The following office-bearers were elected for the year 1947-48.

President:—Dr. K. J. Bhatt,
Secretaries:—Dr. H. G. Jambhekar,
Dr. P. R. Trivedi.

Drs. K. J. Bhatt and H. G. Jambhekar were elected to represent the branch on the Provincial Council. The President Dr. K. J. Bhatt thanked the house and the office-bearers for their hearty co-operation and his re-election as President. With a vote of thanks to the chair the meeting terminated.

Branch Report No. 47
(Madras Provincial Branch)

The members of the Committee of Action, Drs. P. V. Venkappa, P. B. Annangarachari and R. Sankaran interviewed Col. S. L. Bhatia, I.M.S., Surgeon-General with the Government of Madras, on behalf of the Provincial Branch of the All-India Medical Licentiate's Association at 3-30 p.m. at his office on Friday the 26th September 1947 in connection with the recent G.O. published by the Government of Madras and the resolutions passed by the different branches of the Association. The Surgeon-General evinced a great interest and there was a free and frank discussion of all aspects of the G.O., and he suggested to the Committee of Action to finalise their view-points in the light of the discussion that had taken place and forward the same to him for his consideration and necessary action. The members of the Committee heartily thanked the Surgeon-General for his kindness and sympathy in helping their just cause.

A meeting of the Members of the Committee of Action was held at No. 3 Dinadayalu Street, T. Nagar, Madras, on Sunday the 28th September 1947 at 6 p.m. when the following resolutions were unanimously passed after careful consideration.

1. Whilst feeling thankful for the efforts of the Government to bring about the unification of the Civil Medical Service the Members of the Committee feel that the G.O. requires clarification and revision inasmuch as it has given rise to dissatisfaction and discontent in the profession.

2. That the classification of Assistant Surgeon, Class I and Class II is again an invidious distinction and cannot be considered as unifying the Service and hence all Medical Officers should be styled as Assistant Surgeons without any distinction.

3. That the appointment of a Civil Assistant Surgeon being a gazetted one the distinction of having Class I as gazetted and Class II as non-gazetted is keenly resented by the profession as no medical officer should be non-gazetted considering the status, the onerous responsibility involved in the discharge of his duties and keeping abreast of the times with due regard to the progress of Medicine and Public Health.

4. That inasmuch as the Licentiates in the Services have put in more than 15 years' experience and all of them should be automatically promoted to the Assistant Surgeon, Class I by virtue of their merit and experience, there is no question of a "Selection Grade" and hence this term should be deleted from the G. O.

5. That the District Board, L. F., and Municipal Sub-Assistant Surgeons who have to their credit 20 years of service and in addition, War Service should be absorbed in the Provincial Civil Medical Service as Civil Assistant Surgeons, Class I, Vide G. O. No. Ps. 2582/ P. H. (Edn. and Public Health) dated 25-7-47, amendment to Madras Medical Service (War Service Personal) Recruitment Rules, 1945 and G. O. No. Ps. 2711/ P. H., dated 4-8-47 regarding the Madras Medical Service and Medical Subordinate Medical Service—Unification of cadres of Civil Assistant Surgeons and Sub-Assistant Surgeons—Applicability—Order Relaxation requested.

6. That all the Sub-Assistant Surgeons who have put in 15 years' service should be automatically promoted to the cadre of Civil Assistant Surgeons and the service they have put in more than 15 years must be taken into consideration in fixing up their salaries in the scale of pay admissible to Civil Assistant Surgeons. Those who have been promoted to Class I after completion of 15 years' service must be paid according to the number of years completed over and above 15 years.

7. The Sub-Assistant Surgeons employed in the Police, Forest, Railway, P. W. D., Jail and Revenue departments be rendered eligible for the above concession.

Announcement

Dr. V. D. Sathaye, General Secretary, A.I.M.L.A. writes:—

1. In the annual elections of the Central Provinces Branch held recently, Dr. P. H. Sant and Dr. D. B. Bhate are elected as Provincial President and Provincial Secretary respectively.

2. In the annual elections of the Provincial Branch, Madras, held recently Dr. N. Suryanarayanan of Madras is unanimously elected as the President and Dr. D. V. Venkappa, Madras, as the Provincial Secretary for the year 1947-48.

3. In the election of the Provincial Branch, Bengal held recently Dr. A. N. Roy and Dr. J. Mojumdar, were elected as the Provincial President and Provincial Secretary respectively for the year 1947-48.

The Secretary, Gujarat Branch, A.I.M.L.A., writes:—

1. Dr. Joseph Benjamin prize of Rs. 35 for the year 1945 has been awarded to Dr. S. Sunder Rao, Head of Filariasis Research Department, School of Tropical Medicine, Calcutta, for his best article on "Filariasis".

2. Dr. Ramachandra Iyer Prize has been awarded to Dr. R. S. Agrawal, Eye-specialist, of Delhi, for his best article on "Eye Diseases" (Rs. 25) for the year 1945.

Notice

Following two subjects have been selected for the year 1946:—

1. Dr. J. Benjamin Prize Rs. 50 for best thesis on Rheumatism.

2. Dr. Ramachandra Iyer Prize Rs. 40 for the best thesis on "Infantile Diarrhoea".

The thesis should not exceed 1,000 typed lines or 30 pages of foolscap paper and must be written in clear hand or must be a typed copy and from one's own experience of the diseases. The candidate must be a member of the A.I.M.L.A. Association.

The thesis should reach the undersigned on or before 31-3-48, and must be sent by registered post.

Hony. Secretary,
Gujarat Branch A. I. M. L. A.

Dalia Bldgs.,
Ellis Bridge,
Ahmedabad.

The following resolution was passed by the Managing Committee of the Gujarat Branch of A.I.M.L.A. at its meeting held on 19-11-47.

Resolved that the members of the Managing Committee regret the sad demise of Dr. Shambhuprasad D. Mehta, and send their condolences to the members of the bereaved family.

Further resolved that the copy of the resolution be sent to Dr. Rajendra S. Mehta.

Short Account of the Career of Late Dr. Shambhuprasad D. Mehta, L.C.P.S., M.C.P.S., B.M.S. (1880-1947)

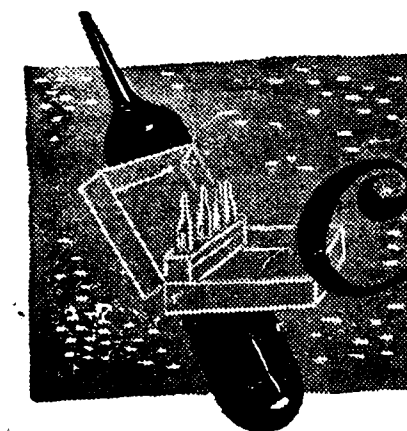
Dr. S. D. Mehta was born on 2-11-1880. Passed his H.A. Exam. in the year 1904, from the B. J. Medical School, Ahmedabad. Subsequently he passed both L.C.P.S. and M.C.P.S. Exams. in the year 1914 and 1918 and was promoted to the rank of B.M.S. in the year 1921 and appointed surgical registrar at the Civil Hospital, Hyderabad-Sind where he worked for 3 years. In 1924 he was transferred to Ahmedabad Civil Hospital and worked in the same post later appointed as Police Surgeon and lecturer in Jurisprudence at B. J. Medical School, Ahmedabad which post he held till his retirement from service.

He received Jubilee Medal in the year 1935. Through his service period he was a member of the Gujarat Branch of A.I.M.L.A. Association and took very active interest in all the activities of the Association. He contributed valuable articles to the Indian Medical Journal and also wrote Thesis on various occasions and attended many annual conferences.

He was very popular amongst his colleagues at the Civil Hospital and the B. J. Medical School, Ahmedabad, and always loved and respected by his students.

His death has deprived our branch a valuable veteran adviser and the city a popular medical man and an experienced medicologist.

He expired on 14-11-47 at the age of 67.
May his soul rest in peace.



INTRODUCING AN ADVANCE IN CALCIUM THERAPY

Calevin, prepared from chemically pure Calcium Levulinate, is manufactured by a special process developed in our laboratories.

Calcium Levulinate contains 50 per cent more calcium than Calcium Gluconate. It is less irritant than other calcium salts and much safer to administer.

Being more soluble than Calcium Gluconate, there is no necessity to adopt any special precautions to keep the salt from crystallising in ampoules as with solutions of gluconate which are always supersaturated.

Calevin is recommended in all cases in which Calcium by injection is indicated. Calevin is available to Physicians in two strengths,

1. 10 per cent solution for intravenous use &
2. 15 per cent solution for intramuscular use.

CONTRA INDICATION: Injections of 'Calevin' should not be given during the course of treatment with the digitalis group.

PACKINGS:

(For intravenous use) Boxes of 5, 25, and 100 ampoules of 5 cc. of 10% solution. Boxes of 5, 25, and 100 ampoules of 10 cc. of 10% solution. (For intramuscular use) Boxes of 5, 25, and 100 ampoules of 2cc. of 15% solution.

Detailed Literature on Request.

SARABHAI CHEMICALS

Bombay Ahmedabad.
(Pharmaceutical Division)

AC 6448

TUSSOPIL

An Efficient Remedy for Coughs

(Does NOT contain ephedrine, bromides, barbiturates and salicylates.)

Contains the essential principles of Vasaka and Tolu with remedial properties of Terpene Hydrate and Potassium Sulpho-gualacalate, in pure honey base.

RECOMMEND TUSSOPIL

for asthma, broncho-pneumonia, bronchitis, chronic or acute cough, pleurisy, influenza, whooping cough, and all affections of the respiratory organs and lungs.



Phone: 89195

Grams: "OPILWORKS"

'HANOVIA IS PRESCRIBED'



FOR THERAPEUTIC INFRA-RED TREATMENT

Injuries and infections of all types, pain and inflammation of very description, respond readily to infra-red irradiation (our free handbook "Pre-eminent in the Relief of Pain" fully describes the indications and technique). To be therapeutic irradiation however it requires ample power in the generator, thoroughly under the control of the operator. That is why Hanovia 'Sollux' Lamps have won recognition during twenty years as standard equipment for heat therapy. In this new Model VII the operator has two (inter-changeable) radiant heat and infra-ray generators, each giving a high output which can be precisely regulated in direction, and field of application. The price lower than for previous models. You will details in our folder "Therapeutic Heat Etc." just of the press. Ask your nearest agent No. 150; no obligation of course.



HANOVIA LTD.

The Specialists in Actinotherapy Equipment
SLOUGH - ENGLAND

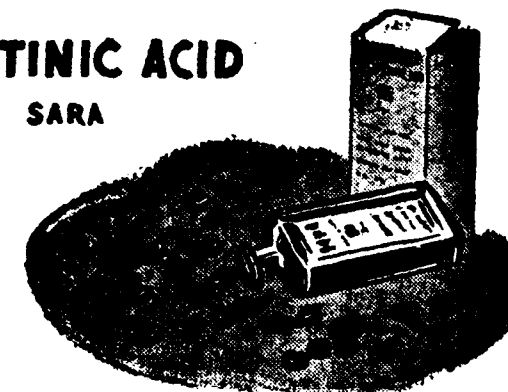
Hanovia Agents in India

MALHAM BROS.

26 Custom House Road, FORT BOMBAY
ADAIR, DUTT & CO. LTD.
5 Dalhousie Square East, CALCUTTA

M. 150.

NICOTINIC ACID SARA



Nicotinic Acid Sara is a white odourless crystalline powder, melting between 234°-237°C. It is non-hygroscopic and one gram dissolves in 60cc. of water at ordinary temperatures. It is stable in the dry state.

INDICATIONS: Nicotinic Acid is a specific in the treatment of pellagra and its administration in clinical doses produces striking results in clearing up the glossitis, stomatitis, gingivitis, pharyngitis, dermal lesions and mental stupor and depression of this deficiency disease.

Pellagra, indigestion, forgetfulness and insomnia respond to Nicotinic Acid Sara. Porphyrinuria, whether due to Pellagra or to the toxic effects of the Sulphonamide drugs is counteracted by Nicotinic Acid Sara. In association with liver extract, it gives good results in sprue and pernicious anaemia. It is also useful in the treatment of delirium tremens.

DOSAGE: Although optimal dosage varies according to the deficiency of the vitamin, oral administration of 500 mgms., in 10 doses of 50 mgms. each is safe and effective for the average patient with pellagra. Administration of 50 mgms., at one-hour intervals ten times a day is more effective than a single large dose.

In grown up children, the dosage varies from 50 to 300 mgms., and for children from 2 to 6 years, 25 mgms. are sufficient. Nicotinic Acid Sara is available as tablets containing 50 mgms., each packed in bottles of 25, 100 and 500 tablets.

REACTION: The absorption of this vitamin is followed by flushing, burning and itching. But these are harmless and disappear within a short time.

Note: This Vitamin—an important member of the Vitamin B Complex—is now prepared in India synthetically by Sarabhai Chemicals (Fine Chemicals Division).



SARABHAI CHEMICALS

(Pharmaceutical Division)

Baroda . . . Ahmedabad

SMPL

SC (Mod) 4

'P.P.'... and the wider field.

'Pelonin' Amide—the Glaxo preparation of nicotinamide—has a sphere of application far beyond its specific role as the 'Pellagra-Preventing' factor. When examination reveals gastro-intestinal, dermal, nervous or mental symptoms, adoption of nicotinamide treatment can with advantage be considered. If carbohydrate represents an

abnormally large proportion of the diet—due, for instance, to the restricted diet of convalescence—regular doses of 'Pelonin' Amide are rationally given. Administered by mouth or injection, 'Pelonin' Amide has the significant feature of being free from the flushing and distressing skin reactions which frequently attend nicotinic acid-therapy.

Tablets (50 mg.), bottles of 25 and 100
Ampoules (50 mg. in 2 cc.), boxes of 6 and 12

PELONIN AMIDE

Nicotinamide Glaxo

GLAXO LABORATORIES LTD., GREENFORD, MIDDLESEX, ENGLAND.

Representatives in India

M. J. FOSTER & CO. LTD., BOMBAY, CALCUTTA, MADRAS, LAHORE.



For ANTIMONY AT ITS BEST

R.
Stibanate

SODIUM ANTIMONY V-HEXONATE

Salient features of Stibanate are :-
(I) Intra-muscular injection (II) Practically painless (III) 20 m.gms. of Pentavalent Antimony V-Hexonate per cc. guaranteed
(IV) No Trivalent Antimony in solution
(V) Perfectly stable solution (VI) Each batch before being passed is subjected to a toxicity test on Guineapigs with at least 400 m.gms. of Antimony per kgm. of body weight
'Stibanate' offers antimony without Pain and Toxicity

Glucanate Ltd.

Your patronage to our general preparations will enable us to work for our specialists.

135, PRINSEP STREET, CALCUTTA.

IN CONGESTIVE OBSTRUCTION OF the NASAL PASSAGES

Quick Relief

Assured by

CATAZOL

Soothing Nasal Drops

Issued in two varieties

CATAZOL-C

Containing Chlorbutanol
and

CATAZOL-E

Containing Ephedrine



BENGAL CHEMICAL PRODUCT

Agents: N. Dasai Gownder & Co., 41, Bunder Street, Madras

ENTERO-QUINOL

Iodochloroxyquinoline

A specific chemotherapeutic agent

For the treatment of acute and chronic

Amoebic Dysentery and Intestinal Amoebiasis.

Prepared for the first time in India in our Research Laboratory

issued in

Tubes of 20 tablets of 0.25 gm. each

For further particulars, please write to:

EAST INDIA PHARMACEUTICAL WORKS LTD.
TOLLYGUNJE CALCUTTA



CROOKES LACTALUMINA

The logical treatment of peptic ulcer includes the control of acidity and pepsin activity throughout the twenty-four hours.

This can be achieved by giving:

- Food which buffers the acid and uses up the pepsin; and
- Lactalumina which inactivates the pepsin and neutralises the acid.

Lactalumina, 2-4 teaspoonfuls, or food, should be given every hour throughout the day with at least two tablespoonfuls of Lactalumina at bedtime, the dose to be repeated once or twice during the night.

The Crookes Laboratories Ltd

Park Royal, London, N.W. 10
Bombay Court House, Carnarvon Road,
Mumbai, India



*Behind
the Brand*

STANDS the excellence of 'Ajit's' unremitting efforts in medicinal and clinical research. 'Ajit's' variety of products are manufactured with confidence of quick relief to suffering humanity and a positive aid to physicians. Doctors' co-operation with 'Ajit' would certainly prove rapid recovery and prompt relief of pain.



Ajit

MEDICINAL PRODUCTS

**AJIT CHEMICAL & PHARMA.
WORKS LTD., SANGLI (S.M.C.)**

WORKS Ltd.

Case, BALLYGUNGE
CALCUTTA, 19

ANTISEPSIS

A durable barrier to infection⁸⁷⁷⁹

'Hitherto the antiseptic toilet of the hands barrier to infection on the skin or gloved hands. Controlled experiments have shown that 30% 'Dettol' provides such a protective covering for over two hours. Further experiments, laboratory and clinical, have demonstrated that 'Dettol' at full strength is non-toxic and non-irritant—and yet rapidly lethal to a diversity of pathogenic bacteria even in high dilution, and even in the presence of blood and other organic contaminants. Against such hazards—which have their parallel in the operating theatre—an obvious precaution, additional to the use of face masks, is to apply a *persistent* antiseptic—one that will form a durable

'has been concerned chiefly with avoiding the carriage of pathogenic organisms from one patient to another. Recently our outlook has changed somewhat. The danger of transfer from patient to patient remains, but we have also learned to recognise another and more subtle danger, namely, the transfer of streptococci from the throat or nose of the patient herself, or of someone in attendance upon her.'*

* Colebrook, L. (1933) *J. Obst. & Gynaec.*, 40, 977.

For effective, safe and *persistent* antiseptics 'Dettol' has become the preparation of choice in general and maternity hospitals throughout the Empire.



For the Treatment of Functional Nervous States

A STUDY of the manifestations of nervous disorders, such as neurasthenia, hysteria and the various types of neurosis, shows that there is frequently an associated impairment of the general nutrition of the patient. Conversely, it is found in practice that measures taken to improve the nutrition of the patient are generally followed by a definite amelioration of the nervous state.

'Ovaltine,' in addition to its well-known high nutritive value, exerts a distinct sedative effect on the nervous system, which renders its use of special benefit in the treatment of functional nervous states. Where insomnia is an additional feature, its use before retiring is conducive to restful sleep.

'Ovaltine' is a natural food tonic prepared from ripe barley malt and fresh creamy cow's milk, together with valuable natural vitamins and phosphatides. Noteworthy features are its content of calcium, phosphorus and iron.

Ovaltine

A. WANDER LTD
5 & 7, Albert Hall Mansions,
London, S.W.7.
Laboratories, Works and Farms
King's Langley, Herts, England.

Distributors:
Grahams Trading Co. (India) Ltd.
16, Bank Street, Bombay
also at Calcutta, Karachi and Madras.

TRADE MARK
'SOLUTHIAZOLE'

BRAND

neutral soluble
sulphathiazole derivative

The soluble sodium salts of the heterocyclic derivatives of sulphanilamide such as sulphapyridine, sulphathiazole and sulphadiazine are strongly alkaline in reaction and their employment both parenterally and topically is subject to limitations.

'Soluthiazole' is the sulphathiazole analogue of 'Soluseptasine' and presents sulphathiazole in the form of a soluble compound which produces approximately neutral solutions in water.

It provides a means for the parenteral administration of sulphathiazole by either the intravenous or intramuscular route, and for its topical application. The chief clinical indication of 'Soluthiazole' is to initiate therapy in patients who are acutely ill or to treat patients who are unable to take sulphathiazole by mouth. It may also be used by topical application in the treatment of infected conditions of the conjunctival sac, nasosinuses, joint cavities, ear and peritoneal sacs.

SUPPLIES :—

'Soluthiazole' is supplied as a 45 per cent. sterile neutral solution containing the equivalent of 20 per cent. (0.20 gramme per c.c.) sulphathiazole in ampoules of 5 c.c. (boxes of 6 and 25) and rubber-capped bottles of 25 c.c.



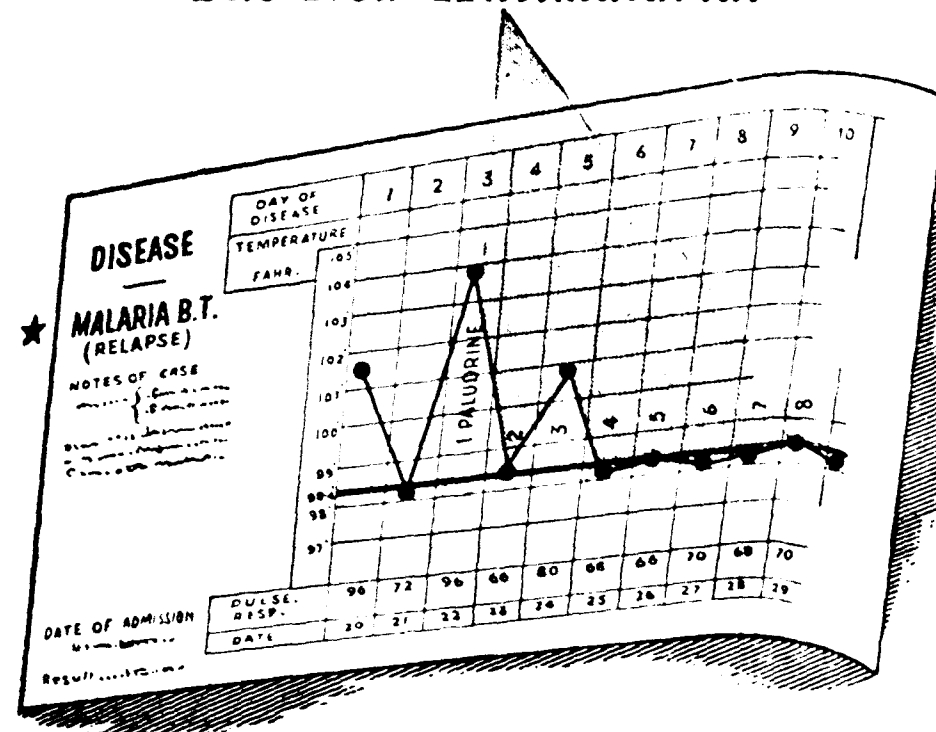
Manufactured by

MAY & BAKER LTD.

Distributed by MAY & BAKER (INDIA) LTD.

'PALUDRINE'

The New Antimalarial



★ B. T. Relapses

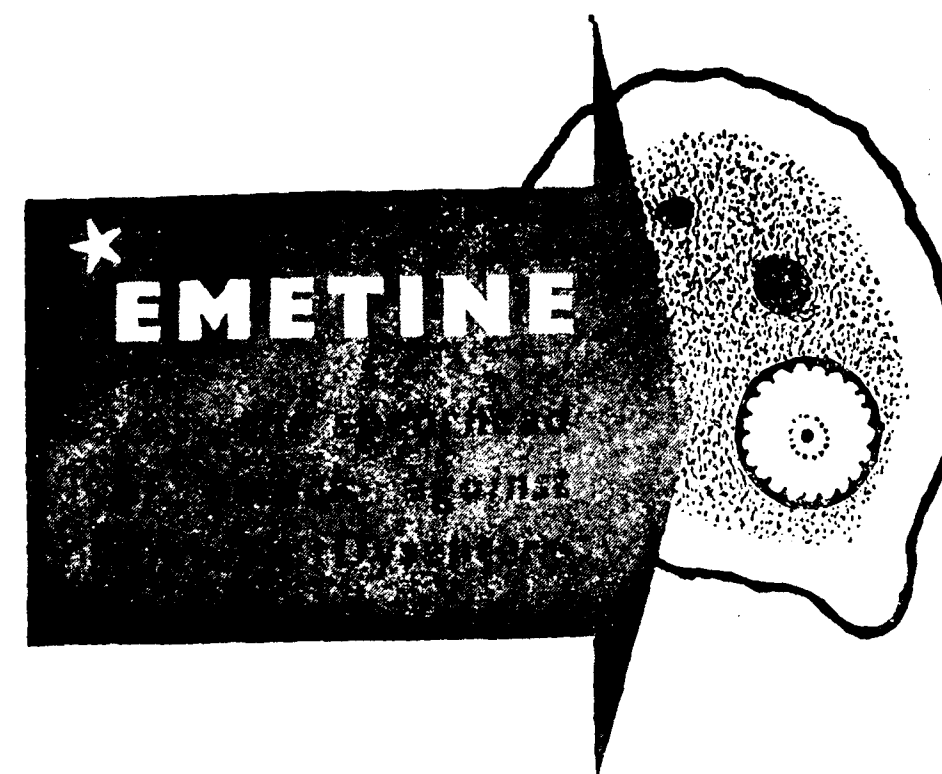
A follow-up course of 'Paludrine' provides the best means of dealing with the difficult problem of residual vivax infections. After the control of the acute attack, one tablet (0.1 Gm.) should be given twice-weekly at evenly spaced intervals for six months. This after-treatment favours the eradication of the persistent vivax forms.

IMPERIAL CHEMICAL INDUSTRIES (India) LTD.

Calcutta Bombay Madras New Delhi Karachi Cawnpore Cochin Rangoon Colombo



P.M. 4



Emetine therapy is of greatest value in the early stages of amœbic dysentery. By bringing the acute manifestations under control, it effectively prepares the way for complete elimination of the infection. Burroughs Wellcome & Co. — pioneer British manufacturers of emetine and its salts — offer a range of products which can be depended upon for purity of content and accuracy of dosage.

★ **'TABLOID'** ^{BRAND} Hypodermic Emetine Hydrochloride

★ **'TABLOID'** ^{BRAND} Emetine and Bismuth Iodide (Enteric-coated)

★ **'WELLCOME'** ^{BRAND} Injection of Emetine Hydrochloride (ampoules)

★ **'WELLCOME'** ^{BRAND} Emetine Hydrochlor., B. P., and Emetine and Bismuth Iodide, B. P.

EMETINE 'B.W. & CO.'



BURROUGHS WELLCOME & CO., LONDON
(THE WELLCOME FOUNDATION LTD., INCORPORATED IN ENGLAND)
AND COOK'S BUILDING, HORNBY ROAD, BOMBAY

Index
B



Cilag Pharmaceutical Specialities

PYRIDACIL 3-phenylazo-2,6-diamino-
pyridine hydrochloride

Disinfectant of the uro-genital tract for peroral use.
Anti-rheumatic.

Indications: Acute and chronic cystitis, pyelitis, cysto-
pyelitis, pyelonephritis, cervical discharge.

AS AN AID in the treatment of post-gonorrheal diseases (complex infections) gonorrheal complications (prostatitis etc.), acute and chronic rheumatic disorders.

Dosage: Adults: 2 pills 3 to 4 times daily.
Children: 1 pill 3 times daily.

Packages: Glass-tubes of 20 0.1 gm. pills. Bottles of
50, 100, 250, 500 and 1000 0.1 gm. pills.

Reference: W. Haubensak (Practice No. 18, 1943).



CILAG PHARMACEUTICAL SPECIALITIES
MANUFACTURED IN SWITZERLAND.

Sole Agents for India:-
THE PLASTIC & INDUSTRIAL CORPORATION LTD.
Pharmaceutical Division
P. B. 1936 Bombay 1.

Non-specific attack AGAINST FEVER

NON-specific stimulation of the body's defence mechanism is desirable when specific treatment is impossible or has failed to control acute fever. A rational means of stimulating the reticulo-endothelial system is to inject a mixture of antigenic factors derived from micro-organisms selected for this purpose.

'Polydin' is the British product

manufactured by Glaxo Laboratories containing antigens from sarcina, B. mycoides, pneumococcus and streptococcus with bile lipoids and animal fats. Normal dosage of 'Polydin' comprises daily injections of 2 cc. by the intramuscular or subcutaneous route. 'Polydin' has no anaphylactic or cumulative effect; it may be safely given to children at half the adult dosage.



Bottles of 5 cc. — 15 cc.

POLYVALENT ANTIGEN
Glaxo

GLAXO LABORATORIES LTD., GREENFORD, MIDDLESEX, ENGLAND.

Representatives in India

H. J. POSTER & CO. LTD., BOMBAY, CALCUTTA, MADRAS, LAHORE.

OUTSTANDING Vitamin PREPARATIONS

- **AVIMIN** • **NICKETAMIN**
(Vitamin "A") (Nicotamide)
- **BVIMIN** • **VEEBIN**
(Vitamin "B") (Vitamin "B₂")
- **CVIMIN** • **VIMALT**
(Vitamin "C") (Vitamin-Minerals-Malt)
- **DVIMIN** • **VITALYN**
(Vitamin "D") (Vitamin "B" Complex Injection)
- **EVIMIN** • **VITALYN "FORTE"**
(Vitamin "E") (High concentration vitamin "B" complex)
- **IRADIN** • **VITALYN SYRUP**
(Vitamins "A" & "D" concentrate) (Vitamin-Minerals compound)
- **NICTAVIMIN**
(Nicotinic Acid)

VITALYN & VITALYN FORTE MANUFACTURED BY CONTINENTAL DRUG CO. LTD.

CONTAIN ALL THE FACTORS OF THE VITAMIN "B" COMPLEX INJECTION.

TRUSTWORTHY MEDICINE THE VITAMIN "B" COMPLEX INJECTION

Index & Price List from Continental Drug Co., Ltd., Worli, Bombay 18.

Even with Rationing**Convalescents can now obtain Essential Cereals**

Adequate cereals form an essential element in the diet of the invalid and convalescent. With all cereals strictly rationed, the provision of the cereal part of the diet has presented doctors with a grave problem. Now, with Farex in full supply, convalescents are assured of an adequate supply of cereal in its most assimilable form.

FAREX is a combination of several cereals — wheat, oats and maize — blended to give the correct balance between protein, carbohydrate and fat.

FAREX contains added vitamin A and D in stated amounts, and a sufficiency of all the important minerals, particularly calcium and iron.

FAREX is "pre-cooked" and can be used with milk or water, or any fluid, cold or warm. For infants, invalids, and growing children. In one pound tins. Full directions for use on tin.

FAREX**The pre-cooked cereal**

Representatives in India

H. J. FOSTER & CO., LTD.

BOMBAY P. O. Box 202. CALCUTTA P. O. Box 2237. MADRAS P. O. Box 108. LAHORE P. O. Box 244.

VENOM THERAPY

Bee Venom	Arthritis, Ascites, Pleurisy
Cobra "	Collapse, Coma, Dyspnoea
Viper v. B.	Rickets, Epilepsy, Climaxis
Red Ant v.	Arthritis, Polypus
Blistering Fly v.	Burns and Scalds, Uremia
Orange Spider v.	Caries, Galloping Phthisis
Cuban " v.	Chorea
Rattlesnake v.	Malignant hematic jaundice
Toad venom	Pains of cancer

*Descriptive Booklet free to the Medical Profession.***LEXIN LABORATORY****MIHJAM, E. I. R. (S.P.) INDIA.****Memorandum****Qumaresh**

The specific remedy for Infantile liver: Hepatic obstruction with dropsy: Tropical congestion of liver: Intestinal troubles during dentition: Summer diarrhoea: Post-natal anorexia with gastro-intestinal irritation and diarrhoea: Anasarca: Jaundice.

Composition:—Andrographis Paniculata (Kalmegh)
Hygrophila Spinosa (Kuliakhara)
Luffa Bindal (Ghosalata)
Ptychotis (Jowan)

and other Cholagogues and Carminatives. Retains full efficacy in both Acid and Alkaline mixtures.

THE ORIENTAL RESEARCH & CHEMICAL LABORATORY LTD.,
SALKIA (HOWRAH)

“.....very good results in cases of pyogenic infection of the skin.” M.B., B.Ch., F.R.C.P.

Sole Agents: Thos Cook & Son Ltd., Distributors, P.O. Box 291, Hornby Road, Bombay.



Because Valderma is an oil-in-water emulsion, it can penetrate, without delay, down to the germs in the infected place. This means that Valderma allows exudates to flow away freely without any "sealing" effect.

Valderma is superior by far to previously known ointments in its inhibitory powers over common bacteria (B.Coli., B.Megatherium, Strep. faecalis., Staph. Albus.)

Valderma is white and almost invisible on the skin. It stains neither linen nor bedclothes and can be used anywhere, any time.

DAE HEALTH LABORATORIES LTD., 25/27 BERNERS ST., LONDON, W.1

'OUR EXPERTS' are pioneers
in preparation of *Injectables and*
Biological products in India

★ *Unquestionably*
the most reliable

★ *Specialities in*
Chemotherapy

SERA • VACCINES & ALL
INJECTABLE PRODUCTS

PROTOQUINOL • IODOQUINOL • SULPHARSAMIN
CARBOSTIBAMIDE • CARBOSULPHAN

DOCTORS RELY MOST ON *Standard* PRODUCTS

Standard PHARMACEUTICAL WORKS LTD.
CALCUTTA



K—before confinement

● Haemorrhage of the newborn, a serious cause of neo-natal mortality, is a preventable disease. The routine administration by mouth of vitamin K as late as 2 hours before delivery, by ensuring a safe prothrombin level in the mother, raises the foetal prothrombin reserves and normally safeguards

*Brit. Med. J., (1945) June 16, 662.

the newborn infant against neo-natal haemorrhage.* Failing this, the infant may be given vitamin K by mouth soon after birth. The dosage is conveniently given by means of 'Kapilin', a vitamin K analogue:—for the mother, one tablet (10 mg.), or 1 cc. (10 mg.); for the infant 0.25 to 0.5 cc. (2.5 to 5 mg.) diluted in oil to 1 cc.

KAPILIN

VITAMIN K ANALOGUE

Tablets, 25; 100; Ampoules, 6 x 1 cc.

Liquid, 14 cc.

GLAXO LABORATORIES LTD., GREENFORD, MIDDLESEX, ENGLAND

Representatives in India

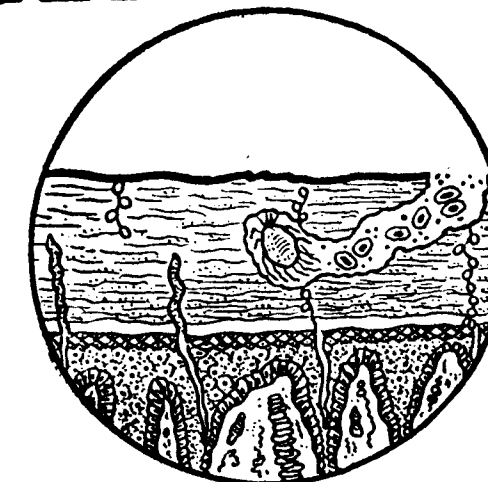
H. J. FOSTER & CO., LTD

BOMBAY P. O. Box 202. CALCUTTA P. O. Box 2137. MADRAS P. O. Box 108. LAHORE P. O. Box 204.



SCABAL

FOR
SCABIES



AN ELEGANT, QUICK AND NON-IRRITATING
PARASITICIDE

Scabal is 25% Benzyl Benzoate
emulsion, stable and homoge-
neous, for the treatment of
SCABIES & PEDICULOSIS.

ALEMBIC CHEMICAL WORKS CO., LTD.
BARODA

AVAILABLE IN
4 FL OZS. & 1 LB. BOTTLES.

AL 493

For effective treatment of acute and chronic
amoebic dysentery and intestinal Amoebiasis.

the best chemotherapeutic agent

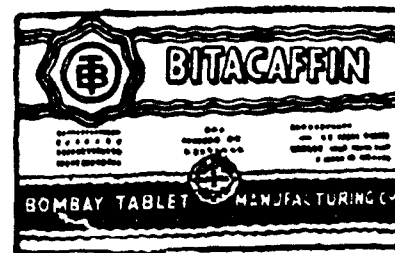
VIO-ENTEROL

tablets of Iodochlorohydroxyquinoline

Issued in tubes of 20 tablets of 0.25 gm. each

For further particulars please write to:—

ADCCO LIMITED,
CALCUTTA-27.



BITACAFFIN

(HEADACHE TABLETS)

Relieves all kinds of pains: Such as head-ache,
tooth-ache, pain in the legs and joints, insomnia, pain
during menses time etc., and cures Malaria Fever.

No harm to Heart or Stomach.

Available at all Chemists.

Per packet of 3 Tablets 1 Anna.

BITALAX

(SWEET CHOCOLATE LAXATIVE TABLETS)

Mild, pleasant and effective remedy for constipation.

Available at all Chemists.

Per packet of 2 Tablets 1 Anna.

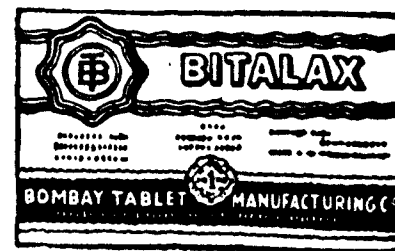
Stockists:—M/S. DADHA & CO., P.T., MADRAS.

Manufactured by:—

BOMBAY TABLET MANUFACTURING CO.,

Post Box 2092,

176, ZAVERI BAZAR, BOMBAY 2.



BELVITA BELVITA BELVITA

Leading doctors prescribe Belvita, the new
yeast extract, as a sovereign tonic for Anorexia,
Loss of Vigour, Lack of Physical and Mental
Power.

VITAMIN DEFICIENCY,

BERI BERI, ANAEMIA, POLYNEURITIS,
SCABIES, PEPTIC ULCERS, DISPEPSIA,
CONSTIPATION, Etc.,

are some of the complaints for which Belvita
may be safely prescribed. It is pure yeast in
concentrated form, containing no meat or animal
fat-Rich in Vitamins of the B complex.

Made by:

The Belsund Sugar Co., Ltd., Bihar.

Managing Agents:

James Finlay & Co., Ltd., Calcutta.

Literature will gladly be sent on request to:

Belvita, Post Box No. 209, Calcutta.

DEPENDABLE PRODUCTS.

TRACHORINE. Regd. No. 11410 } Cures tra-
& choma its
LEUCOMINE. Regd. No. 11411 } complica-
tions and sequelae. Leucomine more useful
to clear opacities.

ASTHAMORINE Regd. No. 11415. Cures as-
thma & bronchitis.

LEPROSCINE Regd. No. 11416. Cures Lep-
rosy anaesthetic or Nodular by oral use.
No injections needed.

TOOTHORINE. Regd. No. 11414. Cures pyo-
orrhoea. Ideal for daily use.

RINGORINE. Regd. No. 11412. Cures ring-
worm & allied skin diseases.

SHISHUKALYAN. (Gripe mixture) Valuable
for various ailments of infancy and child-
hood.

LEUCODERMINE, Cures Leucoderma.

HEALING BALM, Cures wounds & Burns.

Free samples on request.

The Jawahir Chemical Works,
AGRA.

DALIGUNJ, LUCKNOW.

MAGTRIZ

STOMACH POWDER

“... the search for an IDEAL
ANTACID has long exercised the
minds of gastro-enterologists and I have
no hesitation in acclaiming Magtriz as
conforming to an accepted ideal.”
Writes an M.D.

- Prompt and effective relief.
- Neutralisation of gastric acids for
several hours.
- High adsorbency of intestinal
toxins and food poisons.
- Mild laxative effect.
- Adsorbent power much greater
than that of other commonly used
adsorbents.
- Safe in large doses over a
prolonged period.

MAGTRIZ is therefore indicated for
Hyperchlorhydria, Peptic Ulcer,
Intestinal Toxaemia and Minor Digestive
Disturbances.

Write for Professional Literature.
AGENTS IN INDIA
Jas Sons & Co. Waterloo P. H. Hira & Co. Bunder
Managers, Fort, BOMBAY Road, KARACHI
Oriental Mercantile P. H. Hira & Co.
Agency, 99a, Armenian S. Dharamtala Street,
Street, MADRAS CALCUTTA

MAGTRIZ

STOMACH POWDER

ANTACID — ANTIPEPTIC — ANTITOXIC
Magnesium Trisilicate 2MgO.3SiO₂.nH₂O 91%
Magnesium Hydroxide Mg(OH)₂ 9%

FOR THE TREATMENT OF DYSPEPSIA, FLAT-
ULENCE, GASTRIC HYPERACIDITY, INTES-
TINAL TOXAEMIA and ALLIED CONDITIONS.

MAGTRIZ is a highly effective antacid. It combines
a prolonged neutralising and adsorbent action with
a rapid initial effect.

MAGTRIZ also possesses mild laxative properties
and adsorbs intestinal toxins and food poisons.

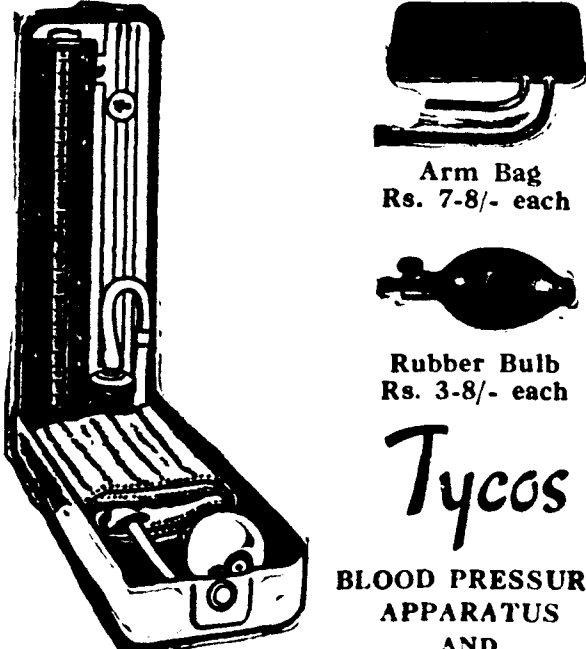
AVERAGE DOSE: One heaped teaspoonful to be
swallowed into a little water, 3 times daily between
meals and at bedtime or as directed by the Physician.

WESTMINSTER LABORATORIES LTD.
LONDON N.W.1, ENGLAND



Bilatorin

IDOMAX CHEMICALS
MIRAJ (S.M.C.)



Tycos

BLOOD PRESSURE APPARATUS AND SPARE PARTS

Rs. 100/- each

From
THE NEW SURGICAL TRADING CO
Princess Street P. O. Box 2821
BOMBAY - 2

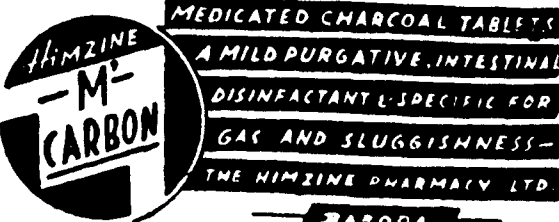
Indian Medical Journal

(Journal of the All-India Medical Licentiate's Association)

Vol. 42. Madras: January 15, 1948. No. 1

CONTENTS

	Page
OUR MONTHLY SURVEY	
1947: Our Country — Our Journal —	
1948: Our Greetings	1
ADDRESSES AND ARTICLES	
Factors influencing the Spread of Tuberculosis and Measures to be taken to combat the same	2
By Dr. K. Vasudeva Rao, M.D., M.R.C.P. (Edin.), T.D.D. (Wales).	
Infantile Cirrhosis	4
By Dr. K. Narayana Murthi, M.D.	
Sex Education—(2) Anatomy of Male Urogenital Organs	5
By Dr. Raja Ram Nayar, M.B.C.S. (Eng.), L.R.C.P. (Lond.), P.C.M.S. (Rid.).	
SELECTED ARTICLES	
Penicillin in Neurosyphilis	8
By C. Worster-Drought, M.A., M.D., F.R.C.P.	
The Modern Treatment of Neurosyphilis	15
By F. Graham Lecher, M.C.M.D., F.R.C.P.	
Assessment of a Systolic Murmur	19
By A. Karmelly	



HIMZINE - M - CARBON

MEDICATED CHARCOAL TABLETS

A MILD PURGATIVE, INTESTINAL DISINFECTANT & SPECIFIC FOR GAS AND SLUGGISHNESS

THE HIMZINE PHARMACY LTD.

Packings of 100, 500, 1000 are available.

Price list, literature, professional samples sent free on request without obligation.

ANAHÆMIN B.D.H.

The Dakin and West Erythropoietic Fraction of Liver

Anahæmin B.D.H. has become established as a standard product for the treatment of pernicious anæmia. Clinical use during more than a decade has provided abundant evidence of its erythropoietic potency, its comparative freedom from allergenic properties and its efficacy in preventing and arresting subacute combined degeneration of the cord.

Effective doses of Anahæmin B.D.H. are small in volume and, in maintenance, satisfactory doses may be given at relatively infrequent intervals.

Anahæmin B.D.H. produces an improvement in the patient's subjective condition, even before an increase in the R.B.C. can be detected. This property has been utilised in the treatment of the debility caused by severe infections and that resulting from major surgical procedures.

Details of dosage and other relevant information on request

THE BRITISH DRUG HOUSES LTD.

Post Box 1341

(Incorporated in England)

BOMBAY No. 1
Anah/In/109

MAXAMIN

VITAMINS A, B COMPLEX C, D
WITH
NATURAL MIXED TOCOPHEROLS

COMPOSITION

Vitamin A	5000 U.S.P. Units
Vitamin D, (Irrad. Ergosterol)	1000 U.S.P. Units
Thiamine HCl	3.0 mg.
Riboflavin	3.0 mg.
Pyridoxine HCl	0.25 mg.
Vitamin C (Ascorbic Acid)	75.0 mg.
Calc. Pantothenate	3.0 mg.
Niacinamide	20.0 mg.
Natural mixed Tocopherols equivalent in biological activity to Alpha Tocopherol in each capsule	8 mg.

INDICATIONS

Acute Vitamin Deficiencies giving rise to night blindness, beri beri, polyneuritis, pellagra, scurvy, glossitis, keratitis.

Minor Vitamin Deficiencies with symptoms of aching pains in the arms and legs, loss of appetite, anorexia, vague pain in the joints, swollen gums with buccal sores. Surgical and Medical Tuberculosis are benefitted by multi-vitamin treatment.

DOSE

One capsule twice or thrice daily.

PACK

Bottles of 25, 50, 250 and 1000 Capsules.

**FERROPLEX**

VITAMINS B COMPLEX C
WITH
IRON AND LIVER

COMPOSITION

Thiamine HCl	1.5 mg.
Riboflavin	2 mg.
Vitamin C (Ascorbic Acid)	30 mg.
Calcium Pantothenate	1 mg.
Niacinamide	10 mg.
Liver Fraction	25 mg.
Ferrous Sulphate dried U.S.P. in each capsule	0.774 grs.

INDICATIONS

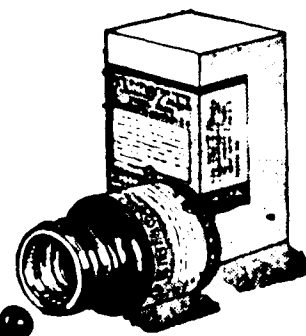
Secondary or iron deficient anaemias accompanied by actual or suspected Vitamin B Complex or C deficiencies. In convalescence following pregnancy, malaria, influenza, dysentery and enteric disorders.

DOSE

1 to 2 capsules three times a day.

PACK

Bottles of 25, 50, 250 and 1000 Capsules.



THE ANGLO-FRENCH DRUG CO. (ESTD) LTD.
CHURCHGATE STREET, BOMBAY 1

GONORRHOEA
PNEUMONIA · MENINGITIS
STAPHYLOCOCCAL INFECTIONS
BURNS · INFECTED WOUNDS
IMPETIGO and other
CUTANEOUS INFECTIONS

Competent Chemotherapy with **CIBAZOL**

Systemic Administration

Cibazol Tablets 0.5 g.
Bottles of 20, 100 and 250
Cibazol Ampoules 5 c.c.
Boxes of 5 and 20

Local Application

Cibazol Ointment 5%
Containers of 40 gm.
Cibazol Powder
Containers of 20 g., 100 g. and 500 g.



SOLE IMPORTERS

CIBA (INDIA) LIMITED.

P. O. Box No. 1123,
BOMBAY

STANDARDIZED VITAMIN B-COMPLEX

(ORAL)

"B-VITAMINS ELIXIR"

(ALBERT DAVID)

A scientifically balanced product from synthetic and rich natural sources yielding the maximum therapeutic benefit in all stages of vitamin B deficiencies.

COMPOSITION

Vitamin B ₁ (Thiamin hydrochloride)	10 mgm
Vitamin B ₂ (Riboflavin)	5 mgm
Vitamin B ₆ (Pyridoxin hydrochloride)	2 mgm
Nicotinic acid	25 mgm
Calcium pantothenate	4 mgm

in a base rich in natural Vitamin B-Complex

ALBERT DAVID LIMITED

15, CHITTARANJAN AVENUE, CALCUTTA

BOMBAY
Sind Building
Near Sassoon Docks,
Colaba, Bombay.

NAGPUR
128, Dakhinamurthy Road,
Mahal

MADRAS
227,
Broadway

Indian Medical Journal

(Journal of the All-India Medical Licentiate's Association)

Vol. 42. Madras, January 15, 1948 No. 1.

President

Dr. M. D. Pustake, Gwalior.

General Secretary

Dr. V. D. Sathaye, 502, Narayanpeth, Poona City.

Treasurer

Dr. Khan Chand Wohra, Civil Hospital, Hoshiarpur, (East Punjab.)

Finance Secretary

Dr. G. K. Kulkarni, Congress Nagar, Nagpur

Managing Editor

Dr. A. Viswanathan, Mylapore, Madras.

Subscribers and members of the Association are requested to remit their subscription or membership fees for the year 1948 to the Honorary Treasurer, Dr. Khan Chand Wohra, Civil Hospital, Hoshiarpur, East Punjab. If the remittance is not received by the end of this month, he will issue V.P.Ps., which may kindly be honoured.

Changes of Address should be communicated to the office of the Journal, Mylapore, Madras.

OUR MONTHLY SURVEY

1947: Our Country.—This was an epochal year in the history of our country. It attained its freedom from British rule on August 15th. Thanks to the present Labour Government of Great Britain, this freedom was the result of open diplomacy and negotiations between the leaders of our country and those of Great Britain. A Great Power voluntarily liquidating its vast empire, such as India was, has no parallel in the history of the world. This shows that the British people could comfortably adjust themselves to the needs of the political situation, and we, on this side, are grateful to them for the right understanding of our political aspirations and for the right decision they have taken. The Indian Constituent Assembly has not yet decided whether it chooses to be within the British Commonwealth or outside. We hope it would choose to be within the Commonwealth, and in our view, it is in no way derogatory to our independence, now or in future.

But this freedom was won at the cost of the division of the country. Our leaders accepted this division, because Mr. M. A. Jinnah would not have anything else. Although the Hindus and the Muslims have lived in perfect amity for the last 500 years, yet his propaganda that they are of two

different races and therefore constitute two different nations has been so successful that our great leaders had to accept this division, not because they believed that Mr. Jinnah was right but because they believed that re-union was yet possible when the communal bitterness cools down. For the present, however, the unexpected had happened. The hymn of hate has had its results in the communal carnage in the Punjab and the exodus of people from West Punjab of Pakistan to the East Punjab of the Indian Dominion and vice-versa. The Government of the Indian Union has faced this problem of refugees with all its energy and resource and is spending Rs. 15 lakhs a day for their immediate physical needs. We are glad to record, in this connection, the quick response of the medical profession in sending medical volunteers to work among the refugees and to do what all is necessary for the prevention of epidemics and for the maintenance of their health. We do hope that the new year will bring in peace and prosperity to our country

1947: Our Journal.—It had a fairly prosperous year, both in circulation and finance. But it suffered from other troubles. Although control of newsprint has been lifted, yet it was not freely available even to the extent of our minimum requirements. The question of using Indian Printing Paper was still more difficult, because it is both controlled and rationed and its output in the mills has materially decreased owing to frequent labour troubles. We do not know when paper would be freely available and as long as this short supply continues we cannot make any plan for the improvement of the Journal. The other trouble was with regard to contributions to the Journal. Our frequent appeals to the Branch Secretaries of our Association to secure contributions from their respective regions have not had the desired effect. So, we had to make up for this lack of sufficient number of contributions by publishing selected articles from the many reputed Journals outside India. We take this opportunity to appeal again to the members of the profession and to our Association in particular, to help us liberally with their scientific contributions and thus make the Journal worth its name.

1948: Our Greetings.—We wish a happy new year to our subscribers, advertisers and well-wishers. We have tried our best to serve them and shall continue to do so in future. We solicit their co-operation, advice and constructive criticism towards making the Journal one of the best representatives of the profession in our country and one of the best interpreters of Indian Medicine in other countries.

ADDRESSES AND ARTICLES

Factors Influencing the Spread of Tuberculosis and Measures to be Taken to Combat the Same*

BY

Dr. K. VASUDEVA RAO, M.D., M.R.C.P., (EDIN),
T. D. D., (WALES),*Suptd. Govt. Tuberculosis Hospital, Madras and
Hony. Secretary Tuberculosis Association of Madras*

Tuberculosis is rampant throughout our Presidency and Madras appears to be very badly hit. The problem that is facing us to-day is of such enormous dimensions, any attempt made to combat the disease would be touching the fringe of the problem. The position of our Presidency with regard to Tuberculosis to-day is indeed very appalling. Practically one in every seven deaths that take place in our Presidency is due to Tuberculosis. In the City of Madras alone there have been about 1,000 to 1,200 deaths from Tuberculosis every year. For every death that takes place from Tuberculosis there are at least 10 more people who are suffering from active Tuberculosis and who are infectious; thus making a total of 12,000 open cases in our City of Madras. The position of mofussil towns like Chingleput is no better. Possibly this is worse due to various causes such as dusty atmosphere, poorer standards of living and lack of sufficient knowledge and also lack of treatment. Our brethren who live in villages were better off a few years back but with the increased means of communications and closer contact between the village people, and the city people, the disease appears to have no more respect for them. The incidence among the villagers is as great as it is among the town people. This disease knows no divisions of colour or race nor of caste. It affects all human beings alike and its incidence is greater in places where standards of living are low, the economic condition of the people are poor and where there is not sufficient anti-tuberculosis propaganda made. The problem of this disease is now engaging the attention of practically the whole of India and an organised scheme is being laid down.

Unfortunately for us, the problem appears to be one which is not so easily solved, yet the organisation of a systematized anti-tuberculosis campaign will go a long way in directing our attention and encouraging any attempt that may be made to combat this disease.

I intend dealing in this article a few facts which are responsible for the spread of this disease and a plan for prevention.

The first and foremost cause for the spread of this disease has been the low nutritive value of our food. The whole prevention of tuberculosis centres

* By arrangement with *Miscellany Trichy*.

in nutrition and it is expressed by certain clinicians that tuberculosis is a deficiency disease just like beri-beri or any other deficiency disease. The ordinary food that is taken by a South Indian consists of rice at both meals with a little of buttermilk and possibly a curry. The nutritive value that is contained in this ordinary diet is indeed very small. Attempts have been made at the Research Institute at Coonoor to classify the value of the different diets and it has been worked out that the diet of the South Indian is the worst as far as nutritive value is concerned. A Punjabi Diet is the best in its nutritive value and even superior to some of the diets of the western countries. Food which contains very little of nutritive element if taken, stunts the growth of the population and produces a set of unhealthy people. Poor health as a result of this poor nutritive diet always exposes the South Indian to greater risks and he easily falls prey to the diseases like tuberculosis, because tuberculosis can spread in an individual whose general health is poor. The loss of general health always follows ingestion of poor nourishing diet.

In addition to the poor nourishing food of a South Indian, the economic condition also is exceedingly poor. It has been estimated that the average income of an ordinary South Indian is less than three annas a day and you can well imagine what means of comfort he can command both for himself and for his family members with three annas a day.

The third factor that influences the spread of this disease is the standard of public health. It should be remembered that tuberculosis affects individuals who are poor in their general health. Insanitary surroundings, ill-ventilated houses and dusty atmosphere have a tendency to decrease the general resistance of the individuals which in its turn paves the way to tuberculosis. Public Health has a great deal to do in preventing this disease. Occurrence of periodical epidemics of infectious diseases like Measles, Influenza and Small-pox always lead in their way to increased incidence of tuberculosis. It should be the prime object of public health authorities to improve the public health of a place if any tangible good has to be done towards the reduction of this disease.

In addition to the above general factors, there are certain other local conditions that are always conducive to the spread of this disease. The first and foremost of this local condition is one of segregation of a tuberculous patient. It is well to remember that tuberculosis is infectious, that it spreads from one tuberculous individual to another. If there are no cases of tuberculosis there can be no spread of tuberculosis at all. The sputum that is brought by a tuberculous patient is the source of further infection and if a person who is suffering from tuberculosis is not segregated he is a source of infection through his sputum. The infection is greater when the individuals that come in contact with him are younger. Within three years of life the chances of catching the infection are very great, but as age advances the natural resistance of the individual does play a part and the infection does not become so acute as in infancy, nor does it lead to such high mortality as in infants.

Certain other social factors are also conducive to the spread of this disease. The persistence of early marriages among us in spite of a certain amount of legislation is still a great factor in its spread. Early marriages often lead to early motherhood which in turn exposes the mother to further infection either due to the ill-nourished condition of the mother, or due to the chances of sepsis occurring. Purdah system still persists in certain places.

In certain communities partaking of eatables and food from the same plate is still in vogue. If any tuberculosis patient happens to be a member of that party woe unto the people who join them.

Conditions like kissing and fondling of children still continues, not knowing the dangers that they expose their children by these methods. In addition to these things, there is a colossal amount of ignorance of the elementary principles of this disease which in its turn leads to neglect to take the necessary precautions which will always lead to the spread of this disease.

There is a colossal amount of ignorance even among the educated people. It is by means of a systematized intensive and at the same time continuous propaganda that the dangers of these factors which influence the disease should be brought to the mind of the masses and masses be educated in the prevention of this disease.

To prevent this disease it is necessary that the following precautions should be taken:

The precautions can be divided into personal and public. The precautions to be taken by the public includes the aid of the State, as well. The measures to be taken in this connection are:

The economic condition of the people must be improved; the standard of living should be raised. The nourishment must be of a better standard and of a more nutritive value. Researches should be made so as to give us a cheap diet but at the same time rich, as far as nutritive value is concerned, cheap in money but rich in nourishment. We have

very many articles of diet which are richer than rice such as Raagi, Wheat etc. but unfortunately we do not use them as sufficiently as they deserve. Demands must be made by the State to impart the results of these researches to the masses so that they may understand the value of food, what food should be taken, what should be avoided etc.

The public health of the country must be improved. The sanitation must be improved. Model houses or tenements must be built for poor people to live in, with little or no rent and precautions must be taken to diminish the occurrence of epidemics as much as possible. Any condition that lowers the general condition must be got over. Legislation must be passed for sale of wholesome food and also to control the contamination that may take place in the food stuffs. Articles of food like, milk, buttermilk etc. which become easily infected should be scrupulously watched. Persons who have any infectious disease should not be allowed to handle food-stuffs. Legislation should be passed to make tuberculosis a specially notifiable disease so that

necessary precautions may be taken whenever a case occurs.

In addition to these measures, continuous propaganda must be made by means of lantern lectures, cinema demonstrations, health-week celebrations and by distribution of leaflets wherein the various aspects of Tuberculosis are clearly explained and their methods of prevention are also made known. It may be necessary and I would consider it also imperative that compulsory teaching of hygiene must be introduced in the curricula of studies in schools and colleges so that when the students come out of their schools and colleges they may have a working knowledge of the elementary principles of hygiene and public health.

The personal factors in the prevention of this disease are that every individual must realize that he owes a duty to his neighbour and to the public. Every attempt must be made by the individual to minimize the risk of further infection.

The following instructions can be followed in preventing further spread by the individual:

Segregation as soon as an individual is diagnosed to be suffering from tuberculosis. It is best in the interests of himself and in the interest of his neighbours and his relations to get himself admitted into an institution which is specially suited for its treatment. By this admission into an institution he derives two benefits:—One he gets his condition attended to and cured and secondly, he saves his friends and relations the danger of tubercular infection.

When segregation is not possible by being admitted into a hospital, the following precautions must be observed:

He should sleep alone in a separate room with all the doors and windows open. If no room is available he must choose a verandah which serves the purpose admirably well. Secondly he must take care of the sputum he brings out. He must see that there is no chance of the sputum either drying up and getting into air as small particles or flies sitting on it and carrying the infection to other members of the family by contaminating their food and drink. He should take care to see that articles and vessels which are used by him are kept separate and that they are not mixed with other articles of the family. His clothes and beds should be separate and he should not fondle children or even kiss or allowed to be kissed by others. The principles of hygiene must be observed as far as possible. Living in crowded houses should be put a stop to as far as possible. The houses chosen for living must admit large quantity of fresh air and sunlight. The floor should be free from damp. Social conditions which increase the spread of the disease must be prevented by personal influence.

Early marriages should be put a stop to.

Care must be taken of Coffee Hotels and other clubs where a large number of people meet. The authorities of these institutions must be forced to clean the vessels thoroughly by putting the vessels etc., etc., for at least three or four minutes in boiling water before they are given to others for use.

Each kidney is approximately 4½" in length, 2½" in breadth, and 1½" in thickness. The weight of each kidney, in an adult, is about 4 to 5 ounces.

The ureters:—These are two tubes conveying the urine from the kidneys to the urinary bladder. Each ureter is about 10" in length.

The urinary bladder:—The urinary bladder is a sac which acts as a reservoir for the urine. Its mean capacity, in an adult male, is about 25 ounces, varying from 15 to 30 ounces.

When the bladder is empty, it is placed entirely within the pelvis behind the pubis. As the bladder fills, it rises gradually into the abdominal cavity and when over-distended it even reaches the level of the umbilicus. When distended, it assumes an ovoid form easily made out by palpation with the hand.

The male urethra:—The urethra extends from the urinary bladder to the external urethral orifice at the end of the penis and is about 8" in length. About an inch of urethra contiguous with the bladder is embedded in the prostate gland and another half an inch in front of this portion lies free in the two layers of pelvic diaphragm and its front terminal portion is embedded in the penis on its hind surface.

The urethra is a tube through which urine is passed at the time of urination and semen at the time of coitus, masturbation, and other unnatural methods of sexual intercourse.

The Male Genital Organs.

The male genital organs include:—

1. Two testes.
2. Two epididymes.
3. Two ductus deferentes.
4. Two Vesiculæ seminales.
5. Two ejaculatory ducts.
6. One prostate gland.
7. Two bulbo-urethral glands.
8. One penis.

1. The testes & epididymes:—It is essential that the description of testes and epididymes should be given together on account of their intimate connection with each other.

The testes are the reproductive glands lying inside the scrotum along with the epididymes, and suspended therein by the spermatic cords. The average dimensions of each testis are two inches in length, one inch in breadth, and 1½ inches in antero-posterior diameter. The weight is about ½ ounce. It is oval in shape, compressed laterally and has an oblique position in the scrotum; the upper extremity is directed forward and a little outward, and the lower backward and a little inward.

The epididymes are two long, narrow, and flattened bodies attached to the outer part of the hind border of the testes.

Its upper end is called the Head or Globus Major, its central is called the Body or Corpus, and its lower end is called tail or Globus Minor.

Each epididymus is actually a tortuous tubule folded on itself and tightly packed in the form of a body.

The head (Globus Major) is intimately connected with the upper end of the testis by means of the

effluent ductules of the gland, whilst the body and the tail are merely attached by the cellular tissue.

The appendages of the testis and epididymes:—There is a small oval sessile body called "Appendix of the testis" (Hydatid of Morgagni) which is placed between the head of the epididymis and upper extremity of the testis. It is the remnant of the upper end of mullerian duct (i.e., the remnant of the sexual organs without differentiation). There is another small stalked appendage, sometimes, duplicated, which is placed on the exposed surface of the head of epididymis. It is called APPENDIX of EPIDIDYMIS and is usually considered to be derivative of the Mesonephros.

Coverings of testis:—The testis is invested by three coverings (tunics), the tunica vaginalis, tunica albuginea, and tunica vasculosa.

The tunica vaginalis is the outermost covering of the testis and forms a closed sac on the front and outer surfaces of the testis.

The TUNICA ALBUGINIA, unlike the tunica vaginalis, forms a complete fibrous covering all round the testis. It is bluish white in colour. Its outer surface is in contact with the tunica vaginalis and the inner is lined by tunica vasculosa. The tunica vaginalis projects into the anterior of the testis on its hind part forming an incomplete vertical septum called mediastinum testis or corpus highmore. Numerous septa are given off from the front and sides of the mediastinum testis which run forward and outward into the body of the testis being attached to the inner surface of the tunica albuginea thus dividing the testis into a number of cone-shaped lobules, the bases of which are towards the surface of the testis and their apices converge towards the mediastinum testis. The mediastinum supports the vessels and the ducts of the testis in their passage to and from the substance of the gland.

The tunica vasculosa, as its name indicates, is a vascular layer consisting of blood vessels held together by delicate areolar tissue. It lines the tunica albuginea and clothes all the septa of the testis and therefore forms an investment to all the lobules of the testis.

Structure of the Testis.—If the testis is cut sagittally, the glandular appearance of it will be visible. It consists of lobules which are estimated about 300 in number and even 400. Each lobule consists of one to three minute convoluted tubes. When they are unravelled by dissection under water, they are seen to commence either by free caecal ends or by anastomotic loops. They are supported by loose connective tissue which contains here and there groups of scattered cells. These cells are very important and called "INTERSTITIAL CELLS". They contain yellow pigment granules. The tubules are pale in colour in early life, but in old age they assume deep yellow colour containing much fatty matter. The tubules, when examined under microscope, are seen to consist of three irregular layers. 1. The outer layer is composed of cubical cells, with small nuclei. 2. The intermediate layer is composed of polyhedral cells with clear nuclei. 3. The inner layer is also composed of polyhedral cells.

The cells of these layers develop into spermatozoon which will be described in detail in the next article on physiology of sex organs.

Straight Seminal Tubules (tubuli seminiferi recti):—They are small channels continuous with the tortuous tubules of the lobules of the testis. They emerge out of the testis by piercing through the fibrous tissue of the mediastinum, pass upwards and backwards, forming in their ascent, a close network of anastomosing tubes which are merely channels in the fibrous stroma, lined by flattened epithelium, and having no proper walls; this network is named the RETE TESTIS. At the upper end of the mediastinum these channels terminate in from 12 to 20 ducts, termed the DUCTULI EFFERENTES TESTIS. They perforate tunica albuginea, and carry the seminal fluid from the testis to the epididymis. Their course is at first straight; then they become enlarged and exceedingly convoluted and form a conical mass, known as the LOBULES OF THE EPIDIDYMIS which together constitute the head of the epididymis.

The Ductus Deferens.—The ductus deferens (vas deferens) is the continuation of the canal of the epididymis commencing at the lower part of the tail of the epididymis, it is at first very tortuous, but gradually becoming straighter, it ascends along the posterior border of the testis and the medial side of the epididymis. From the upper pole of the testis it runs upwards in the posterior part of the spermatic cord, and traverses the inguinal to the abdominal inguinal ring. Here it separates from the other structures of the spermatic cord and ultimately runs backwards and downwards and enters the pelvic cavity where it is continued backwards between the peritoneal membrane and lateral wall of the pelvis. It then crosses in front of the ureter and reaching on its medial side, bends at an acute angle and runs forwards between the base of the bladder and upper end of the seminal vesicle. Here it lies between the base of the bladder and the rectum. Lastly it passes downwards to the base of the prostate and is joined at an acute angle by the duct of the seminal vesicle to form the ejaculatory duct, which traverses the prostate behind its middle lobe and opens into the prostatic portion of the urethra close to the orifice of the prostatic utricle. Owing to the thickness of its wall relative to the small size of its lumen, the ductus deferens feels hard and cord like when grasped by the finger and thumb.

The vesiculæ seminales.—The vesiculæ seminales are two sacculated pouches, placed between the base of the bladder and the rectum. Each vesicle is pyramidal in form, the broad end being directed upwards. It is about two inches in length.

The ejaculatory ducts.—The ejaculatory ducts are two in number, one on each side of the middle line. Each is formed by the union of the ducts of the seminal vesicles with the terminal part of the ductus deferens and is a little less than an inch in length. They commence at the base of the prostate, run forwards and downwards between the middle and lateral lobes, pass along the sides of the prostatic utricle, and end on the foliculus seminalis in the slit-like orifices on or just within the margins of the opening of the prostatic utricle. The ducts converge to towards their terminations.

The spermatic cords.—The testis, in foetal life, are placed in the posterior part of the abdominal wall and in the seventh month of foetal life descend through the abdominal wall into the scrotum, it drags its vessels and nerves and the ductus deferens with it. These structures meet at the abdominal inguinal ring and together form the spermatic cord.

The scrotum.—The scrotum is a cutaneous pouch containing the testis and lower part of spermatic cords and placed between the pubic symphysis in front of the upper part of the thighs. It is divided on its surfaces into right and a left portion by a ridge (raphe) which is continued forwards to the under surface of the penis and backwards along the middle line of the perineum to anus.

The external appearance varies under different circumstances, thus, under the influence of warmth, and in old age and debilitated persons, the scrotum is elongated and flaccid; but under the influence of cold, and in the young and the robust, it is short, corrugated, and closely applied to the testes. The skin is very thin, of a brownish colour, and generally thrown into folds (rugae). It is beset with thinly scattered hairs, the roots of which are visible through the skin, it is provided with sebaceous follicles, the secretion of which has a peculiar odour. The inner surface of the skin of the scrotum is lined by a thin layer of unstriped muscle called dartos tunic. It is under the influence of contraction and relaxation of this muscle that the scrotum assumes its various forms.

The Penis.—The penis is a pendulous organ suspended from the front and sides of the pubic arch, and containing the greater part of urethra.

In the flaccid condition, it is cylindrical in shape, but when erect it assumes the form of a triangular prism with rounded angles, one side of the prism forming the dorsum of the penis. It is composed of three cylindrical masses of cavernous tissue bound together by fibrous tissue and covered with skin. Two of the masses are placed side by side, and are known as "CORPORA CAVERNOSA PENIS"; the third, median in position and beneath the other two, is traversed by the cavernous part of the urethra, and is termed the "CORPUS CAVERNOSUM URETHRA."

The corpora cavernosa penis form the greater part of the substance of the penis. Throughout the anterior three-fourth of their extent they lie in apposition with one another, separated only by the septum of the penis; behind they diverge in the form of two tapering processes, which are known as the crura of the penis, are firmly connected to the rami of the pubic arch.

Traced from behind forwards each corpus cavernosum penis end abruptly in a round extremity a short distance from the point of penis.

The corpus cavernosum urethra (Corpus spongiosum) contains the cavernous part of urethra. Behind it is expanded to form the urethral bulb and lies in apposition with the inferior fascia of urogenital diaphragm. The urethra enters through the bulb. The position of corpus cavernosum urethra in front of the bulb lies in the groove on the under surface of the conjoined corpora cavernosa penis.

It is cylindrical in form and tapers from behind forward its anterior end suddenly expands to form an obtuse cone named glans penis.

For descriptive purposes it is convenient to divide the penis into three regions, the root, the body, and the extremity. The root of the penis is triradiate in form consisting of two diverging crura on each end, and the median urethral bulb. Each crus is covered by ischiocavernosus muscle while the bulb by the bulbocavernosus muscle.

The body of the penis extends from the root to the anterior end of the corpora cavernosa penis. In the body the corpora cavernosa penis are intimately bound together. A shallow groove which marked their junction on the upper surface, lodges the deep dorsal vein of the penis, while the deeper and wider groove on the under surface contains the corpus cavernosa urethra. The body is ensheathed by the fascia. The extremity is formed by the glans penis, the expanded anterior end of the corpus cavernosum urethra. The glans penis is somewhat conical in shape and its concave base covers, and is attached to the ends of the corpora cavernosa. The projecting margin of its base is named corona glandis, and constriction behind it is called the neck of glans. The terminal part of the urethra runs through the glans penis, and ends in a vertical slit on its apex.

The skin covering the penis is remarkably thin, dark in hue, loose in connection with the fibrous envelope of the organ and devoid of fibrous tissue. At the neck of the penis it is folded upon itself to form the prepuce or foreskin, which overlaps the glans for a variable distance. On the under surface of the penis a small median fold passes from the deeper surface of prepuce to a point on the glans immediately behind the external urethral orifice, this median fold is called frenulum of the prepuce. The prepuce is separated from the glans by a potential sac called preputial sac which presents two shallow fossae, one on each side of frenulum. On corona and neck of the glans there are numerous small preputial glands which secrete a sebaceous material named smegma preputii which is colorless and possesses a very peculiar smell.

Structure of the penis.—From the internal surface of the fibrous envelope of the corpora cavernosa penis, as well as from the sides of the septum, numerous trabeculae arise, and cross the corpora cavernosa in all directions subdividing them into a number of cavernous spaces, and giving the entire structure a spongy appearance. These trabeculae consist of white fibrous tissue, elastic fibers and plain muscular fibers, and they contain numerous arteries and nerves. The cavernous spaces are filled with blood and are lined with a layer of flattened cells similiar to the endothelial lining of veins.

The fibrous envelope of corpus urethra is thinner but more elastic. The trabeculae are more elastic and meshes between them are smaller.

Vessels and nerves.—The arteries bringing the blood to the cavernous spaces are the deep arteries of the penis. It divides into innumerable branches and ends in a capillary network.

The branches perforate the fibrous capsule and passing through the trabeculae, being supported by it, open into cavernous spaces.

The blood from the cavernous spaces is returned by a series of vessels, some of which emerge from the base of glans penis and converge on the dorsum of the penis to form the deep dorsal vein. Others from different parts of the penis also join the deep dorsal vein, but many pass out at the root of the penis and join the prostate plexus.

The nerves.—The nerves are derived from second, third, and fourth sacral nerves through the pudendal nerve and pelvic plexus. On the glans penis and urethral bulb some filaments of cutaneous nerves have Pacinian Bodies connected with them, and many of them end in peculiar end-bulbs.

The prostate gland.—The prostate is a firm, partly glandular and partly muscular body, surrounding the commencement of the urethra.

It is about the size of a chestnut, and about two drachms in weight.

It is conical in shape, the base is above and apex below. The base is directly continuous with the wall of the urinary bladder. The urethra enters its anterior part. The apex is directed downwards and is intact with the superior surface of urogenital diaphragm. Its posterior surface is in front of the rectum. Near the upper part of the posterior surface, there is a depression through which two ejaculatory ducts enter the prostate to terminate in the urethra. The portion of the prostate above the ejaculatory ducts and behind the urethra is called middle lobe of the prostate.

The bulbo-urethral glands.—The bulbo-urethral glands (Cowper's glands) are two small rounded glands, about the size of a pea and placed lateral to the membranous portion of urethra, between the two layers of fascia of the urogenital diaphragm.

The excretory duct of each gland passes forwards beneath the mucus membrane and opens by a minute orifice on the floor of the cavernous portion of the urethra about an inch in front of urogenital diaphragm.

SELECTED ARTICLES

Penicillin in Neurosyphilis*—By C. WORSTER-DROUGHT, M.A., M.D., F.R.C.P., Physician, West End Hospital for Nervous Diseases and Metropolitan Hospital. [From the British Medical Journal, October 11-1947.]

General observations

Penicillin, introduced into therapeutics in 1941, was at first restricted to the treatment of certain specified infections. This limitation was by Government direction, and was mainly due to the necessity for conserving the somewhat scanty supplies. It is only within the last year that penicillin has become available for more general use, and especially for experimental therapeutics. Nevertheless, penicillin already has an established place in the treatment of neurosyphilis. It was recognized quite early that the substance had a definite antispirechaetal action, and in 1943 Mahoney, Arnold, and Harris published the

* The opening paper read at a joint discussion between La Societe de Neurologie de Paris and the Section of Neurology, Royal Society of Medicine, on April 15, 1947.

results of treating a series of cases of early syphilis with penicillin. From these and the subsequent observations of other workers it became apparent that the immediate results of treatment with penicillin in early syphilis equalled if they did not exceed those obtained with intensive arsenical and bismuth therapy. Further, there was the added advantage that with penicillin there was little or no risk of toxic reactions. Subsequently, rapid improvement in both the clinical condition and the cerebrospinal fluid changes in various forms of late syphilis was reported.

From the follow-up of cases of early syphilis treated with penicillin alone, however, it became apparent that a moderately high rate of relapse occurred. In addition, it was noted that the percentage of cases relapsing was roughly inversely proportional to the total dosage of penicillin given; in the earlier cases treated this had no doubt been inadequate. These observations finally determined what was considered an optimal total dosage expressed in so many Oxford (now international) units. By June, 1944, penicillin was adopted as the "drug of choice" for the treatment of early syphilis in the U. S. Army in Europe, and in the autumn of 1944, in the Royal Navy, R. A. F., and the British Army. The standard course was fixed at a total dosage of 2,400,000 units given in doses of 40,000 units every three hours, day and night (60 injections), over a period of seven and a half days. Even with this dosage the average relapse rate in early syphilis appears to have been as high as 15 per cent in some series of cases (Marshall, 1946; King, 1946), while others report an 8 per cent (Marshall, 1946) and 7 per cent Moore, 1945) relapse rate.

Dosage and methods of administration

Most of the present-day experiences of penicillin in neurosyphilis are based on the results of a dosage and a frequency of administration similar to those of the standard course referred to above. From subsequent variations of dosage, however, it is clear that we still have much to learn in order to evolve the most satisfactory method of applying penicillin, especially in the treatment of neurosyphilis.

Many authorities have considered it advisable, if not essential, that the concentration of penicillin in the blood should be kept at as high a continuous level as possible throughout the period of treatment. It was found that penicillin disappeared from the blood after four hours from the time of injection. The level of penicillin in the blood therefore could be kept up either by a continuous drip technique or by an intravenous, intramuscular, or subcutaneous injection given every three hours, the average period of treatment required to reach an adequate total dosage being seven and a half to eight days.

Intravenous penicillin therapy has little to commend it. The continuous drip technique is inconvenient, troublesome, and needs special apparatus, while even with repeated single intravenous injections there is a risk of thrombophlebitis (Kolodny and Denhoff, 1946). On the other hand, three-hourly intramuscular injections of penicillin in adequate doses yield equally good if not better clinical results than those following intravenous treatment. Thus according to Mahoney and his co-workers (1944),

relapse was more frequent after penicillin treatment given by intravenous injection (including continuous intravenous drip) than by repeated intramuscular injection.

The recent tendency is towards the administration of a somewhat larger total dosage of penicillin in neurosyphilis. Several authors (e.g., Olansky and Chinn, 1946; Marshall, 1946) advocate a total dosage of 4,000,000 units given in repeated intramuscular doses of 40,000 units every three hours.

Some authors consider that it may not be necessary to keep a measurable level of penicillin in the blood constantly throughout the period of treatment, but that equally good therapeutic effects might be obtained by administering much larger doses at considerably longer intervals—for example, twenty-four hours—until an adequate total dosage is reached. Thus Lloyd-Jones and Maitland (1945) state that single doses of from 300,000 to 500,000 units given daily for eight to fourteen days yield equivalent therapeutic results to those following the usual standard course—namely, 60 injections of 40,000 units given every three hours—although no trace of penicillin can be detected in the blood twelve hours after the massive injection.

I have treated some cases of meningovascular neurosyphilis by this method, giving a daily dose of 500,000 units of penicillin intramuscularly for 14 days, and agree that the immediate clinical response is good. It is far too early, however, to judge the ultimate results; should these prove satisfactory when cases have been followed up for sufficiently long periods, the problem of treating cases of chronic neurosyphilis in out-patient departments, instead of admitting them to hospital as at present, would largely be solved. If it is eventually shown that a continuous and fairly constant level of penicillin in the blood is really necessary for full therapeutic effects, the preparations of penicillin in oil and beeswax may prove valuable—for example, injectio penicillin oleosa, B.P.

I have invariably used sodium penicillin in watery solution for injection by all routes and have no personal experience of oil-wax preparations. Harrison (1946), who has been using these preparations, states that after a deep subcutaneous injection of 300,000 units in oil-wax, penicillin can be found in the blood serum for 12 to 16 hours but not at the end of 24 hours. Similarly, Kirby, Leifer, and their co-workers (1946) found that an injection of 300,000 units of highly purified calcium penicillin (of potency 1,000 units per mg. in 1 ml. of peanut oil with 4.8 percent of beeswax) given by subcutaneous injection maintains an assayable blood level of penicillin for 20 hours. Thus patients can be treated with one injection daily of 300,000 units in oil-wax for 10 to 14 days (total dosage of 3,000,000 to 4,200,000 units). From these observations it would appear that, if the maintenance of a fairly constant concentration of penicillin in the blood throughout the period of treatment proves to be necessary, the use of oil-wax preparations is the method of choice for daily injection in out-patient cases of neurosyphilis. If such a continuous level in the blood should not be necessary, however, then watery or saline solutions of penicillin

are preferable, for I am aware that example of persistence of the oily preparation in the tissues (nonabsorption) have been reported, and occasionally a localized and tender induration appears three days after injection of the oil—wax penicillin (Pillsbury, 1945).

Penicillin combined with Arsenicals and Bismuth

In view of the percentage of relapses reported in cases even of early syphilis treated with penicillin alone, and in spite of the initial beneficial effects following penicillin treatment, I have at no time abandoned the use of arsenicals and bismuth—in conjunction with penicillin—in treating cases of neurosyphilis. It is of interest to note that many authors (e.g., Marshall, 1946; McElligott, 1946; Olansky and Chinn, 1946) advocate the combined use of penicillin arsenicals, and bismuth not only in neurosyphilis but also in early syphilis. It is even possible that a synergistic action exists between the two types of treatment as indicated by the animal experiments of Eagle and his co-workers (1946) and the observations of Levaditi and Vaisman (1946).

Using the standard course of penicillin administered parenterally, the most appropriate method of applying the combined treatment is to give three injections of arsenic and bismuth during the week of penicillin treatment in order to utilize the possible synergistic action (in doses of 0.3 g. of nearsphenamine and 0.2 g. of bismuth). The course of penicillin is then followed up by 12 injections of an arsenical—0.45 g. of nearsphenamine or 0.06 g. of "mapharsen" ("mapharside")—and bismuth 0.2 g. at weekly intervals. Some observers prefer to give the arsenical and bismuth every four days for forty days—10 injections of each substance—using 0.45 g. of nearsphenamine, 0.06 g. of mapharsen, or 0.09 g. of "neohalarsen," given intravenously, and 0.2 g. of bismuth intramuscularly (McElligott, 1946).

It will not be possible fully to assess the final results of penicillin treatment—even when combined with the older methods—for several years. A careful and prolonged follow-up of cases is imperative. We can only wait and ascertain what proportion of the thousands of cases of early syphilis treated with penicillin alone in the British and U. S. Forces will eventually relapse or develop some form of neurosyphilis. Consequently, as a result of further observations, it may be necessary to amplify, extend, or otherwise alter the schemes of treatment at present in use.

Intrathecal Administration of Penicillin

However advisable in acute meningeal infections such as streptococcal and pneumococcal meningitis, is the intrathecal injection of penicillin either indicated or advisable in neurosyphilis—or can equally good therapeutic results be obtained by parenteral injection alone?

The evidence as to whether penicillin given by parenteral injection is able to penetrate the blood-brain barrier (choroid plexus) into the subarachnoid space has been somewhat contradictory. Thus it is stated that penicillin injected parenterally in standard doses does not reach the cerebrospinal fluid in demonstrable quantities (Marshall, 1946; McDermott and Nelson (1945) found only traces of penicillin in the cerebrospinal fluid after the intramuscular injection

of a single dose of 300,000 units or over (which produced a blood concentration of penicillin of 10 units or more per ml.). On the other hand, Schwemlein and his co-workers (1946) claim that penicillin injected parenterally reaches the cerebrospinal fluid in adequate amounts. There is more recent evidence that massive single doses of penicillin—for example, 600,000 units given every hour—may penetrate the blood-brain barrier in larger quantities (Lourie *et al.*, 1945; Lloyd-Jones, Allen and Donaldson, 1946; Schwemlein *et al.*, 1946).

It is considered by some observers (e.g., Rosenberg and Sylvester, 1944; Dickson Wright, 1946) that if the choroid plexus is damaged by inflammation—for instance, in meningitis—penicillin may reach the cerebrospinal fluid in somewhat larger quantities than normally.

Is it necessary for penicillin to pass the blood-brain barrier in order to exert an adequate therapeutic effect in neurosyphilis (including parenchymatous neurosyphilis)? My answer is "No," since adequate clinical response, with rapid reduction in cell and protein content of the cerebrospinal fluid towards normal, is obtainable in most, if not all, cases of meningovascular neurosyphilis treated by parenteral injections of penicillin; and, further, in forms of parenchymatous neurosyphilis (general paresis and tabes dorsalis) considerable improvement in the pathological cell content and total protein of the cerebrospinal fluid is observed in many cases—as well as a slower decrease in the intensity of the serological reactions. Consequently, whether or not penicillin passes the blood-brain barrier in "adequate" amounts, it is certainly capable of exerting considerable effect on the meninges and central nervous system when given by parenteral injection. In view of these facts it is probable that the reaction between the infecting organism and the antibiotic takes place mainly in the leptomeninges, these membranes being well supplied with blood vessels. In my earlier cases of neurosyphilis treated with penicillin I used the intrathecal route, giving 10,000 units in 10 ml. of normal saline by lumbar puncture every day for eight to ten days, at the same time administering the usual standard penicillin treatment by intramuscular injection (40,000 units every three hours for seven and a half to eight days). I was fortunate in meeting with no excessively severe reactions—as judged by certain published reports, to which I will refer later—but there is often a brisk meningeal reaction accompanied by some pyrexia and generalized pain after the first intrathecal injection. The cerebrospinal fluid drawn off by lumbar puncture on the following day will be found to contain a larger number of cells (varying from 500 to 10,000 per c.mm. and including a high percentage of polymorphs) and an increased total protein of from 80 to 250 mg. per 100 ml. The pleocytosis persists, but with diminishing intensity, throughout the course of intrathecal penicillin. In tabes dorsalis the initial intrathecal injections may provoke a severe attack of "lightning pains."

As a result of further observation and experience with parenteral injections I have now abandoned routine intrathecal injection of penicillin in neurosyphilis, preferring intramuscular injection in

adequate dosage, except for certain cases of tabes dorsalis with severe and frequent "lightning pains."

If intrathecal injection is decided upon it is best to give 10,000 units of penicillin in 10 ml. of saline daily by lumbar puncture, more than this quantity of cerebrospinal fluid having been drawn off, and to repeat the injection for seven to ten days. (In acute streptococcal and pneumococcal meningitis intrathecal penicillin may be necessary at intervals of 12 hours for the first three or four days.) It has been shown (Cairns *et al.*, 1944) that a single intrathecal dose of 4,000 units maintains an adequate level of penicillin in the cerebrospinal fluid for 24 hours. Penicillin appears in the lumbar cerebrospinal fluid after an intraventricular injection, and administration by lumbar puncture gives rise to a substantial concentration in the cerebrospinal fluid bathing the brain and even in the ventricular fluid. Cooke and Goldring (1945), however, advance the view that the presence of large amounts of penicillin in the cerebrospinal fluid after lumbar intrathecal injection suggests stasis to be the reason for such high concentration, whereas the presence of large amounts of penicillin in the intraventricular fluid suggests that the blood stream may be the source of the penicillin, as the direction of the flow of the cerebrospinal fluid is from the ventricles to the subarachnoid space.

The introduction of penicillin by cisternal puncture in neurosyphilis seems to be not only inadvisable but hazardous according to the results of Neymann, Heilbrunn, and Youmans (1945). These authors report muscular twitchings and generalized convulsions in cases of general paresis, as well as two deaths from what they term "chronic penicillin encephalopathy" following the injection of penicillin by the cisternal route. Lesions of the cauda equina following the injection of penicillin by lumbar puncture have been described, and convulsion have resulted from intraventricular injections (Smith, Duthie and Cairns, 1946). Also, the American Year Book of Neurology and Psychiatry, 1946, refers to motor weakness, optic atrophy, bladder incontinence, neuroradiculitis, mental abnormalities, and cerebral atrophy occurring after the intrathecal and intraventricular administration of penicillin (Siedal, 1945; Walker and Johnson, 1945; Sweet, Stanley *et al.*, 1945). Some of these effects may have been due to impurities in the penicillin used, as earlier preparations of penicillin issued were considerably less pure than those now available.

Therapeutic Reactions

All observers testify to the relative harmlessness of penicillin compared with its unexampled destructive effect on many bacteria. By rapid intravenous injection the penicillin concentration of the blood can be forced up to a level 1,000 times greater than is necessary to produce therapeutic effects without untoward incident (Fleming, Young, Suchet, and Rowe, 1944). Even in early syphilis, however, some 50 per cent of cases treated with penicillin experience varying degrees of malaise and usually slight pyrexia after the initial doses (McElligott, 1946). A few individuals may be sensitive to some constituent of the penicillin. Generalized urticaria, with or without constitutional disturbance, has

occasionally been observed one week or so after the first injection, but it is not an indication for discontinuing treatment (Pillsbury, 1945). Only very few instances of more severe systemic reactions, including profound malaise, continued pyrexia, and toxicodermal reactions, have been reported (Kolodny and Denhoff, 1946). There is no recorded instance of any damaging effect on bone marrow, liver, or other organs. With the more recent, and purer, preparations of penicillin such reactions are less frequent; consequently, the earlier reactions recorded were probably due to impurities. Calcium penicillin is said to be six times more toxic than sodium penicillin, but even this is negligible, as the lethal dose in a man weighing 60 kg. would seem to be over 10,000,000 units (Welch Chandler, Davis, and Price, 1945).

Herxheimer-Jarisch reactions have been reported from time to time in cases of neurosyphilis in addition to other forms of late syphilis, as well as in early syphilis, treated by penicillin alone. Personally, I have observed no more than a pyrexial reaction following the first or second dose of penicillin (given intramuscularly), and very occasionally some discomfort in the legs with temporarily increased spasticity in cases of meningomyelitis. To judge from some of the published reports, however, it would seem that I have been fortunate, as various forms of exacerbation of symptoms, including thrombosis, have been observed, and even acute transverse myelitis (McElligott, 1946). In view of the possibility of Herxheimer-Jarisch reactions following penicillin injection, however, I now prefer to give six injections of bismuth (0.5 ml. of "bismostab") every four days in meningovascular neurosyphilis, and four injections of bismuth at the same intervals in parenchymatous neurosyphilis, before proceeding with the full course of penicillin.

Meningovascular Neurosyphilis

There is abundant evidence that penicillin—in adequate dosage and administered by whatever route—has a striking initial beneficial effect on all forms of meningovascular neurosyphilis, especially acute forms. The therapeutic effect is observed not only in the tendency to subsidence of clinical symptoms but more particularly in the rapid improvement in pathological cerebrospinal fluids. The pleocytosis and the increased protein content will often show a noteworthy decrease within a few days of starting treatment and reach a normal level within two to four weeks. The intensity of the Wassermann reaction (and other serological reactions) in the cerebrospinal fluid gradually decreases and may become negative within two to four months. These results suggest an actual selective action of penicillin on pathological cerebrospinal fluids or meninges, as there is no parallel decrease in the serological reactions of the blood. The blood Wassermann reaction may continue positive for many months, and even indefinitely, after treatment limited to penicillin.

The clinical response of syphilitic meningitis to penicillin (by parenteral injection) is usually immediate and dramatic. In acute forms of the disorder headache and neck rigidity may disappear within 48 to 56 hours, and the increased cell and total protein content of the cerebrospinal fluid rapidly reaches a normal level. The serological response, as stated

previously, is somewhat slower. Cranial nerve palsies improve gradually and usually recover. Nelson and Duncan (1944) mention five cases of syphilitic meningitis with cranial nerve palsies, all of which made a good recovery with penicillin treatment, the cranial nerve lesions disappearing completely in four cases. In the remaining case some residual weakness was still present after 98 days.

From the observations of Stokes and his co-workers (1944 to 1946) it is doubtful if any further change towards improvement occurs after four months from the termination of penicillin treatment. Consequently these authors have thought it advisable to repeat the course of penicillin after this four-month interval. At the time of reporting, however, they had noted no conspicuous benefit as a result of repeating the course. Repetition is advocated by other observers, for example, two courses of penicillin of a total dosage of 2,400,000 units at a week's interval (Marshall, 1946) and the usual course of penicillin at intervals of three weeks for two or more courses (McElligott, 1946). Further time must elapse before the value of such repeated courses can be finally assessed.

As stated previously, in most cases of neurosyphilis (especially parenchymatous forms) the serological reactions in the blood—particularly the Wassermann reaction—are little affected by penicillin treatment and will often continue to show positive results long after the cerebrospinal fluid has become normal. This observation may furnish a further argument for following up the course of penicillin with arsenical-bismuth therapy; also relapse may occur in a cerebrospinal fluid that has become normal as a result of penicillin treatment although a return to the original pre-treatment severity is unusual.

Parenchymatous Neurosyphilis

Even in parenchymatous forms of neurosyphilis, such as general paresis (G. P. I.), the initial effect of penicillin treatment—injected by whatever route—on the symptomatology (usually) and upon the cerebrospinal fluid changes is remarkably good. In cases of early general paresis treated with penicillin alone I have seen the cell and protein content of the cerebrospinal fluid become normal within four weeks, and even a strongly positive Wassermann reaction becomes negative within two months; the blood Wassermann reaction continued strongly positive. Six months later, however, the Wassermann reaction in the cerebrospinal fluid may be found weakly positive, the blood Wassermann reaction still remaining strongly positive. These later results determined me to combine penicillin treatment with the usual course of fever therapy—for example, malaria, 10-12 rigors—in all cases of general paresis; and in tabes dorsalis to follow up the penicillin treatment with full arsenical and bismuth therapy.

(a) General Paresis

Some authors claim definite clinical improvement in cases of general paresis treated by penicillin alone. As judged by the literature, however, most observers now use penicillin in combination with either the usual arsenicals, "tryparsamide," bismuth, or some form of pyrexial therapy for the treatment of this

condition. The results reported are somewhat conflicting. All observers agree, however, that even when penicillin alone is used some improvement occurs in the pathological state of the cerebrospinal fluid in fully 60 per cent of cases. This improvement is not sufficient to guarantee permanent benefit (confirmed by my own experiences); also, it has to be remembered that similar improvement in the cerebrospinal fluid in cases of general paresis may result from initial treatment with arsenical preparations, only to be followed by relapse at a later stage. So far as I am aware no case of general paresis has been reported to have become serologically negative in both cerebrospinal fluid and blood, with the maintenance of clinical improvement, on penicillin treatment alone. The best results appear to have been obtained in those cases treated with penicillin in combination with some form of pyrexial therapy (Goldman, 1945). Some clinicians have used a total dosage of 3,000,000 units of penicillin in conjunction with only "half the usual amount of fever therapy." Rose and his co-workers (1946), for instance, report 49 cases of general paresis receiving this form of treatment: 25 improved, 21 showed no change, and 3 became worse.

In cases of general paresis treated with full malarial or fever therapy, whether or not followed by courses of arsenical and bismuth injections, the positive serological reactions in blood and cerebrospinal fluid take two to four years to become negative. The addition of an initial course of penicillin to therapeutic malaria certainly appears to hasten the reversal of the positive serological reactions, especially in the cerebrospinal fluid.

From my personal experiences the scheme I would advocate for the treatment of general paresis is as follows:

After four initial injections of bismuth—for example, bismotab 0.5 ml., or metallic bismuth 0.2 g.—to obviate Herxheimer-Jarisch reactions, a full course of intramuscular penicillin is given in doses of 40,000 units every three hours (preferably), or 300,000 units every 12 hours, for a total dosage of 4,000,000 or even 5,000,000 units. This is then followed by the usual standard course of fever therapy—e.g., induced malaria to 12 rigors if possible, or at least 10. Arsenic and bismuth therapy is then given in weekly doses of neoarsphenamine (0.45 g.) or mapharsen (0.06 g.) or "acetylarsan" (diethylamine acetarsone) (3 ml.) and bismuth—e.g., 1 to 0.5 ml. of bismotab = 20 per cent suspension of precipitated metallic bismuth in isotonic glucose solution. Twelve injections of each substance constitute a course. Three such courses should be attempted during the year, the intervals between them depending upon the patient's tolerance and progress. The cerebrospinal fluid is examined every six months and treatment is continued until the serological reactions become negative. A further examination should be made six months later and then at intervals of one year for two years.

In cases of general paresis in which malarial or fever therapy is contraindicated by reason of hyperpiesis or cardiovascular disease one needs to rely on penicillin alone. So far I have had only two such cases, which I have been able to follow up for an appreciable period.

One case, that of a woman aged 47 with early general paresis showing the usual and typical cerebrospinal fluid changes (14 small lymphocytes, total protein 60 mg., Lange curve of parietic type, strongly positive Wassermann reaction, and Meinicke 4431), had aortic valvular disease with regurgitation and a blood pressure of 250/100. She was given 10,000 units of penicillin intrathecally in 10 ml. of saline daily for nine days, and at the same time the standard course of 40,000 units of penicillin every three hours for 7½ days, by parenteral injection. No noteworthy therapeutic reaction occurred, and meningeal reaction following the first intrathecal injection was comparatively slight (cerebrospinal fluid 420 cells—parietic type and 40 per cent lymphocytes 60 per cent polymorphs and 100 mg.). Two months later the cerebrospinal fluid showed only two cells, total protein 25 mg., Wassermann reaction negative, and Lange curve still parietic. The blood Wassermann reaction was still strongly positive. Six months later her clinical condition remained satisfactory and the cells and total protein of the cerebrospinal fluid were normal; the Wassermann reaction of the cerebrospinal fluid, however, was now weakly positive and that of the blood still strongly positive.

The second case was that of a man aged 45 with early general paresis, hyperpiesis—blood pressure 240/120—and enlarged left ventricle. The cerebrospinal fluid changes were typical, with strongly positive Wassermann reaction and parietic Lange curve. The usual standard course of penicillin by intramuscular injection was given. He received no intrathecal treatment. Three months after treatment the cell and total protein content in the cerebrospinal fluid were normal and the Wassermann reaction was negative; the Lange curve was still parietic and the blood Wassermann reaction positive. Six months later (nine months after penicillin treatment) his clinical condition had remained more or less stationary, but the cerebrospinal fluid Wassermann reaction was positive, as was that of the blood; the Lange curve was still parietic in type.

The persistence of the parietic Lange curve in both cases is of interest. With the tendency to serological relapse in these cases, it would seem inadvisable to rely on penicillin alone in the treatment of general paresis if malarial or fever therapy is likely to be tolerated. To detect any tendency to relapse the cerebrospinal fluid should be examined at intervals of six months until the serological reactions have been negative for two years, clinical improvement having been maintained. Taboparesis is treated in the same manner as general paresis.

(b) Tabes Dorsalis

No dramatic change is to be expected in tabes dorsalis following penicillin treatment, although in common with other forms of neurosyphilis a pathological cerebrospinal fluid usually shows definite improvement and there is an improvement in symptoms—even if temporary—in some 40 per cent of cases.

As a result of earlier experiences I have not been in favour of treating tabes dorsalis with malarial or fever therapy; this I have stated elsewhere (Worster-

Drought, 1940). After two or three years' intensive treatment with courses of arsenical and bismuth therapy most cases of tabes dorsalis (and especially early cases) can be arrested and the serological reactions rendered negative. Admittedly, a negative serology does not necessarily indicate arrest of the disease process, and some symptoms—more particularly attacks of lightning pains—are apt to persist.

I now treat cases of tabes dorsalis with an initial course of penicillin given intramuscularly. Although all the earlier cases received the usual standard course I have treated later cases with a larger total dosage (40,000 units every three hours, up to a total of 4,000,000 or 5,000,000 units); other cases have received larger doses at longer intervals (300,000 units every 12 hours or 500,000 units every 24 hours, for eight days). The course of penicillin is then followed up with arsenical (neoarsphenamine or acetylarsan) and bismuth therapy in the usual doses. I intend to continue this arsenical-bismuth treatment up to one or two years, according to the progress of the patient's symptomatology and serological reactions, which are determined from time to time at the same intervals as given for general paresis.

Attacks of so-called lightning pains often persist in tabes dorsalis even when other symptoms are absent and when the disease is apparently arrested, or at least has reached a quiescent stage, and long after the serological reactions have become negative and the cerebrospinal fluid is normal. I have now treated several cases showing negative serological reactions with courses of penicillin by intrathecal and intramuscular injection combined and by intramuscular injection alone. The results as regards the lightning pains have been variable. In a few cases treated by intramuscular injections only (the usual standard course), relief from lightning pains has occurred without relapse over periods of observation up to 12 months. In other cases a remission of several months' freedom from these pains has followed the course of treatment—that is, considerably longer intervals between the attacks of pain than before treatment—while other cases have remained unaffected.

I have also treated a few cases (tabes dorsalis with negative serology and apparent quiescence of the disease apart from the lightning pains) with penicillin given intrathecally (10,000 units in 10 ml. of saline daily for eight days and accompanied by the usual standard course of penicillin injections intramuscularly), and the results as regards subsequent freedom from lightning pains (up to six months' follow-up observation) have been rather better than in those cases treated by parenteral injection alone. The disadvantage of intrathecal treatment, apart from the usual risks, in these cases, however, is that the first intrathecal injection of penicillin is apt to provoke a very severe attack of generalized nerve-root pain accompanied by pyrexia and considerable meningeal reaction.

Some cases of gastric crises have been definitely improved by penicillin treatment, but a few have remained unaffected. I have not observed any material change in Charcot's arthropathy as a result of penicillin treatment.

(c) Primary Optic Atrophy

I have been able to convince myself that malarial therapy (preferably followed by bismuth and arsenical treatment) is capable of arresting primary optic atrophy of syphilitic origin (tabes optica) from a series of cases followed up to six years after treatment. It is known that 75 per cent of untreated cases become totally blind within three years and 100 per cent within five years (Lehrfeld and Gross, 1938). Consequently the observation of any patient treated must extend to five years or longer before success can be claimed.

The experiences of Moore, Woods, Hopkins, and Sloan in America, ranging from 1932 to 1942, also confirm the beneficial effects of malarial therapy in primary optic atrophy. Only 14.6 per cent of 16 cases of primary syphilitic optic atrophy became blind within three years of treatment, and thereafter there was no rise in the incidence of blindness.

"Excellent initial effects" following penicillin treatment are reported by some observers. Rose and his co-workers (1946) record "apparent arrest of visual loss" in five of six cases of primary optic atrophy treated with penicillin and half the usual amount of fever therapy. In view of the fact, mentioned above, that primary optic atrophy can slowly progress for five years before blindness ensues, it is clearly far too early to consider possible arrest of primary optic atrophy following penicillin treatment alone, and I doubt if complete arrest is possible as a result of penicillin treatment, however administered, without concomitant fever therapy.

I would still advocate full malarial or fever therapy in primary optic atrophy, but I now start treatment with a course of intramuscular penicillin (total dosage of 4,000,000 units) and follow this 10 to 12 malarial rigors, according to the patient's tolerance. Also, I prefer to follow the Malaria with arsenical and bismuth therapy until the serological reactions become negative.

(d) Late Asymptomatic Neurosyphilis

Asymptomatic neurosyphilis is a term applied to the condition in which pathological changes due to syphilitic infection exist in the cerebrospinal fluid but the patient neither complains of symptoms nor shows any abnormal neurological signs.

Two types of asymptomatic neurosyphilis must be distinguished: (1) That occurring in the earlier stage of syphilitic infection coincident with or shortly after the secondary stage or period of general invasion (early asymptomatic neurosyphilis). This form of the disorder is of meningeovascular type and readily amenable to treatment. (2) That detected long after primary infection as a result of an examination of the cerebrospinal fluid either because the blood has been found to yield a positive Wassermann reaction—for example, in a proposed blood donor—or during the routine investigation of a patient with a history of syphilis (late asymptomatic neurosyphilis). It is probable that this latter type is classifiable as a form of parenchymatous neurosyphilis in that the pathological changes in the cerebrospinal fluid are only slightly, if at all, influenced by intensive treatment with the ordinary antisiphilitic remedies. Observations have shown that late asymptomatic neurosy-

philis often terminates in general paresis—a fact that led Solomon to term the condition "paresis sine paresi." Even with malarial or fever therapy followed by arsenical-bismuth treatment three or four years may elapse before the serological reactions in the blood and cerebrospinal fluid are favourably influenced.

From the reports on penicillin treatment applied to asymptomatic neurosyphilis it is clear that not sufficient distinction has been drawn between the "early" and the "late" type. As a form of meningeovascular neurosyphilis early asymptomatic neurosyphilis is rapidly and favourably influenced by penicillin. Also, so far as can be judged at so early a stage, penicillin is most valuable in the treatment of late asymptomatic neurosyphilis even if regarded only as an additional measure. Reports indicate improvement in the cerebrospinal fluid of many cases treated with penicillin alone, although in some of the records it is by no means clear whether the authors are including cases of early asymptomatic neurosyphilis. Stokes and his co-workers (1946) report improvement in 60 per cent of cases of asymptomatic neurosyphilis; also Lloyd-Jones and his co-workers (1946) report that of 10 cases treated with massive daily doses of penicillin (300,000 to 500,000 units) given intramuscularly to a total dosage of 2,400,000 to 5,000,000 units, the cerebrospinal fluids of four of the 10 cases reverted to normal within six weeks (these cases may have been examples of early asymptomatic neurosyphilis). Although the cerebrospinal fluids of the remaining six cases showed improvement (as one would expect) they had not become serologically negative at the time of reporting.

Owing to the known severity of late asymptomatic neurosyphilis as regards prognosis, my view is that the condition should be treated with a full course of penicillin consisting of a total dosage of at least 4,000,000 units given by intramuscular injection in doses of 40,000 units every three hours (preferably), of 300,000 units every 12 hours, or of 500,000 units every 24 hours; with the last-mentioned method the total dosage should be 5,000,000 units. The period of penicillin therapy is then followed by full pyrexial therapy—for example, malaria, 10 to 12 rigors—and, finally, by the usual arsenical-bismuth therapy until the cerebrospinal fluid is normal and the serological reactions are negative. As with other cases of neurosyphilis, the cerebrospinal fluid should be examined at intervals of six months, and following a negative results at yearly intervals for two years.

(e) Erb's Syphilitic Spinal Paralysis

This form of parenchymatous neurosyphilis (antero-lateral spinal sclerosis of syphilitic origin) results from degeneration in the antero-lateral portions of the spinal cord, and is notoriously resistant to treatment by all previously known methods. Tucker (1946) has treated four cases with penicillin, giving a total dosage of 2,000,000 to 10,000,000 units by intramuscular injection in repeated doses of 25,000 units every three hours for 10 to 25 days. No improvement resulted. One patient died, six months after treatment, from *Clostridium welchii* infection, and the other three failed to show improvement after 121, 376, and 582 days. In the only case I have been able to treat with penicillin the result was similar.

Summary and Conclusions

Penicillin has a definite and established place in the treatment of neurosyphilis.

Most of the present-day experiences are based on the "standard" course of penicillin established in 1944 for the treatment of early syphilis in the British Services and in the U.S. Army in Europe (a total dosage of 2,400,000 international units given by parenteral injection in doses of 40,000 units every three hours, day and night, for seven and a half days).

In view of the percentage of relapses even in early syphilis it is considered doubtful if this course is sufficient for neurosyphilis. It is suggested that a total dosage of at least 3,000,000 units be given to all cases of neurosyphilis and that in parenchymatous neurosyphilis the total dosage should reach 4,000,000 to 5,000,000 units.

It may prove unnecessary to keep penicillin in the blood at as high a continuous level as possible throughout the period of treatment. If so, equally good therapeutic effects may be obtainable with larger doses of penicillin given at longer intervals (300,000 units given every 12 hours or 500,000 units every 24 hours for 8 to 15 days). Such a method would enable cases of chronic neurosyphilis to be treated as out-patients.

Intramuscular injection is the best method of administering penicillin. For reasons given, the intravenous route—either by continuous drip or by repeated single injections—has little to commend it.

There is no evidence that the intrathecal administration of penicillin is of greater therapeutic value in neurosyphilis than when the remedy is given by intramuscular injection. Because of the resulting reactions and the various additional risks intrathecal injection of penicillin is best avoided in most cases of neurosyphilis.

Owing to the risk of possible Herxheimer-Jarisch reactions following the first doses of penicillin, all cases of neurosyphilis should receive an initial series of bismuth injections before starting the full course of penicillin.

The rapid beneficial effects of penicillin on the cell and protein content of the cerebrospinal fluid suggest a special selective action on the meninges or cerebrospinal fluid.

In meningeovascular neurosyphilis the course of penicillin should be followed by full arsenical and bismuth therapy in view of the percentage of relapses, even in cases of early syphilis treated with penicillin alone.

General paresis is best treated with an initial course of penicillin of total dosage of 4,000,000 to 5,000,000 units followed by full malarial or fever therapy (10 to 12 malarial rigors). Finally, the usual courses of arsenic and bismuth are advisable until the serological reactions become negative.

In cases of general paresis (and taboparesis) in which malarial or fever therapy is contraindicated by reason of cardiovascular disease, one must rely on penicillin alone. Some improvement, but not cure, can be expected.

In tabes dorsalis no dramatic change follows penicillin treatment. Cases are best treated with an

initial course of penicillin and then with the usual courses of arsenicals and bismuth for two to four years until apparently quiescent and the serological reactions have become negative. Special symptoms such as lightning pains and gastric crises benefit from penicillin in some cases, including those in which the serological reactions are already negative.

Primary optic atrophy of syphilitic origin can be arrested in a fair proportion of cases by malarial therapy. Penicillin alone is not likely to arrest the optic atrophy, but may prove useful in hastening arrest or in bringing about arrest in an even larger proportion of cases. Treatment should consist of an initial course of penicillin of total dosage 4,000,000 to 5,000,000 units, followed by full malarial therapy (10 to 12 rigors) and afterwards arsenicals and bismuth. Observation of any patient must extend to five years or longer before success can be claimed for any form of treatment.

A distinction must be drawn between early asymptomatic neurosyphilis and late asymptomatic neurosyphilis. The latter condition, being of serious import, must be treated with penicillin and malarial or fever therapy on the same lines as general paresis.

At least five years must elapse before we can determine fully the value of penicillin in neurosyphilis.

The Modern Treatment of Neurosyphilis, BY F. GRAHAM LESCHER, M.C., M.D., F.R.C.P., Physician, Derbyshire Royal Infirmary.

AND

H. R. M. RICHARDS, M.B., B.Ch., Medical Officer in charge of Venereal Disease Clinic, Derbyshire Royal Infirmary (From the British Medical Journal, Oct. 11, 1947).

During the last eight years, over 50 patients suffering from various types of neurosyphilis, chiefly in the earlier stages, have been treated in this clinic by three different methods. Twenty-five who had not responded satisfactorily to pentavalent arsenic and bismuth were treated by infection with tertian malaria, followed by chemotherapy (Lescher and Richards, 1944). Ten more were given penicillin alone; and a further 19 were treated by malaria combined with penicillin. Forty-seven have been followed up both clinically and serologically, examinations of the spinal fluids having been made at definite intervals. It is our intention here to try to compare the results of these three different methods of treatment.

Treatment of Neurosyphilis with Malaria and Chemotherapy

Until recently it was considered that the most satisfactory method of treatment of neurosyphilis was with malaria, followed by trypanamide and bismuth. The latest review is by Nicol (1946), who treated and followed up 217 patients suffering from taboparesis or dementia paralytica. Over 50 per cent improved clinically and in 70 per cent the spinal fluids became negative. Of the 25 patients in our series who were treated by this method, 20 have been followed up for from five to eight years (Tables I and II).

TABLE I.—Clinical Results after Treatment with Malaria and Chemotherapy.

Type	No.	Much Improved	Improved	Stationary	Worse
Meningovascular	5	4	1	—	—
Tabes	10	2	4	2	2
Tabes with marked optic atrophy	4	—	—	2	2
Dementia paralytica	1	—	1	2	—
Totals	20	6	6	4	4

TABLE II.—Clinical Results after Treatment with Malaria and Chemotherapy

Type	No.	Cerebrospinal Fluid				Blood	
		Strong Pos.	Weak Pos.	In-active	Neg.	Im-proved	Pos.
Meningovascular	5	—	—	2	3	2	—
Tabes	10	1	2	1	6	2	2
Tabes with marked optic atrophy	4	—	—	3	1	1	2
Dementia paralytica	1	—	—	1	—	—	—
Totals	20	1	2	7	10	6	4

In classifying the spinal fluids in neurosyphilis Dattner's method (Dattner *et al.*, 1944) has been adopted. The various groups may, however, merge one into another.

(1) *Strongly Positive*.—Cell count and total protein increased. Paretic gold curve (first zone). Strongly positive W.R.

(2) *Weak Positive*.—Cell count normal or slightly raised; amount of protein increased. Paretic gold curve. W.R. strongly positive to positive.

(3) *Inactive Fluid*.—Cell count normal; marked reduction in the total protein. Gold curve may or may not be positive. W.R. positive.

(4) *Negative Fluid*.—Cell count normal; normal amount of protein. Normal gold curve. Negative W.R.

Each patient in the series was infected with tertian malaria, and ten bouts of fever were generally allowed. The duration of each bout averaged from eight to twelve hours, and no difficulty was experienced in stopping the infection by means of quinine. During the stage of fever the intake of fluids and the output of urine must be watched, and the urine should be tested for its salt content, as there is a danger of salt depletion. No complication occurred. Care was taken, however, not to employ malarial therapy in any patient of poor nutrition, or in those suffering from debilitating diseases or infections, especially those of the kidneys and bladder. Further malarial therapy was not given to those in whom there was evidence of damage to the cardiovascular, renal, or hepatic system.

To assess accurately the clinical results in a chronic disease so complex as neurosyphilis is far from easy, for clinical improvement depends not only on the death of the spirochaete and the subsidence of the inflammatory reaction but also on the extent of destruction of nerve tissue. It cannot be expected, then, that scarred and destroyed nervous tissue can ever be restored to normal by treatment, or that nervous wrecks can be rehabilitated. The results of treatment in the present series (Table I) conform in most respects to the results obtained by others. There is often improvement in the general health, as well as in such symptoms and signs as lightning pains, ataxia, and disorders of micturition, and in libido. In some, arrest of failing vision was noted.

However, the clinical disappointments are to some extent offset by the almost mathematical accuracy of the information on the activity of the disease and the need for further treatment gained by serial examinations of the spinal fluid. For in neurosyphilis there is a definite relationship between the pathological state of the nervous system and its reflection in the spinal fluid. Dattner *et al.* (1944) say that "for evaluating the success of treatment in neurosyphilis the spinal fluid syndrome is a far better guide than clinical symptoms." Whelan (1946), after examining a series of patients suffering from dementia paralytica and taboparesis, found that the majority of spinal fluids became inactive within six to twelve months after the termination of treatment with malaria, and, further, that there was a strong probability that the reactions would become negative in from one to three years without any further treatment. She found also that these fluids seldom reverted. Our experience, on the whole, bears out these conclusions.

Treatment of Neurosyphilis with Penicillin

Although penicillin is being used alone or combined with malaria in the treatment of neurosyphilis in many clinics in this country, few detailed accounts have as yet appeared in the medical press; a number of communications have, however, come from the United States. The earliest was from Stokes and his fellow workers (1944), but as it was a preliminary report no definite conclusion could be reached except that of encouragement. Later the same authors (Stokes *et al.*, 1946) claimed successful clinical and serological results from treatment with penicillin in 197 patients suffering from various forms of neurosyphilis. They found that the maximum improvement occurred in the first 120 days after its use, although it could continue beyond this time. Relapses were infrequent; little difference was found between high dosage (5.8 mega units) and low (1.4 mega units); no better results were obtained from a repetition of the course Gammon and his associates (1945), Nelson and Duncan (1945), Rose (1945), and Smith (1947) also reported successful results. O'Leary, Brunsting, and Ockuly (1946) and Mohr and Moore (1946) observed great serological improvement after the use of penicillin but clinically the results were not so striking. No significant advantage was found to occur with amounts greater than 5 mega units. Marshall (1946) gives two courses of penicillin, followed by chemotherapy, with clinical improvement. Callaway and his associates (1946) consider that treatment with penicillin is more effective than with malaria. On

the other hand, Rose and his colleagues (1945) concluded that there was little to choose between malarial therapy followed by trypanamide and that of penicillin alone. Bruetsch (1946) found that penicillin is not so efficacious as malaria in the treatment of syphilitic optic atrophy.

In the above reports a total of 1-10 mega units of penicillin was given in divided doses, intramuscularly every three hours. The intrathecal route has also been employed. Goldman (1945) considers that the results justify further study, but he gives no account of a follow-up. O'Leary, Brunsting, and Ockuly (1946) and Thrasher (1945) also claim more rapid serological reversals with this method. McDermott and Neson (1945), Marshall (1946), and Neymann, Heilbrunn, and Youmans (1945), however consider that this route is dangerous. But as penicillin which contains at least 90 per cent penicillin G (II) and is free from impurities has been issued for special purposes—for example, for intrathecal injection—since these reports, any irritant property that it formerly possessed should be of a lower degree.

Ten patients in our series were treated each with intramuscular injections of penicillin in oil, 125,000 units twice daily, until four mega units had been given. The course was preceded by smaller doses for the first two days to avoid the possibility of a Herxheimer reaction (Tables III and IV). They have been followed up both clinically and serologically.

TABLE III.—Clinical Results after Treatment with Penicillin

Type	No.	Much Improved	Improved	Stationary	Worse
Meningovascular	2	2	—	—	—
Tabes	6	1	2	2	1
Taboparesis	2	1	1	—	—
Totals	10	4	3	2	1

TABLE IV.—Serological Results after Treatment with Penicillin

Type	No.	Cerebrospinal Fluid				Blood	
		Strong Pos.	Weak Pos.	In-active	Neg.	Im-proved	Pos.
Meningovascular	2	—	—	2	—	1	1
Tabes	6	—	1	2	3	1	3
Taboparesis	2	—	—	2	—	1	1
Totals	10	—	1	6	3	3	5

There is a difficulty, however, in comparing the results obtained at the present time with penicillin with those obtained with the earlier preparations, for penicillin has been a changing mixture. Formerly much of it contained an appreciable amount of penicillin K, which is inefficacious against *Treponema*

pallidum, and this may have been responsible for the poorer results obtained in the treatment of syphilis. At present penicillin of a purity of 90 per cent can be produced, and it does not contain K substance in any significant amount; but to assess accurately the value of penicillin in the treatment of neurosyphilis more knowledge is required, especially as regards the dosage and the duration of treatment. Time and experience should give the answer to this problem; most investigators have certainly stressed this.

Treatment of Neurosyphilis with Malaria and Penicillin

It is now established that penicillin is a definite spirochaetocidal agent; and malaria has stood the test of time as an effective therapeutic method in the treatment of neurosyphilis, very probably by raising in some manner the immunity of the host, besides having itself a spirochaetocidal action. Eagle and Musselman (1944) have found that the rate at which spirochaetes were killed *in vitro* by penicillin increased with a rise of temperature, the optimum being 39–41°C. It seems reasonable, therefore, to expect that owing to their complementary action a combination of these two methods may be likely to enhance the beneficial effects of either.

A few papers giving preliminary results of this combined treatment have appeared in the United States. However, no reports have yet been published in Great Britain, although the method is being employed in some clinics in this country. Rose and his associates have so treated 70 patients with clinical and, to a greater extent, serological improvement. Reynolds, Mohr, and Moore (1946), and Rose and Solomon (1947) consider that this combined method is superior to that with penicillin alone; Nicol (1946), despite his success with malaria and trypanamide, advocates treatment with malaria together with penicillin. O'Leary, Brunsting, and Ockuly (1946), however, have found no appreciable difference either clinically or serologically with the combined treatment, compared with that of malaria alone, except in the asymptomatic and meningeal forms of disease.

We started in August, 1945, to use penicillin combined with malarial therapy. Nineteen patients suffering from various forms of neurosyphilis, mostly in the earlier stage, have been so treated and followed up (Tables V and VI); others are at present undergoing this method of treatment, but are not included in this review.

TABLE V.—Clinical Results after Combined Treatment with Malaria and Penicillin

Type	No.	Much Improved	Improved	Stationary	Worse
Asymptomatic	3	3	—	—	—
Meningovascular	1	1	—	—	—
Tabes	8	3	2	3	—
Dementia paralytica	7	2	3	2	—
Totals	19	9	5	5	—

TABLE VI.—Serological Results after Treatment with Malaria and Penicillin

Type	No.	Cerebrospinal Fluid				Blood			
		Strong pos.	Weak pos.	Inactive	Neg.	Neg.	Im-proved	Pos.	
Asymptomatic ...	3	—	—	1	2	1	—	2	
Meningeo-vascular ...	1	—	—	—	1	—	1	—	
Tabes ...	8	—	1	4	3	3	—	5	
Dementia paralytica	7	1	—	5	1	2	1	4	
Totals ...	19	1	1	10	7	6	2	11	

A wax-oil preparation of penicillin was given just before and during the acute stage of the malarial infection, 250,000 units being injected twice daily, to a total of 4 mega units. To avoid the possibility of a Herxheimer reaction, a smaller dose was given for the first two days. It was confirmed that penicillin had no inhibiting effect on *Plasmodium vivax*. These patients attended the follow-up department at regular intervals afterwards, and the changes in the spinal fluids were carefully watched. One problem has been practically solved. A patient will not submit willingly to periodic lumbar punctures if each is followed by a severe headache; but since we have started to use the fine Dattner needle the complaint of post-puncture headache has rarely been made. Follow-up lumbar punctures are performed in the out-patient clinic, and the patient leaves shortly afterwards.

Comparison of the Three Methods of Treatment

Two difficulties are apparent in attempting a just comparison between these three different methods of treatment. The number of patients in each series is too small to draw an absolute conclusion; and enough time has not elapsed to complete a thorough follow-up of those who have been treated with penicillin or with penicillin combined with malaria. This paper must therefore be considered rather as an interim report.

In comparing the various tables, after reducing the figures to percentages, the best clinical results are seen to have been achieved with malaria and penicillin, closely followed by those obtained with penicillin alone; the results obtained by combined treatment with malaria and chemotherapy come last.

Serologically there are several points to notice. In our series a greater number of positive spinal fluids became inactive within six months after the combined treatment with malaria and penicillin than with the two other methods. So rapidly may this change occur that some fluids have been found to become inactive directly after the termination of this form of treatment. The total number of spinal fluids that have become inactive and negative is higher in those treated with malaria and penicillin and with penicillin alone; but more fluids have become negative and remained negative after malaria and chemotherapy. It is possible, however, that it is merely a question of time, since those patients who have been treated with the latter therapy have been followed up for a longer period; and there is reason to suppose that in time more spinal fluids of these patients

treated with malaria and penicillin will eventually become negative. After treatment with malaria and chemotherapy a greater percentage of spinal fluids remain positive than with the two other methods.

It seems, therefore, that in active neurosyphilis the method of choice, at least for the present, is to treat the patient immediately with penicillin and malaria (provided there is no contraindication to the latter). If at the end of twelve months from the termination of this method of treatment the spinal fluid is still found to be positive, or if it remains inactive after two years, treatment with penicillin or with penicillin and malaria can be repeated. Even in "burnt-out" cases of neurosyphilis with subjective sensations and abjective signs, but with negative spinal fluids, clinical improvement may still occur with further treatment.

Treatment of Latent Neurosyphilis

There is enough evidence to show that *Treponema pallidum* may invade the central nervous system early in the septicaemic stage of the disease, yet the organism can remain latent for a varying period without showing clinical evidence. In asymptomatic neurosyphilis, which can easily be detected by the examination of the cerebrospinal fluid, correct therapy is of the greatest importance, for by it further progress can be prevented. Through treatment with trivalent arsenic, together with bismuth, will often at an early stage cause a positive fluid to revert permanently to normal. For in dealing with neurosyphilis it is not enough to wait for obvious clinical signs of disease, as by this time irreparable damage has been done. The spinal fluids of all patients who have received adequate treatment for early syphilis should therefore be examined at the end of the first year of treatment. A positive fluid will mean that there is a danger that the patient may at any time develop clinical neurosyphilis; with pathological changes in the brain or spinal cord. In our opinion intensive treatment, preferably with penicillin and malaria, should under these circumstances then be started.

It is also advisable to employ the latter method of treatment in those who show evidence of latent neurosyphilis of longer standing. If a positive Wassermann reaction in the blood is found in a person with no other signs of syphilis, and who has not had adequate treatment, it will often be observed that the spinal fluid is also positive. (We have seen this a number of times in prospective blood-donor volunteers on whom a blood Wassermann reaction has been performed as a routine.)

Summary

Forty-nine patients suffering from neurosyphilis in varying forms and degrees have been treated by one of the following three methods: 20 with malaria and chemotherapy, 10 with penicillin, and 19 with malaria together with penicillin.

Each patient has been followed up clinically and serologically.

An attempt has been made to compare the results of these three different methods of treatment.

Assessment of a systolic murmur*—A. KARMALLY †—(From the Indian Journal of Medical Sciences, October 1947)

Cardiac murmurs have an attraction of their own. To some they constitute heart disease. I well remember having heard from a colleague of mine some 25 years back about his father who commanded a very large practice in Northern India. To him the presence of a murmur meant heart disease and was an indication for administration of digitalis. This sort of attitude cannot be justified now.

In the 19th century the presence of a cardiac murmur was considered to be an evidence of heart disease. Many individuals were invalidated for cardiac disease on the basis of a murmur. Then followed the teaching that murmurs were best left alone and the attention was focussed on the myocardium. Both these are extreme attitudes and one has to follow the middle course. All cardiac murmurs do not connote cardiac disease. We, one and all, are agreed that murmurs in diastole do not occur in healthy individuals. They are associated with organic or structural changes in the heart. But systolic murmurs which are more common than the diastolic murmurs, have been found in healthy hearts and by themselves they do not always constitute heart disease. Individuals who have been known to have systolic murmurs have lived a normal span of life.

In the first world war many instances have occurred where individuals have been disqualified on the evidence of a systolic murmur. Many have been invalidated or disqualified for particular jobs or for life insurance on the finding of a systolic murmur. A systolic murmur presents a difficult problem and its proper assessment needs a thorough and complete investigation of the case. It is with this object in view that I have selected this subject of assessment of systolic murmur.

A few words regarding the theory of production of a murmur will not be out of place here. Normally, the flow of blood from one chamber to another through a valvular orifice with relative normal proportions occurs easily and noiselessly at a normal velocity. During this flow the first and second sounds occur being due to muscular contraction and closure and opening of the valves. Under certain circumstances the flow may become turbulent or eddying and the vibrations set up in it are conducted to the surrounding structures and so give rise to new sounds which are called murmurs or bruit. A familiar example is that of an elastic tube or channel in which liquid is flowing quickly at a uniform rate. If partially compressed or constricted mechanically it will set up vibrations in the liquid for some time. These murmurs are continuous sounds and as Levine says they have duration no matter how faint they are. They must last for an appreciable interval between the first and second sounds.

Turbulence of the blood may be produced by many conditions. It may occur when a critical velocity is exceeded as one finds in conditions like fever, anaemia, and thyrotoxicosis. Undoubtedly diminished

viscosity, as met with in anaemias, sets up more readily eddying currents. It may also be produced by changes in relation between calibres of adjoining cavities of the heart or blood vessels as the blood passes from a relatively narrow cavity to one of much greater calibre. It may be due to vibrations of a torn or everted valve cusp or of some tissue floating in the blood stream one end of which tissue is fixed to valves or to the heart or to the vessel wall. It is not well known that one of the most important modifying factors is the velocity of the blood stream. It is essential when evaluating these murmurs that it should be done when the heart rate is slow. Roughening of the surface of the wall of the heart valve or blood vessel does not produce a murmur as is supposed by many. The peripheral lagging layer of the axial stream of the blood on the contrary wets the roughened surfaces without producing a murmur.

White, Craib and Adam put forth a plea for revision of the terms "Functional" and "Organic" as applied to murmurs. The functional murmur does not signify that the murmur is benign or of serious significance. It may equally mean both. It would be better to differentiate these murmurs as of a physiological or pathological significance. Therefore, they recommend the use of physiological and pathological murmurs in place of functional and organic murmurs.

Recently Parkinson and R. Hartley have referred to the functional murmurs as incidental murmurs which also include the haemic murmur, the febrile murmur and the cardio-respiratory murmurs, to distinguish these from the murmurs due to pathological conditions of the heart.

In assessing a case presenting a systolic murmur the first thing to decide is whether the systolic murmur is the sole evidence or it is associated with any other manifestations which indicate an underlying pathological cardiac condition. It is in the first group presenting a sole systolic murmur that difficulties are encountered and in spite of an exhaustive examination one may finally be unable to interpret the findings. The second group is definite and decisive. In association with the evidence that is present the systolic murmur is of definite significance.

I shall deal with the second group first. The presence of an accompanying diastolic murmur with the systolic murmur indicates that there is an underlying pathological cardiac condition. Diastolic murmurs do not occur in healthy hearts. They are significant. Their interpretation when they are present is definite. But diastolic murmurs are often elusive and one has to be careful not to miss them. A diastolic aortic murmur is at times difficult to detect and may be most marked at the left border of the sternum rather than at the aortic area. Diastolic murmurs at the apex have at times to be brought out by making the patient lie on the left or giving the patient exercise. Its presence therefore establishes a pathological basis and one should look for it in all cases of systolic murmurs.

A systolic or a diastolic thrill is another sign that may accompany a systolic murmur. They prove that the systolic murmur is of some significance. Sometimes thrills are felt where there are no thrills.

* From the Department of Medicine, J. J. Hospital, Bombay.

† Paper read before the Staff meeting of the Grant Medical College and J. J. Group of Hospitals in July, 1947.

present. In presence of a hypertrophied heart or in association with a forcible closure of the semilunar valves of the heart one may mistake the shock for a thrill. For detecting thrills one has to feel for them correctly. While feeling for a thrill at the base of the heart it is better to make the patient sit and bend his head forward and palpate during the expiratory phase. This manoeuvre brings forth the heart nearer to the sternum. At the apex for a thrill the patient may have to lie on the left side with or without exercise. These two signs, diastolic murmur and a systolic thrill are important physical findings, and are of definite significance. Thus we have no difficulty in considering that the systolic murmur is significant.

Another important evidence that may accompany the systolic murmur is cardiac enlargement. This may or may not be associated with a diastolic murmur or a thrill. Diagnosis of cardiac enlargement must be definite and unmistakable, as judged by the markedly displaced and often having apex impulse. It may have to be confirmed by X-ray examination. A displaced apex impulse to the left may be due to a pulmonary condition or to a not uncommon condition of scoliosis which may produce a pseudo-enlargement. A radiological examination should be carried out to confirm or exclude cardiac enlargement. Thus if a systolic murmur is not associated with any of the above evidences, we are left with the systolic murmur as the sole manifestation. We now will deal with the first group of systolic murmurs only. We may be able to get a little more insight if we carefully study in detail the characters of the systolic murmur itself.

The Site of Murmur: Acquired valvular lesions involve commonly the mitral and aortic areas and by noting the places of maximum intensity in these areas the site of production of the murmur may be determined. Besides the valvular areas systolic murmur may be heard in the mid precordial region along the left sternal border from the 2nd—4th intercostal spaces. These murmurs are often missed or considered to be insignificant. Murmurs of congenital heart disease are usually found in these areas and this cause has to be considered.

The intensity of a murmur is of importance. A very loud murmur does not necessarily mean a severe degree of damage. A small septal defect may be associated with a loud murmur whilst a gross defect may not produce a murmur at all. Levine suggested a very simple and useful classification of murmurs according to their intensity. He recognises six degrees of murmurs, the first degree being the very faint murmur, and the last or the sixth degree being the very loudest murmur which can be heard with the stethoscope away from the chest wall. The other four gradations fall in between these two extremes. These may be called "very slight", "slight", "moderate", "loud", "very loud" and "loudest possible" murmur. In a survey of 1000 cases with systolic murmur Levine found in several instances in which a systolic murmur of grade III, i.e. "moderate", was heard definite evidence of organic disease of the heart, although these patients may have been admitted in the hospital primarily for some other condition. Thus murmurs from 3rd degree onwards are significant. It was the grade I and II which occurred in

non-cardiac cases and present difficulties in diagnosis. They were often missed and considered insignificant. Thus the degree of the intensity of the murmur may be helpful.

Not only intensity but duration of the murmur is of importance. The longer the murmur the more chances of it being associated with organic disease of the heart.

Path of Conductibility: Too much stress is often laid on the transmission of murmur in deciding whether there is organic disease of the heart present or not. More intense the murmur, the wider the area of transmission present. It depends upon the intensity of the murmur. The location and loudness of the murmur are of more importance than the transmission. Faint murmurs will not be conducted. Too much reliance, therefore, must not be placed on merely the transmission of the murmur. The murmur that is well conducted for about more than two inches from the site where we hear it best is of importance and may be considered suggestive of organic basis.

Effect of Posture and Breathing: The murmur due to a diseased valve or an organic condition does not change on posture. Although organic murmurs will diminish a little during inspiration when the lung covers the heart more during that stage, a marked change as disappearance on a change of posture or during the phase of respiration may make one think that the murmur is not significant.

Certain extra-cardiac factors may produce murmurs which must be excluded. The haemic murmur of anaemia is a very common condition. Cardio-respiratory murmurs are not uncommon and disappear when the patient holds his breath. In fever, associated with an increased heart rate, a systolic murmur may appear which disappears on the termination of the fever. The last factor in consideration, that I would like to stress, is the importance of eliciting a careful history of rheumatic fever especially in a young patient. A definite positive history may be helpful in keeping in mind the expected cause during the investigation of a case of systolic murmur.

Thus recapitulating, the finding of a systolic murmur should lead to a search for any evidence suggestive of pathological cardiac conditions. The diastolic murmur, thrill, an enlargement of the heart will help to decide the organic basis. In the absence of these physical signs, a careful study of the characters of the murmur with regard to its site, intensity, duration, transmission and posture and respiratory constancy may help to come to some conclusion as to the presence of a cardiac condition.

The usual cardiac diseases that one has to think of are rheumatic, syphilitic, congenital and arterio-sclerotic diseases with or without hypertension. Rheumatic, syphilitic, and arterio-sclerotic diseases are easily recognized from the history of the patient, the age of the patient, the familiar physical signs of mitral and aortic involvement and the laboratory investigations. The diagnosis of congenital heart disease is often not thought of and missed. I may here stress the importance of the diagnosis of congenital heart disease. It is not necessary for the diagnosis of congenital heart disease to have a very young patient, with clubbed fingers, polycythaemia

and cyanosis. With minor congenital defects, compatible with a normal span of life there may be no obvious signs and symptoms suggestive of a congenital heart lesion. The murmurs that do not occur in the regular valvular areas but are found in the mid-precordial region along the left border of the sternum are very often met with in congenital heart diseases. A further radiological examination and an electro-cardiogram must be carried out. In the absence of a left auricular enlargement, an enlargement of the pulmonary artery and pulmonary conus by radiological examination would point to a congenital lesion. Right axis deviation in the electro-cardiogram may further support the diagnosis.

This diagnosis of congenital heart disease was vividly brought home to me in certain cases, to few of which, I shall briefly refer.

A consultant whose electro-cardiographic apparatus was out of order referred a case to me for an electro-cardiogram with a note that a boy of about 25 was disqualified for a job because of a systolic murmur. The consultant thought that it might be possible that it was functional as it was best heard in the pulmonary area, not conducted and diminished on change of posture. On radiological examination large pulmonary conus was detected and the electro-cardiogram showed right axis deviation.

Similar to the above case, a case was examined by a doctor attached to a well-known company. He found a systolic murmur along the left border of the sternum, 3rd inter-costal space. He recommended the boy for the job stating that it was of no importance and that the boy could be taken into service. But the company refused to employ him and the patient came to see me worried with regard to the condition of the heart. The last examining doctor had assured him that there was nothing wrong with the heart and the murmur would soon disappear. The radiologist reported a hypoplastic aorta and enlarged prominent pulmonary conus.

Another case with a negative clinical and radiological examination was seen in our wards and we thought that we came across a case of physiological systolic murmur. But an electro-cardiogram showed a prolonged P-R interval of 0.22 seconds with a heart rate of 72. No history of digitalis administration was forthcoming.

Another interesting example was of a female patient who was admitted for weakness and debility. The house-physician and others found no murmur. On my rounds, I pointed out to them the presence of a systolic murmur along the left border of the sternum, in the 3rd and 4th inter-costal space and the X-ray showed enlarged pulmonary conus.

Thus in the absence of any clinical evidence, the radiological examination and electro-cardiographic examination must be done to complete a thorough cardiac examination.

With a complete negative cardiac examination, the systolic murmur may now be considered to be insignificant. At least the patient should be asked to lead a normal life without any restrictions. There is a difference of opinion whether one should inform the patient of a physiological systolic murmur.

I think he must be told but at the same time he must be assured that there is nothing to prove that he has heart disease and he need not restrict his activities. Here is a danger that he may become heart conscious and may become a cardiac neurotic but if you do not disclose the murmur he may be seen by another doctor, who may acquaint him about the systolic murmur.

Systolic murmurs have known to be present for a long time in healthy individuals. But Levine who has made a detailed study of such cases found that in some cases of systolic murmur after certain years a diastolic murmur has appeared or an attack of sub-acute endocarditis has followed. Sub-acute bacterial endocarditis does not attack a normal healthy endocardium but has a predilection for diseased structures as in rheumatic endocarditis, and also for defective structures as met with in congenital heart disease. Therefore diagnosis of congenital heart disease is of great importance so that one may take proper precautions to eradicate focal sepsis specially in teeth, sinuses and tonsils. Prophylactic treatment by sulfa drugs or penicillin may be helpful to prevent such complications in congenital heart cases during minor operative measures.

I have been endeavouring to look for cases of physiological systolic murmur. In hospital practice, in my opinion, they are rare. Those of you, who have opportunities to examine cases in school children, college students and mill workers, may have seen a good many cases of this murmur. Unless and until these cases have had a thorough cardiac examination, I am sure a large proportion of them will turn out to be minor congenital defects.

In a collection of 182 cases of mine from the Hospital and private cases there were 111 males and 71 females. The following were the age groups:—

10 to 20	...	36
21 to 30	...	50
31 to 40	...	50
41 to 50	...	26
51 and above	...	20

Of these 182 cases, 134 had only a systolic murmur whilst 48 had a systolic murmur with other physical signs. Of the 134 with the systolic murmur only 51 cases showed evidences of a cardiac lesion and were caused by the following diseases:—

21 Rheumatic	
4 Syphilitic aneurysms	
14 Congenital heart disease	
12 Arterio-sclerosis with or without hypertension.	

You will note in the above group the high incidence of congenital heart disease.

The remaining 83 cases due to extracardiac factors were accounted for as follows:—

Anaemia	...	75
Thyrotoxicosis	...	nil.
Febrile	...	5
Unaccounted for	...	3

The high incidence of anaemia cases in this group is quite striking. It can be explained by a high rate of admission of anaemia cases in our hospital.

In the other group of 48, cases of systolic murmur with other physical signs the following were the causes:—

Rheumatic	...	36
Syphilitic	...	8
Congenital	...	2
Arterio-sclerotic	...	2

Conclusions:

1. Systolic murmurs are met with more often than diastolic murmurs and sometimes present a problem of considerable difficulty.
2. In assessing a systolic murmur, cases may be divided into two groups. One group of cases where the systolic murmurs are associated with definite evidences of organic disease of the heart, viz., diastolic murmur, thrill, and cardiac enlargement. Another group where systolic murmur is the only evidence; and a detailed consideration of the characters of the murmur, viz., site of maximum intensity, duration, conduction and effect of posture and respiration, may help to decide whether the murmur is significant or not. Extra-cardiac conditions causing a systolic murmur like anaemia, thyrotoxicosis, fever, and respiration must be excluded.
3. A radiological and an electro-cardiographic examination should complete the cardiac investigation.
4. Diagnosis of congenital heart disease is very often missed and not thought of. It has a very high incidence and needs radiological and cardiographic examination.
5. Physiological systolic murmurs are not common, and every method of examination must be carried out before pronouncing the murmur as physiologic.
6. An analysis of 132 cases is presented.

REFERENCES

1. White, P.: Heart Disease, pp. 70, New York, MacMillan Company, 1944.
2. Parkinson, J., and Hartley R.: Early Diagnosis of Rheumatic Valvular Disease in Recruits, Br. H. Jour, 8: 212-232, 1946.
3. Levine, S.: Clinical Heart Disease, pp. 254-264, Philadelphia, W. B. Saunders & Co., 1935.

A SPECIFIC REMEDY FOR

DISPEPSIA **DIARRHOEA**

SPRUE **ACUTE & CHRONIC AMOEBIC DYSENTERY & INTESTINAL AMOEBIASIS**

Packings of 50, 100, 200, 500, 1000 are available. Price list, literature, without obligation —

THE HIMZINE PHARMACY, LTD. BARODA.

"FOOD & NUTRITION IN INDIA"

By An Indian Dietarian

Price Rs. 6/- only

- A Systematic & comprehensive study on Food & Nutrition based on modern researches with Indian back ground.
- A really useful guide to Medical Profession and National Health-workers for reference & propaganda.
- A well-written book and an invaluable addition to any library.

Available from leading book-sellers all over India

Published by

Dr. D. N. CHATTERJEE,
312, College street, CALCUTTA

"ROSBAY"

A DEPENDABLE PRODUCT FOR FILARIA

"Rosbay is a combination of Rosebay with a radioactive element as per researches of Dr. A. T. Paul and has been before the profession for the last 20 years. It is indicated in Filaria and is given orally or by subcutaneous injections. It contains no antimony, arsenic or any vaccine and in cases where these have failed, Rosbay may be tried with advantage".

—The Antiseptic.

"There is no doubt that Rosbay is worthy of trial especially as a good and reliable remedy for filariasis".

—Editor, Cal. Med. Review.

"Many prominent doctors all over India have used Rosbay specific for filariasis and claim very successful results even in the long standing cases.

Editor, Medico-Surg. Suggestions.

Literatures, etc., on request to:—

ROSBAY & Co.
185, Chittaranjan Avenue (N.)
CALCUTTA 7

Dr. W. C. Roy's (L.M.S.)

ROYAPILLA

(Famous since 1869)

Therapeutics: It acts as a sedative to the central nervous system and produces different degrees of hypnosis. It has a mild laxative action on the bowels and sharpens the appetite. On the cardio-vascular system it acts by lowering the increased blood pressure.

Indications: INSANITY, EPILEPSY, HYSTERIA, INSOMNIA, NEURASTHENIA AND OTHER MENTAL DISEASES.

Dose: 2 to 4 pills twice daily or as directed by the Physician.

Samples & Literature sent on request

S. C. ROY & Co.

Manufacturing Chemists,

167/3 Cornwallis Street, Calcutta 6

"H.11" EXTRACT

FOR CANCER

"Analysis of 1371 'untreatable' cancer cases shows inhibition of all types of malignant growth in all parts of the body by H. 11."

("Medical World," 7th October, 1946.)

Supplied exclusively to the Medical Profession

Enquiries are invited and fullest information will be gladly given

STANDARD LABORATORIES
SUNBURY - ON - THAMES
Telephone: Sunbury 2117.

MINAFERROL

COMBINATION OF

Minerals with Vitamins

Alterative, Reconstructive tonic with Minerals and Vitamins A, B₁, B₂, C and Nicotinamide.

Elixir POLY-B-COMPLEX

Concentrated Elixir of Vitamin B-Complex (B₁, B₂), Nicotinamide, Pyridoxine Hydrochlor, Calcium Pantothenate with B-factors (Biotin, Folic acid, Choline Chloride and Inositol).

POLY-VIT-HEPAR

LIVER EXTRACT TONIC

Proteolysed liver extract, Glycerophosphate compounds, Vitamin B₁, B₂, Nicotinic acid and Vit. C.

'POLY-VIT PRODUCTS'

BOMBAY PHARMACEUTICAL WORKS LTD.

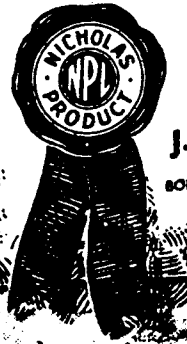
BOMBAY 14.

ANNOUNCEMENT!

J. L. MORISON, SON & JONES (INDIA) LTD.
have been appointed
Sole distributors in India and Ceylon
of
NICHOLAS  ETHICALS

- VITAMINS
- SULPHONAMIDES
- ANTI-BACTERIALS
- ARSENICALS

Scientific literature, samples and prices available from:—
Nicholas Ethical Division
J. L. MORISON, SON & JONES (INDIA) LTD.
 BOMBAY • MADRAS • CALCUTTA • KARACHI • COLOMBO • RANGOON



N. P. Y. 1

MEDICO-POLITICAL SUPPLEMENT

TO

THE INDIAN MEDICAL JOURNAL

Vol. 6, No. 1]

MADRAS

[January, 1948.

CONTENTS

	Page		Page
LEADING ARTICLE:		History of the Medical Council of India	... 5
Madras Sales Tax and the Medical Practitioners	... 1	ASSOCIATION NOTES	... 11
OTHER ARTICLES:			
World Medical Association By Dr. P. B. Mukherjee, Calcutta	... 2		

Thought for the Month.

A Physician who does not read books and journals, who does not need a library, who does not read one or two of the best weeklies or monthlies, soon sinks to the level of the cross-counter prescriber, not alone in practice but in those mercenary feelings and habits which characterise a trade. The average non-reading doctor might play a good game of golf or bridge, but professionally he is a lost soul.

—Sir William Osler.

LEADING ARTICLE

Madras Sales Tax and the Medical Practitioners

When in 1946, the Madras sales-tax officer began to levy the tax on the "sale" of medicines by the medical practitioners to their own patients, representation was made to the then Government that under no stretch of imagination could a doctor be deemed to sell medicines to his patients when he dispenses them in his professional capacity and that therefore they could not be classified along with chemists and druggists. This contention was upheld by the Commissioner of Sales-tax and orders were issued against imposing this tax on the practitioners.

Despite this, we understand that in Madura, the sales-tax officer has called on the

practitioners to produce their accounts on the cost of medicines supplied to their patients for the purpose of assessing sales-tax on the same. It is strange that in one area the doctors are exempted from this tax and in another area they are asked to pay the tax, although all are under the jurisdiction of the Government of Madras.

The Sales-tax Act itself is very clear in its definition of what constitutes "sale of goods". The following are the relevant portions of the Act:

- (a) Under S. 4 of the Indian Sale of Goods Act, sale of Goods involves a contract whereby the seller transfers the property in goods to a buyer.
- (b) Under S. 2 (10) of the Act price is defined to mean "the money consideration for the price of goods".

The wordings are very clear. When a doctor dispenses medicines to his patients, he serves rather than sells, and he could not therefore be brought under the Sales-tax. It is therefore time that the Government of Madras clarifies the issue and save the doctors from the embarrassment of the District Sales-tax officers some of whom interpret the Act in their own way.

We understand that Dr. T.S. Tirumurthy, President of the South-Indian Provincial Branch of the Indian Medical Association, has addressed the appropriate authorities requesting them to cancel the notices issued by the Madura Commercial Tax Officer on the medical practitioners of that city. We hope the Government would heed his advice and act in a fair manner.

It is ridiculous that one and the same law is administered differently in different districts.

When Madras practitioners are exempted, why should the Madura practitioners be taxed?

OTHER ARTICLES

World Medical Association.—By Dr. P. B. MUKERJEE, *Leader of Indian Delegation to the World Medical Conference held at Paris during September, 1947.*

18th of September, 1947, was a red letter day in the history of the medical profession of the world. On this date, at 3'40 P.M. in the historic city of Paris, was born, as a result of the deliberations of the representatives of 48 countries from different parts of the world, including India, an organisation with the following objects:—

(1) to promote closer ties among the national medical organisations and among the doctors of the world by personal contact and all other means available; (2) to maintain the honour and protect the interests of the medical profession; (3) to study and report on the professional problems which confront the medical profession in the different countries; (4) to organise an exchange of information on matters of interest to the medical profession; (5) to establish relations with, and to present the views of the medical profession to the World Health Organisation, the U.N.R.S.C.O., and other appropriate bodies; (6) to assist all peoples of the world to attain the higher possible level of health; and (7) to promote world peace. The first initiative in this direction was taken last year when, under the joint auspices of the Association Professionnelle Internationale des Médecins and the British Medical Association, thirty-three medical associations in thirty one countries sent their representatives to a three day Conference held at the

British Medical Association House in London, opening on September 25, 1946. This Conference which was attended by over 40 full delegates and 32 observers decided that there should be international liaison in the field of medicine and that an international organisation should be brought into being to lend full support to the practitioners all over the world against the subtle and insidious forces which were menacing the age-old traditions and freedoms of the profession. Dr. J. Decourt of France (Secretary, A.P.I.M.) who was very frank in expressing his doubts about the intentions of the W.H.O. and U.N.E.S.C.O., observed that a World Medical Association was necessary "to defend medical practitioners whose liberty was being menaced in many countries" and Dr. T. C. Routley of the Canadian Medical Association desired an organisation "which would signify the unity of doctors all over the world". Before breaking up, this Conference set up a Provisional Committee of nine members to work out a draft constitution and by-laws of the proposed Association and to place the same before a similar Conference of representatives of National Medical Associations to be held at Paris in 1947 for consideration and adoption as the instrument governing its activities.

This second Conference which held its sittings at Paris from 17th to 20th September, 1947 was inaugurated by the French Minister of Health who welcomed the delegates to the French capital and was attended by representatives from 48 national medical organisations. At the first part of the meeting, the delegates adopted the Draft Constitution and By-Laws which were submitted by the Organising Committee of nine, after suitable modification of some of the articles of the constitution and the by-laws, as a result of amendments proposed by some of the representatives present. The important articles of the constitution, as finally adopted, are those relating to the objects of the World Medical Association, eligibility for membership, rate of subscription, composition of the General Assembly and the Council. Voting power of member associations, official language of the organisation and election of officers. From a perusal of the objects, as enumerated above, it will be clear that the Association will concern itself principally, with those aspects of professional problems which are generally recognised as falling under "medico-political" work, leaving the scientific and academic aspects to the national medical associations. Membership of the organisation will be governed by Article 5 which was accepted in the following form:—

- (i) These medical associations which sent delegates or observers to the International Medical Conference in London in September 1946; and
- (ii) Any other national or territorial medical association which is fully representative of the medical profession in its country or territory or of the members of the medical profession of a recognised ethnic group in its country or territory.

A good deal of discussion centred round the basic idea of clause (ii) of the above Article, many of the delegates present expressing the view that the concession allowed in eligibility for membership on ethnic grounds might encourage fissiparous tendencies

amongst certain classes of members of national medical associations and lead to fragmentation and subdivision in their ranks with a view to obtaining recognition as independent units of the world organisation. After prolonged discussion, however, the clause was adopted without any change or modification. The General Assembly which would be responsible for the general control and direction of the policy and affairs of the Association would consist of delegates from the Member-associations, each such association being entitled to appoint two delegates and to enjoy two votes, one for each delegate and two for one delegate, if the second was unable to be present. "A Delegate", it was decided "shall be a person who is medically qualified and a member of the association he represents, and he shall be an ordinarily resident in the territory of that Association". The rate of subscription was fixed as follows:—(a) that the subscription of each member—association be calculated at a flat rate per member with a minimum total and a maximum total. (b) that the flat rate per member be 20 Swiss centimes, with a minimum of 1000 Swiss francs and a maximum of 10,000 Swiss francs." The Council, which would carry into execution the resolutions passed by the General Assembly and administer the affairs of the Association in accordance with the Article and By-Laws, would be composed of the President, the then President-elect, the Treasurer and ten members of the General Assembly elected at its annual meetings in the manner and for the period prescribed in the By-Laws, it was decided that the English, the French and the Spanish would be the official languages of the Association and that a Journal or a Bulletin may be published, periodically as decided upon by the Council. It is a matter for sincere congratulation that India has obtained a seat in the Council of the World Medical Association, Dr. S. C. Sen, the Hony. General Secretary of the Indian Medical Association, who was one of the delegates secured the third highest vote in the election.

After adoption of the Constitution and the By-Laws, began the second part of the Conference which was the First Annual Meeting of the General Assembly of the World Medical Association. Dr. Charles Hill, Secretary of the British Medical Association was appointed Acting Hony. Secretary and Prof. Marquis, who is Director of the School of Medicine of Rennes (France) was elected the First President. Dr. Lauch of Switzerland, the Treasurer, then presented the financial report and in doing so, pointed out that the revenue derived from subscriptions from member-associations would fall short of the requirements, if the tasks imposed upon the World Medical Association were to be carried out efficiently. The Delegates from the U.S.A. reported at this stage, that some industrial "friends of the American Medical Association", being convinced of the potential value of the World Medical Association to the science and profession of Medicine and to the cause of promotion and maintenance of world peace, and being desirous of helping it financially during the early years of its career, had offered a generous gift of \$50,000 a year for five years on certain conditions, the principal among which were that the money was to be used for the remuneration and expenses of the Secretary, other officials and clericals

and clerical staff; the rent, rates and other disbursements in connection with the official Head-quarters; the cost of publication of the Associations' official bulletin or journal; the travelling expenses of the Council. Other conditions attached to the gift were that the Head-quarters of the World Medical Association should be in North America, that the Council be instructed to work out a scheme of Associate Membership and that the disbursement of the money would be in the hands of an American Committee composed of five doctors and four laymen who, as donors, were to be admitted to the Associate Membership with right to attend meetings but not to vote. The American delegates made it clear that the Committee had no intention of determining or interfering with the policy of the World Medical Association; their only desire was to approve of the general purpose of the schemes which the Association would decide to finance out of the donors' money. A prolonged discussion ensued on the desirability or otherwise of accepting this generous offer on the terms attached to it; particularly, those relating to the demand of the establishment of the Head Quarters of the Association in North America, the working out of a scheme of associate membership to which laymen were to be admitted and the setting up of an American Committee to control disbursement of the gift fund. Many delegates including one from India, who led the Opposition, objected to these conditions and expressed the view that the World Medical Association would sell its soul, if it accepted the gift under these terms. They appreciated the generosity of the donors and thanked them warmly for offering to place such a handsome sum of money at the disposal of the Association in the early years of its existence but were definitely of the opinion, that unless the latter conditions were withdrawn, it would be better for the World Medical Association to work out its own salvation and arrange to have during the preliminary years all its routine and other work done by Honorary officers. A large number of delegates took part in the discussion and at the end, the Assembly voted in favour of accepting the handsome gift after the conditions relating to the reference to working out a scheme of Associate Membership and the constitution of an American Committee to control disbursement of the money, were deleted. It is pertinent to quote here the observations of the British Medical Journal which aptly describe the feelings of all delegates present at the meeting and who took part in the discussion of this controversial subject:—"It is perhaps a commentary on the unsettled economy of the world that the World Medical Association which represents some 500,000 doctors, could not raise sufficient funds to carry on its work unaided."

After the business part of the meeting was over, the General Assembly took up for discussion two motions by Denmark and Great Britain and a document prepared by the Council of the British Medical Association, entitled "War Crimes and Medicine"; Prof. Charles Richet, a French medical victim who had spent some time in a German concentration camp, related his own experiences and was followed by one of the Greek delegates who described the brutalities committed in his country during the last war by members of the profession, acting under orders of the Nazi High Command. After hearing with sympathy

the statements made by those and other members, the Assembly condemned the crimes committed by German and other doctors and appointed a small Committee to go into the subject and formulate recommendations. The following report of the Committee was subsequently adopted by the Assembly:—

(i) That a report on crimes committed since 1933 by doctors and medical organisations in Germany and other countries and on the violation of the medical ethics, be prepared and made available to doctors throughout the world.

(ii) That the World Medical Association solemnly condemns the crimes against human beings committed by certain members of the medical profession such as are described in the British memorandum.

(iii) That every doctor, at the time of receiving his medical degree or diploma, be required to subscribe to the following oath:—

" My first duty, above all other duties, written or unwritten, shall be to care to the best of my ability for any person who is entrusted or entrusts himself to me, to respect his moral liberty, to resist any ill-treatment that may be inflicted on him, and, in this connection, to refuse my consent to any authority that requires me to ill-treat him.

Whether my patient be my friend or my enemy, even in time of war or in internal disturbances, and whatever may be his opinions, his race, his party, his social class, his country or his religion, my treatment and my respect for his human dignity will be unaffected by such factors."

(iv) That the World Medical Association endorses judicial action by which members of the medical profession who shared in war crimes are punished.

(v) That the World Medical Association request the German medical syndicates to make the following public declaration:—

(a) We, members of the German medical syndicate, are aware of the very large number of acts of cruelty committed, both by individuals and collectively, since 1933 in mental hospitals and in concentration camps, and of the violation of the medical ethic. These acts have resulted in the death of some millions of people. A large number of our members have been implicated in those acts, either as instigators or as technical agents or as actual perpetrators:—

(b) We regret that the organised medical profession in Germany has not made any protest and has been content to ignore these acts, of which it could not have been unaware;

(c) We undertake solemnly to condemn these crimes, to expel from our organisation the criminals who have committed them, and to remind all our members of the respect due, not only to life, but to human personality, dignity and liberty.

The Assembly instructed the Council to prepare a report incorporating these resolutions and also to take into consideration the following motion by the Netherlands:

That the Council be instructed to prepare a report on the collaboration of medical practitioners in the preparation of means of warfare.

The following matters were also referred to the Council for appropriate action or investigation and report:—

(i) The general arrangements for the organisation and publication of a bulletin or journal;

(ii) The preparation of a report on the enquiry into the present position of the medical profession in relation to the State;

(iii) The motions of Luxembourg, supported by Australia, recommending the preparation of a comparative statement of standards of training for the medical profession and conditions of registration, and of a comparative statement on the qualifications of specialists;

(iv) The following motions by India:—

(a) That the Council be requested to study and report on the question of the advertisement of cures and medicines in the lay press;

(b) That the Council be requested to study and report on the question of unqualified and unauthorised medical practice.

(v) The preparation of Standing Orders to govern the procedure of the meetings of the General Assembly;

(vi) The appointment of auditors.

The General Assembly decided to hold its 1948 meeting at Prague the exact date to be fixed by the Council, and elected Dr. J. Stucklich (Czechoslovakia) as the President-elect for the year 1947-48.

The Conference was held in the Domus Medicae, the Head Quarters of the Confederation des Syndicats Medicaux Francais, which acted as a most generous host and was all attention to the delegates congregated to this unique and important conference in the historic city of Paris.

The Indian Delegation played no inconsiderable part in shaping matters, it expressed itself with determination, pointing out that if the high ideals of the nobility of the profession and of service above self and of the high code of professional ethics were not kept constantly in view in giving a practical shape to the World Medical Association, then it would cease to exist as a useful international body.

Speaking generally, it might be said that although the proceedings of the Conference during its four days' sittings were frequently marred by unrestrained language, unpleasant incidents, and passages at arms across the floor of the house, they brought out in bold relief some of the difficulties, attending the establishment of a world organisation which has set its hands on a great task, and the supreme efforts made by most of the organisers of the Conference to solve them. The feature that was particularly disturbing in the proceedings of the first two days of the Conference when the constitution and by laws were under discussion, was the introduction of the method of "bloc voting" resorted to by the delegates of the South American countries who acted as a solid group under the leadership of the delegate of the Medical Association of Costa Rica. Some of the

items in the agenda were not considered on their own merit but on how they appeared to affect the interests of a particular group of representatives. This was sad and at times, a very distressing and disgusting feature of the proceedings, reminding one of the worst features of the U. N. O. This is full of ugly possibilities for the future and the authorities of the World Medical Association would be well advised to take steps to prevent early wrecking of the organisation on the rock of group-politics in its ranks.

The value of international organisations lies in the amount of good they can render to the greatest number of people and if they fail in serving the interests of a larger number of people than were being served by their national organisations, they should be considered as having failed in their objects and missions. Judged by this yard-stick, the World Medical Association holds out promise of much better and more efficient service to the suffering humanity of the world by reason of the weight of its authoritative opinion, in matters relating to public health and medical relief, which can be brought to bear upon all governments of the world in remedying those unfavourable circumstances that stand in the way of ensuring the attainment of those conditions that are necessary for the enjoyment of positive health.

History of Medical Council of India—By ITS SECRETARY.

The author of this History of Medical Council of India has failed to record that the Indian Medical Council Act has done the gravest injustice to the Medical Licentiates of India by not recognising their qualifications although they form 75 per cent of the profession. The organised medical profession, including both the graduates and the licentiates, is still protesting against this injustice and demanding suitable amendment of the Act. We have no doubt that this Act would be amended to meet the just demands of the profession by the Government of India as soon as they are free from the present pre-occupations due to the division of the country. Ed. I.M.J.

The establishment of medical colleges at Calcutta and Madras in 1835 marked the beginning in India of state-organized education in the Modern Medical Science. Ten years later, the Grant Medical College was opened at Bombay, and in 1860 a Medical College was started at Lahore. Although a number of medical schools sprang up to provide training for Hospital Assistants and Sub-Assistant-Surgeons later known as Licentiates, it was not until 1906 that the need for expansion of the teaching for the University standard was recognised. The Medical College at Lucknow was established in 1911 which example was followed by other centres, and the year 1925 saw ten university medical colleges in India including the Lady Hardinge Medical College exclusively for women at New Delhi. In the early days the medical colleges granted their own diplomas, but in 1857 the medical college at Calcutta became affiliated to a university and others followed suit.

There was no central or provincial body to register the qualified medical men to improve their status and standard of education and to regulate the practice of scientific medicine in the country. The medical education was in the hands of the members of the

Indian Medical Service who were qualified in the United Kingdom. In 1892, Part II of the British Medical Act, 1886, which conferred on the General Medical Council the duty of ascertaining the sufficiency of the examinations leading up to the qualifying examinations, was applied to India, and before 1920 the General Medical Council had accepted for registration the degrees and diplomas of the Universities of Bombay, Calcutta, Lucknow (Allahabad), Madras and the Punjab. Between 1912 and 1936, except the North-West Frontier Province and Sind, all the provinces in British India enacted their Medical Registration Acts in pursuance of which Medical Councils were established in each province. These Councils, however, were concerned only with the standard of medical education in their respective provinces. There was thus no central or other co-ordinating authority empowered to maintain a minimum uniform standard of medical education for the whole country. Therefore, in 1921, the General Medical Council addressed a questionnaire to those Indian Universities whose qualifications were recognised by it, and from the replies received, that Council felt that the teaching of midwifery did not, except in Madras, reach a standard which would be recognised for a University in the United Kingdom. In 1922, on the invitation of the Secretary of State for India, Sir Norman Walker visited India. In his report he expressed the opinion that each University could bring its regulations sufficiently in accord with the requirements of the General Medical Council to enable that Council to continue to recognise its diplomas. Consequently, Colonel Needham was appointed as Inspector of Medical Teaching in the Indian Universities and on his reports, the General Medical Council continued to recognise the Indian degrees. The Calcutta University did not agree to such inspections by an outside authority, and therefore the General Medical Council withdrew recognition of the qualifications of that University from the 30th November, 1924, which was however resumed from the 13th May, 1928. The necessity for a Central Co-ordinating Body was more keenly felt after the Great War, as some colleges were unable to attain the uniform standard required by the General Medical Council and regular inspections by that Council were resented. Early in 1926 a non-official Bill dealing with the subject was introduced in the Council of State, but as it met with opposition in various quarters, it was dropped. Sir Norman Walker again visited India, and in 1928 the question was taken up by the Government of India, and subsequently in July, 1929, a Conference of provincial representatives was convened. As the Conference was opposed to the establishment of such a central authority, the matter was again dropped for the time being. Meanwhile, to meet the criticisms and objections of the General Medical Council of the United Kingdom, which, since 1922, had been recognising the Indian degrees for limited periods only on the basis of reports submitted by the Inspectors appointed on its behalf and who in 1927 expressed itself in favour of the establishment of an All-India Medical Council with which it could deal direct, the Government of India proposed instead to appoint a whole-time Commissioner of Medical Qualifications and Standards in India. In view of the opposition the proposal

evoked, both inside and outside the Legislative Assembly it had to be abandoned. The abandonment of this proposal and the non-acceptance by the General Medical Council of an alternative proposal for the appointment, as a temporary measure pending the establishment of an All-India Medical Council, of a Board to supervise medical qualifications, led the General Medical Council in February, 1930, to withdraw the recognition of all the Indian Medical Degrees. This decision of the General Medical Council completely changed the whole atmosphere and made it imperative to establish a Central Council. Accordingly, in June, 1930, a second Conference consisting of the representatives of Provincial Governments and of all the Indian Universities, was convened by the Government of India, and it was resolved that the establishment of an All-India Medical Council was essential and acceptable to it in principle and that a Bill should be drafted and legislation undertaken to bring the Council into existence. Accordingly, a Medical Council Bill was introduced in the Legislative Assembly in September, 1932, and was referred to a Select Committee. The Bill was passed in the Autumn Session of 1933 and the Indian Medical Council Act No. XXVII of 1933 was brought into force with effect from November 1, 1933. In pursuance of this Act, the Medical Council of India came into existence on February 15, 1934.

So much for the history of the formation of the Council. Let us now turn towards its constitution and achievements since its inception.

Constitution and Functions

The constitution of the Council was slightly changed under the Adaptation of India Laws—Order 1937—, and now it is composed of :—

(a) One member from each Governor's Province nominated by the Central Government.

(b) One member elected by each British Indian University having a Medical Faculty, to be elected from amongst the members of the Medical Faculty.

(c) One member from each province where a medical register is maintained to be elected from amongst themselves by persons enrolled on the register who possess recognised medical qualifications or medical qualifications granted by a British Indian University.

(d) Four members to be nominated by the Central Government.

For the first four years of the Council's constitution the President was nominated by the Governor-General-in-Council. Major-General Sir C. A. Sprawson, C.I.E., K.H.P., I.M.S., was nominated as the first President, and he held office till February 13, 1937, save for 4½ months when Major-General Sir Frank Connor, D.S.O., K.H.S., I.M.S., was nominated in his leave vacancy. After the former's retirement Major-General E. W. C. Bradfield, C.I.E., O.B.E., K.H.S., I.M.S., was nominated, and in February, 1938, he was elected by the Council as its first elected President. He was succeeded by Dr. B. C. Roy as the first non-official President and in October 1945, Dr. Abraham S. Erulkar was elected to this office.

The Secretary was nominated by the Governor-General-in-Council for the first four years from the

commencement of the Act. Mr. Farquhar Macrae, M.B., C.M., was the first nominated Secretary and in May, 1935, he was succeeded by Lt.-Col. G. T. Burke, I.M.S. From November 1, 1937, the Council appointed Khan Bahadur Dr. K. A. Rahman, O.B.E., as its Secretary, who in February, 1946, was succeeded by Khan Bahadur Dr. A. H. Butt.

The Vice-President and the members of the Executive Committee are elected by the Council from amongst its members. The Executive Committee consists of seven members of whom five are elected by the Council and the President and the Vice-President are ex-officio members and are also President and Vice-President respectively of the Executive Committee.

A member of the Council holds office for a term of five years and under the Regulations framed by the Council the term of office of the Vice-President and the members of the Executive Committee has been fixed for two years.

The medical qualifications recognised under the Act are contained in two Schedules. The First Schedule is composed of medical qualifications granted by medical institutions in British India and the non-Indian medical qualifications are given in the Second Schedule. Inclusion in the latter Schedule is sufficient qualification for enrolment on any Provincial Medical Register.

The Schedules are attached as Appendices I and II.

The functions of the Council fall under two heads :—

(1) The maintenance of a uniform minimum standard of higher medical qualifications for the whole of British India; and

(2) The furtherance of the recognition of these qualifications in States and Countries outside British India, with its corollary, the recognition in this country of approved qualifications of such States or Countries.

(1) Immediately after its constitution, the Council drew up its Recommendations on Professional Education and on Professional Examinations. In view of the latest developments in and suggestions for the improvement of the medical curriculum, a revision of the former was undertaken in 1936. The modified Recommendations came into operation from 1940. With a view to uniformity in the syllabus of the pre-medical courses, the Council appointed a Board of Experts who formulated the minimum requirements in the Basic Scientific Subjects, a copy of which has been forwarded to the Inter-University Board for necessary action. The Council has also laid down minimum qualifications necessary for appointment of teachers in a medical college.

The first round of inspections of courses of instruction and final examinations of all the British Indian Universities was carried out between 1934 and 1938, as a result of which much improvement was effected and the qualifications of all the Universities are now included in the First Schedule. On the recommendation of the Council the M.C.P.S., qualification granted by the College of Physicians and Surgeons, Bombay, has also been placed on the

Schedule and recognised when granted after the 30th April, 1944. The Council has been engaging itself in inspecting the courses of instruction, facilities for teaching and examinations in the pre-clinical and clinical subjects as well.

In consequence of the Council's recommendation to the Central Government to ask the Provincial Governments either to abolish the medical schools or raise them to university standard, the Agra Medical School, Stanley Medical School, Madras, and Amritsar Medical School have been raised to college standard. Steps in this connection are being taken in other Provinces and new colleges are also being established under the post-war reconstruction schemes.

By an amending Act 1942, powers have been vested in the Council to appoint visitors in addition to Inspectors.

The Women's Christian Medical College, Ludhiana, and the Glancy Medical College, Amritsar, were visited on behalf of the Council. The Council has inspected the Agra Medical College and before deciding the question of the recognition of the M.B., B.S. degree granted by the Agra University, the Council has appointed visitors in order to find out as to how far the necessary improvements as pointed out by the Inspectors have been given effect to.

The Council accorded temporary recognition to certain qualifications, viz. D.M.S. Madras, L.M.S. Punjab State Medical Faculty, M.S.M.F. Punjab and U.P., M.M.F. Benagal, for purposes of recruitment to the Emergency Cadre of the I.M.S. After a visitation, the M.B., B.S. degree granted by the Osmania and Mysore Universities was also given similar temporary recognition as a war measure. As regards permanent recognition, the Osmania Medical College was inspected on behalf of the Council and the inspection reports are under consideration. The Mysore University is not yet ready for inspection. For Emergency Commissions, the cases of the holders of foreign qualifications not recognised by the Council were disposed of on individual merits by the President.

The Executive Committee of the Council did not approve of the Government's suggestion that during the war the period of training of medical students should be cut short or the standard of examinations lowered. It was, however, decided that if a member of the staff of a Medical College joined the Army, his work might be carried out by the senior students provided suitable arrangements were made to continue their studies.

In 1937, the Council made recommendations regarding admissions of Licentiates to the M.B., B.S. degree. In 1943, certain concessions were allowed operative during the war and three years thereafter. These were followed by further concessions and the periods of training of the different categories of Licentiates for the degree have been clarified. The Council has been moving the Universities in this connection and as an interim measure requested the Central and Provincial Governments to take steps to provide suitable teaching facilities to the Licentiates to obtain the M.B., B.S. degree by utilising as far as possible the existing medical schools and colleges as

well as by establishing new institutions wherever possible and necessary.

The Council's proposal for an All-India Medical Register is receiving the consideration of the Central Government. It is intended to include Licentiates as well as Indian National holders of foreign qualifications not recognised by the Council but borne on the Provincial Registers up to a fixed date.

In 1937, the Council made a survey of the teaching in the subject of Midwifery and the information so collected was compiled in a pamphlet. A further survey was made in 1942.

The Council has invited the attention of the Universities to the desirability of paying special attention to the teaching of Orthopaedics on account of the growing importance of this branch of surgery especially due to war.

The Council has suggested to the universities that special instruction in diagnosis and treatment of Leprosy on modern lines be provided for the students of the medical colleges.

(2) With a view to making provision relating to medical diplomas granted in the United Kingdom or Burma which is referred to in sub-section (1) of section 120 of the Government of India Act, 1935, the Medical Diplomas Act, 1939, has been enacted by the Indian Legislature.

As a result of negotiations with the General Medical Council that Council has accepted for recognition the medical qualifications granted by the British Indian Universities included in the First Schedule except Andhra University. The matter is under the consideration of the General Medical Council. That Council has also been informed of the recognition by the Medical Council of India of the qualification of M.C.P.S. (Bombay).

In view of the defects pointed out by the Inspectors of the General Medical Council regarding the qualifications granted by some of the Licensing Bodies in the United Kingdom, the Medical Council of India has recommended for the discontinuance of the recognition of such qualifications and the matter is receiving the attention of the Central Government.

As a result of the negotiations with Countries and States outside British India, the Council entered into schemes of reciprocity in some cases directly and in others through the General Medical Council, and in 1937, the Second Schedule was revised accordingly. In 1940, the Council did not favour indirect reciprocity, and on its recommendation, the Schedule was further amended whereby reciprocity now exists only with Malta, New Zealand and Burma. The question of mutual recognition of medical degrees between this Council and the South African Medical Council is under consideration of that Council.

In view of the existence of a state of war with Italy and Japan the medical qualifications granted in these countries are now recognised only when granted on or before the 10th October, 1940 and 8th December 1941, respectively.

The Council has proposed to the Central Government to set up a General Reciprocity Board for the purposes of facilitating reciprocity between India and various countries comprising the British Commonwealth of Nations as also for the purpose of removing by mutual discussion and difficulty in the way of establishing reciprocity with these countries and maintaining it when once established. The matter is being examined by the Central Government and the India Office.

It may be borne in mind that the Medical Council of India has to function both internally and externally within the four corners of the Act under which it has been constituted. It is neither an administrative nor legislative body. It cannot amend, alter or change its Act. Even for its finances it has to depend solely on the Central Government. Within its limitations the Council has been doing its best towards the attainment of efficiency at home and honour abroad.

FIRST SCHEDULE

Recognised medical qualifications granted by medical institutions in British India
and

(Approved by the Medical Council of India)

Medical Institution.	Recognised medical qualification	Abbreviation for registration.
University of Allahabad	Bachelor of Medicine & Bachelor of Surgery	M.B., B.S., All.
University of Bombay	Licentiate in Medicine and Surgery	L.M.S., Bom.
	Bachelor of Medicine & Bachelor of Surgery	M.B., B.S. Bom.
	Doctor of Medicine	M.D., Bom.
	Master of Surgery	M.S., Bom.
University of Calcutta	Licentiate in Medicine and Surgery	L.M.S., Cal.
	Bachelor of Medicine	M.B., Cal.
	Doctor of Medicine	M.D., Cal.
	Master of Surgery	M.S., Cal.
	Master of Obstetrics	M.O., Cal.
University of Lucknow	Bachelor of Medicine & Bachelor of Surgery	M.B., B.S., Lucknow.
	Doctor of Medicine	M.D., Lucknow.
	Master of Surgery	M.S., Lucknow.
University of Madras	Licentiate in Medicine and Surgery	L.M.S., Mad.
	Bachelor of Medicine & Master of Surgery	M.B., C.M., Mad.
	Bachelor of Medicine & Bachelor of Surgery	M.B., B.S., Mad.
	Doctor of Medicine	M.D., Mad.
	Master of Surgery	M.S., Mad.
Punjab University	Licentiate in Medicine & Surgery	L.M.S., Pun.
	Bachelor of Medicine	M.B., Pun.
	Doctor of Medicine	M.D., Pun.
	Master of Surgery	M.S., Pun.
	Bachelor of Medicine & Bachelor of Surgery	M.B., B.S. Pun.
Patna University	Bachelor of Medicine & Bachelor of Surgery	M.B., B.S., Patna.
	Doctor of Medicine	M.D., Patna.
	Master of Surgery	M.S., Patna.
Andhra University	Bachelor of Medicine & Bachelor of Surgery	M.B., B.S., Andhra.
	Doctor of Medicine Master of Surgery	M.D., Andhra.
	Licentiate in Medicine and Surgery	M.S., Andhra.
		L.M.S., Andhra.
College of Physicians and Surgeons, Bombay	Membership of College of Physicians and Surgeons, Bombay.	M.C.P.S. (Bombay). (This will be a recognised medical qualification only when granted after the 30th April, 1944.)

GILAG

Gilag Pharmaceutical Specialities

BESULAN

Sulfonamide, Pyridine
merc. chlorid.
Lactose, carbohydrates

For the local treatment of vaginitis accompanied by discharge.

Indications: All cases of Vaginitis accompanied by discharge caused by gonococcus, streptococcus, staphylococcus, B. coli, trichomonas, thrush or complex infections.

Packages: Glass-tubes of 15 1-gm. tablets
Clinical packages of 150 and 500 1-gm tablets.



GILAG PHARMACEUTICAL SPECIALITIES

MANUFACTURED IN SWITZERLAND.

Sole Agents for India:-

THE PLASTIC & INDUSTRIAL CORPORATION LTD.

Pharmaceutical Division

P. B. 222 Bombay 1.

Diazinol Wander
constitutes a great progress in chemotherapy.

Due to its rapid absorption in the gastro-intestinal tract on the one hand and its fairly slow elimination on the other, very small doses suffice to obtain the blood concentration required for a rapid therapeutic effect. It is the ideal sulphonamide derivative, guaranteeing a maximum of action with a minimum of toxicity.

CALCIC SULFAMETHAZINE
DIAZINOL

WANDER

Sole Importers:
"WANDER" PHARMACEUTICAL DEPARTMENT
MAY & BAKER (INDIA) LTD., P. O. Box 99, BOMBAY I.

INDIAN MEDICAL JOURNAL



(Journal of the All-India Medical Licentiates' Association with which the Agra Medical Club Journal is incorporated)
(WITH MEDICO-POLITICAL SUPPLEMENT)

Vol. 42, No. 2
February 15, 1948

Editorial and Publishing Office
32, Sullivans Garden St., Mylapore, Madras 4.

Annual Subscription:
Members Rs. 4-0
Non-Members " 6-0
Foreign " 7-8

For
the treatment of

SCABIES

PEDICULOSIS CAPITIS

ICULOSIS PUBIS

Ascabiol
brand benzyl benzoate emulsion

This elegant preparation of benzyl benzoate is widely used in the treatment of scabies. One thorough application will usually cure a case of scabies without the danger of dermatitis and with the minimum of skin irritation. 'ASCABIOL' has also been successfully used in the treatment of pediculosis capitis. Not only are lice destroyed but the cement by which the nits adhere to the hair is dissolved. The nits can, therefore, be removed by simple washing instead of the painstaking use of the small tooth-comb. It is also effective in the treatment of pediculosis pubis.

'ASCABIOL' is supplied as follows:
Bottles of 4 ozs. (fluid)



MAY & BAKER LTD.
MAY & BAKER (INDIA) LTD.

For Threatened and Habitual Abortions

PREGNANCIES may be maintained in patients having histories of habitual abortions and in those obstetrical cases with ... painful uterine contractions or associated bleeding ... due to deficiency of corpus luteum hormone.

LUTOCYCLIN (Progesterone), the chemically pure, synthetic *injectable* compound with maximum progestational activity is available in 1 cc. ampoules of 2 mg., 5 mg. and 10 mg. in sesame oil.

LUTOCYCLIN TABLETS (Anhydrohydroxyprogesterone), the orally effective compound with progestational activity is available in tablets of 5 mg.



LUTOCYCLIN
(Progesterone)
LUTOCYCLIN
TABLETS
(Anhydrohydroxyprogesterone)



CIBA PHARMA LIMITED

P. O. Box No. 1123

BOMBAY.

A PRODUCT OF THE HOUSE OF DR. A. WANDER S. A., BERNE-SWITZERLAND

SULFOTROPINE

WANDER

THE NEW
POLYVALENT DISINFECTANT
OF THE URINARY PASSAGES

Sole Importers :

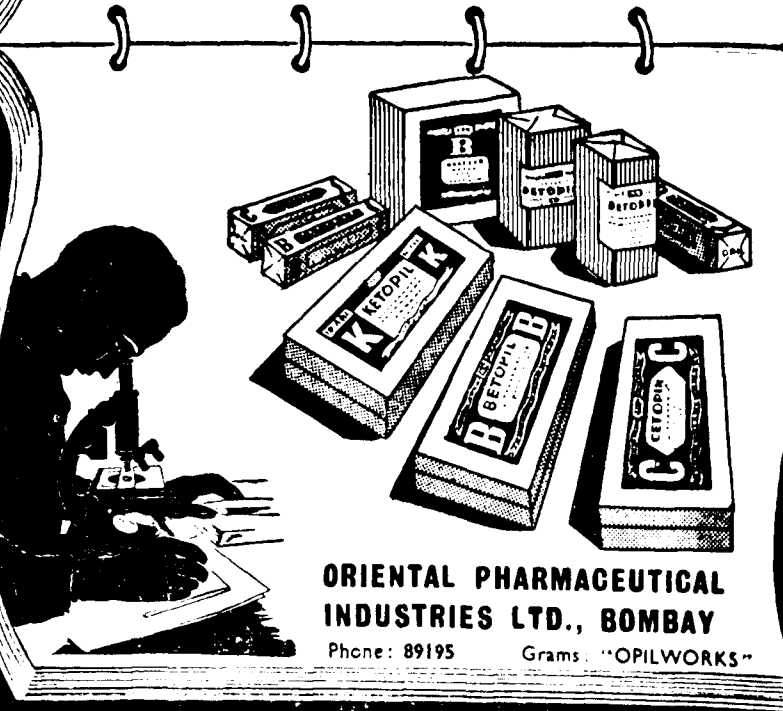
"WANDER" PHARMACEUTICAL DEPARTMENT
GRAHAMS TRADING CO., (India) LTD., P. O. Box 90, BOMBAY I.

**CONSISTENT QUALITY,
POTENCY
AND ACCURACY**

OPIL

VITAMIN PRODUCTS

Opil Vitamin products are the result of careful manufacture and laboratory tests, and never vary in their high quality, desired potency and absolute accuracy. Vitamin A (Oily Solution) ★ Betopil (Vitamin B₁) ★ Vitamin B₂ (Riboflavin) ★ Opil B-Complex ★ Cetopil (Vitamin C) ★ Detopil (Vitamin D) ★ Ketopil (Vitamin K)



**ORIENTAL PHARMACEUTICAL
INDUSTRIES LTD., BOMBAY**
Phone: 89195 Grams: "OPILWORKS"

ADARTS OPIL 37

'THIAZAMIDE'

TRADE MARK BRAND

SULPHATHIAZOLE



Sulphathiazole is one of the most active of the sulphonamide drugs at present available for the treatment of pneumococcal, meningococcal, gonococcal and haemolytic streptococcal infections.

It is the sulphonamide of choice for the treatment of urinary tract infection, staphylococcal infections and gas gangrene. It is an effective chemotherapeutic agent in acute bacillary dysentery and in chancroid.

SUPPLIES : Tablets of 0.50 Gm. Also available in paste, eye ointment and powder.

'SOLUTHIAZOLE' brand neutral soluble sulphathiazole derivative is recommended when parenteral administration is indicated.

The manufacture and sale of this product is fully protected by Indian Patents Nos 26513.39 and 26850.39 (May & Baker Ltd.), and by corresponding patents in many other countries.

Manufactured by

MAY & BAKER LTD.

Distributed by MAY & BAKER (INDIA) LTD.



Cilag Pharmaceutical Specialities

DIAZIL

2, 6-Aminobenzo-sulfo-
nylam to -4'-dimethyl-
pyrimidine
(SULFAMETHAZINE)

The chemo-therapeutic preparation best tolerated and the most certain against pneumococcus, streptococcus, meningococcus, gonococcus, staphylococcus and coli.

Indications: Pneumonia, erysipelas, cystopyelitis, cholangitis, cholecystitis, lymphadenitis, sepsis, leuka, gonorrhoea, meningitis, otitis, pyuria, slight influenzal infections, pyoderma, bronchitis, kerion celsi.

Dosage: Initial dose of 4 tablets containing 0.5 gm. followed by 2 tablets every 4 hours.

Packages: Glass-tubes of 20 0.5 gm. tablets. Bottles of 50, 250 and 1000 0.5 gm. tablets. Boxes of 5 and 25 ampoules containing 5 cc. 20 %. Eye ointment. Tubes of 10 gms.

References: A. Jannings, W. H. Patterson (Lancet 1942 Vol. 11, No. XI).—W. Macartney, Luxton & Ramsay (Lancet 1942, 30th May, P. 639).—B. A. Peters, M. L. Easby, (Brit. Med. Jour. 1943, 4311 p. 230).—O. Aschla (Practice No. 44, 1944).—K. Meier (Swiss Med. Weekly, No. 50, 1945).—W. Junet (Swiss Med. Weekly No. 3, 1946).



CILAG PHARMACEUTICAL SPECIALITIES
MANUFACTURED IN SWITZERLAND.

Sole Agents for India

THE PLASTIC & INDUSTRIAL CORPORATION LTD.

Pharmaceutical Division
P. B. 1036 Bombay I.

'Tubarine'

INJECTION OF d-TUBOCURARINE CHLORIDE

Provides a reliable and convenient means of producing profound muscular relaxation during surgical operations. Since light-plane anaesthesia usually suffices, post-operative complications are reduced, patients recover consciousness early, and are comparatively free from shock.

'Tubarine' is of great value in electric shock therapy. By its use, fractures, cardiovascular and other complications have been almost entirely eliminated and patients formerly considered inoperable have been treated with safety.

Descriptive literature available on request

'TUBARINE'
INJECTION OF
d-TUBOCURARINE CHLORIDE

A sterile, stable solution containing 10 mgm. of d-tubocurarine chloride per c.c.

Ampoules of 15 mgm. in 1.5 c.c.
Boxes of 6 and 25

Rubber-capped bottles of 50 mgm. in 5 c.c.



BURROUGHS WELLCOME & CO. LONDON

(The Wellcome Foundation Ltd. Incorporated in England)

AND COOK'S BUILDING, HORNBY ROAD, BOMBAY

Efficient

Salicylate

Medication

A LASIL' is an analgesic, anti-pyretic and sedative of established value. It provides the physician with an efficient form of salicylic medication which combines the advantages of higher tolerability and greater freedom from the possibility of unpleasant gastro-intestinal sequelae.

This tolerability is due to the fact that 'Alasil' is a combination of acetyl-

salicylic acid and Dibasic Calcium Phosphate together with 'Alocol' (Colloidal Hydroxide of Aluminium), a powerful gastric sedative and antacid.

For these reasons 'Alasil' can be administered with confidence — over prolonged periods if necessary — to children, adults, the aged, and patients with finely balanced digestive capacities.

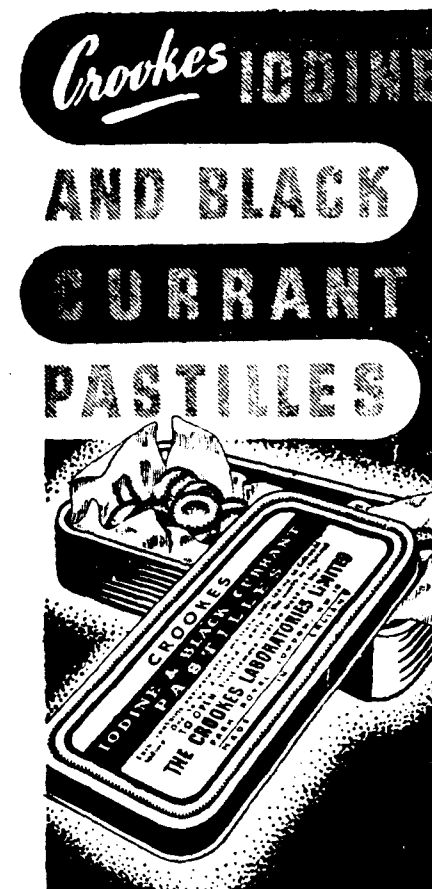
Alasil

Distributors:

Grahams Trading Co. (India) Ltd., Madras

A. WANDER LTD., 5 and 7, Albert Hall Mansions, London, S.W.7. Laboratories, Works and Farms: King's Langley, Herts, England.

GAR/11



A mild antiseptic and pleasant throat pastille containing 1/10 grain of iodine as 'Collosol' Iodine flavoured with true fruit juice and hard gum base.

A pleasant and mild antiseptic for the mouth and throat.

In 2 oz. hermetically sealed tins.

The Crookes Laboratories Ltd
(INCORPORATED IN ENGLAND)
Park Royal, London, N.W. 10
Bombay: Court House, Farnac Road
Also at Madras

BELVITA BELVITA BELVITA

Leading doctors prescribe Belvita, the new yeast extract, as a sovereign tonic for Anorexia, Loss of Vigour, Lack of Physical and Mental Power.

VITAMIN DEFICIENCY,

BERI BERI, ANAEMIA, POLYNEURITIS,
SCABIES, PEPTIC ULCERS, DISPEPSIA,
CONSTIPATION, Etc.,

are some of the complaints for which Belvita may be safely prescribed. It is pure yeast in concentrated form, containing no meat or animal fat-Rich in Vitamins of the B complex.

Made by:

The Belsund Sugar Co., Ltd., Bihar.

Managing Agents:

James Finlay & Co., Ltd., Calcutta.

Literature will gladly be sent on request to:
Belvita, Post Box No. 209, Calcutta.



ENTRIN

(IODO-CHLOROXYQUINOLINE)

A specific for the treatment of acute and chronic amoebiasis, balantidial infection and other gastro intestinal disorders.

Supply:

In tubes of 20 tablets of 0.25 gm. each

For further particulars please write to:

**STERLING
PHARMACEUTICAL PRODUCTS CO., LTD.**
CALCUTTA-25

OR,

To **Agents in South India:**
MESSRS. STERLING AGENCY HOUSE
MANGALORE.

Dr. W. C. Roy's (L.M.S.)

ROYAPILLA

(Famous since 1869)

Therapeutics: It acts as a sedative to the central nervous system and produces different degrees of hypnosis. It has a mild laxative action on the bowels and sharpens the appetite. On the cardio-vascular system it acts by lowering the increased blood pressure.

Indications: INSANITY, EPILEPSY, HYSTERIA, INSOMNIA, NEURASTHENIA AND OTHER MENTAL DISEASES.

Dose: 2 to 4 pills twice daily
or as directed by the Physician.

Samples & Literature sent on request

S. C. ROY & Co.

Manufacturing Chemists,
167/3 Cornwallis Street, Calcutta 6

"ROSBAY"

A DEPENDABLE PRODUCT FOR FILARIA

"Rosbay is a combination of Rosebay with a radioactive element as per researches of Dr. A. T. Paul and has been before the profession for the last 20 years. It is indicated in Filaria and is given orally or by subcutaneous injections. It contains no antimony, arsenic or any vaccine and in cases where these have failed, Rosbay may be tried with advantage."

—The Antiseptic.

"There is no doubt that Rosbay is worthy of trial especially as a good and reliable remedy for filariasis."

—Editor, Cal. Med. Review.

"Many prominent doctors all over India have used Rosbay specific for filariasis and claim very successful results even in the long standing cases."

Editor, Medico-Surg. Suggestions.

Literatures, etc., on request to:—

ROSBAY & Co.
185, Chittaranjan Avenue (N.)
CALCUTTA 7

"H.11" EXTRACT

FOR CANCER

"Analysis of 1371 'untreatable' cancer cases shows inhibition of all types of malignant growth in all parts of the body by H. 11."

("Medical World," 4th October, 1946.)

Supplied exclusively to the Medical Profession

Enquiries are invited and fullest information will be gladly given

**STANDARD
LABORATORIES**
SUNBURY - ON - THAMES
Telephone Sunbury 2117.

**Read for 40 YEARS
BY THE MEDICAL PROFESSION**

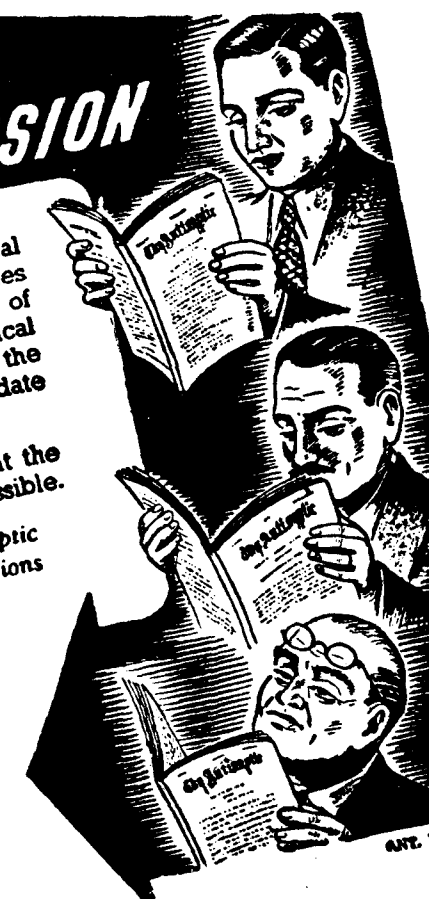
THE ANTISEPTIC is one of the oldest and foremost medical journals in India. Month by month it publishes important articles on various aspects of medicine and surgery from the pens of leading authorities. The best foreign and Indian medical journals have spoken highly of it. To the practitioner and to the student the ANTISEPTIC furnishes invaluable and up-to-date scientific information.

The rates of subscription are kept deliberately low so that the journal can reach as large a number of readers as possible.

Subscription: Rs. 7-8 a year.
Foreign 15s. a year.
Single Copy Re. 1.

The Editors of the Antiseptic gladly welcome contributions from Doctors.

The Antiseptic
323-24, THAMBU CHETTY STREET,
G. T., MADRAS



SEDATIN

BRAND

ELIXIR HYDRASTIS COMPOUND



SEDATIN is an elegant and palatable combination of the active principles of well-known and widely-used drugs, viz., Golden Seal, Black Haw and Jamaica Dogwood.

SEDATIN is offered as a reliable utero-ovarian sedative and tonic indicated in such conditions as uterine engorgement, sub-involution of the uterus, congestion of the ovaries, dysmenorrhoea, inflammation of the uterus, uterine haemorrhage etc. It is also useful for correcting the menstrual irregularities at the time of the menopause.

Composition: Each fluid ounce is equivalent to: Ext. Hydrastis Liq., B.P.C. 30 min., Ext. Viburni Liq., B.P.C. 68 min., and Ext. Piscidia Liq. B.P.C. 34 min., with Syrup and flavouring q.s.

Caution: To be taken only under the advice and prescription of a physician.

An I.T.L. Product

Manufactured by:

THE MYSORE INDUSTRIAL & TESTING LABORATORY, Ltd.,
MALLESWARAM P. O., BANGALORE

OUR EXPERTS are pioneers
in preparation of *Injectables and
Biological products in India*

★ Unquestionably
the most reliable

★ Specialties in
Chemotherapy

**SERA · VACCINES & ALL
INJECTABLE PRODUCTS**

**PROTOQUINOL · IODOQUINOL · SULPHARSAMIN
CARBOSTIBAMIDE · CARBOSULPHAN**

DOCTORS RELY MOST ON *Standard* PRODUCTS

Standard PHARMACEUTICAL WORKS LTD.
CALCUTTA

**Even with Rationing
Convalescents can now obtain Essential Cereals**

Adequate cereals form an essential element in the diet of the invalid and convalescent. With all cereals strictly rationed, the provision of the cereal part of the diet has presented doctors with a grave problem. Now, with Farex in full supply, convalescents are assured of an adequate supply of cereal in its most assimilable form.

FAREX is a combination of several cereals — wheat, oats and maize — blended so give the correct balance between protein, carbohydrate and fat.

FAREX contains added vitamin A and D in tested amounts, and a sufficiency of all the important minerals, particularly calcium and iron.

FAREX is "pre-cooked" and can be used with milk or water, or any fluid, cold or warm. For infants, invalids, and growing children, in one pound tins. Full directions for use on tin.

FAREX The pre-cooked cereal
Representatives in India
H. J. FOSTER & CO., LTD.

BOMBAY P. O. Box 202. CALCUTTA P. O. Box 1237. MADRAS P. O. Box 108. LAHORE P. O. Box 244.

NATURE backing up our research

NEXT to nature comes medical cure, often times superseding. 'Ajit' group of expert scientists have turned out medicinal products of rare quality for the prompt relief to suffering world. Doctors' co-operation with 'Ajit' brand is earnestly solicited.

Write for literature and information.

Ajit
DEPENDABLE PRODUCTS

AJIT CHEMICAL & PHARMA WORKS LTD.
SANGLI (S.M.C.)

Memorandum

Qumaresh

The specific remedy for Infantile liver: Hepatic obstruction with dropsy: Tropical congestion of liver: Intestinal troubles during dentition: Summer diarrhoea: Post-natal anorexia with gastro-intestinal irritation and diarrhoea: Anasarca: Jaundice.

Composition:—Andrographis Paniculata (Kalmegh)
Hygrophila Spinosa (Kuliakhara)
Luffa Bindal (Ghosalata)
Ptychotis (Jowan)

and other Cholagogues and Carminatives. Retains full efficacy in both Acid and Alkaline mixtures.

THE ORIENTAL RESEARCH & CHEMICAL LABORATORY LTD.,
SALKIA (HOWRAH)

ENTERO-QUINOL

Iodochloroxyquinoline

A specific chemotherapeutic agent
For the treatment of acute and chronic
Amoebic Dysentery and Intestinal Amoebiasis.

Prepared for the first time in India in our Research Laboratory

issued in

Tubes of 20 tablets of 0.25 gm. each

For further particulars, please write to:

EAST INDIA PHARMACEUTICAL WORKS LTD.
TOLLYGUNJE CALCUTTA



For
**ANTIMONY AT ITS
BEST**

Stibanate

SODIUM ANTIMONY V-HEXONATE

Salient features of Stibanate are:-
(I) Intra-muscular injection (II) Practically
painless (III) 20 m.gms. of Pentavalent Anti-
mony V-Hexonate per c.c. guaranteed
(IV) No Trivalent Antimony in solution
(V) Perfectly stable solution (VI) Each batch
before being passed is subjected to a toxicity
test on Guinea pigs with at least 400 m.gms.
of Antimony per k.gm. of body weight.
Stibanate offers antimony without Pain and Toxicity.

Gluconate Ltd.

Your patronage to our general
preparations will enable us
to work for our specialities.

135, PRINSEP STREET, CALCUTTA

THE SOUTH INDIAN EYE LABORATORY

CHODAVARAM, (VIZAG.) S. INDIA

Our new products for various Eye Diseases produced by our Research Department.
(Available for sale from 1st January 1948.)

(1) ANTI-INFECTIVE EYE OINTMENT.

Sulphacetamide 10.
Fatty Vehicle to 100.

Indicated in all infections of the Eye.

(2) ANTI-SERPIGENOUS ULCER EYE OINTMENT.

Sulphacetamide 5.
Atropine 1.
Fatty Vehicle to 100.

Indicated in all varieties of Corneal Ulcerations, specially Serpigenous type.

(3) SULPHACETAMIDE CUM COPPER EYE OINTMENT.

Sulphacetamide 5.
Copper citrate 2.
Fatty Vehicle to 100.

Indicated in Granular Conjunctivitis and Trachoma.

Prices each 100 gr. tube Rs. 1-4-0.

1 oz tube Rs. 2-8-0.

(4) ANTI INFECTIVE EYE DROPS.

Sulphacetamide 15%.

Price Rs. 2

1947 Booklet containing 80 formulae & Therapeutic Index will be sent on request.

SULFODINE

An organic Combination of Sulphur
and Iodine prepared by a process
special to M.S.C. Laboratory.

It is an efficient preparation for
both acute and chronic **RHEUMATIC**
conditions, viz., Acute rheumatic fever,
chronic Arthritis, Fibrositis, Myositis,
SCIATICA, Pleurisy, etc., etc.

Widely recommended by doctors.

For literatures please apply to:-

MEDICAL SUPPLY CONCERN Ltd.
197, Cornwallis Street, CALCUTTA.

RAYCALCIN

RAYCALCIN with GOLD
RAYCALCIN with IRON
(Injections in 5 c.c. and 3 c.c. packings)

SYRUP RAYCALCIN (oral)

Advance Therapy in Tuberculosis

FILARSEN

Specific for Filariasis

POLYTONE

A Unique Restorative & Tonic Preparation

Ask for Descriptive Literature from:-

**THE POLYCLINICAL
LABORATORY LTD.**

Head Office:- 20/22 A, B, C, Gopal Chatterjee Road,
P.O. GOSSIPUR, CALCUTTA.

UNI-CALCIN

(FOR INTRAMUSCULAR INJECTION ONLY)

An advanced therapy for Tuberculosis and other conditions where Calcium, Choline, Liver extract and Vitamins are indicated.

Each 5 c.c. ampoule contains the following:

Calcium Gluconate	...	10%
Whole liver extract (with anti-anaemic principles) obtained from fresh young healthy sheep's liver equivalent to	...	30 gm.
Choline Chloride	...	1/12 gr.
Thiamine hydrochloride (Vitamin B.)	...	2.5 mg.
Riboflavin (Vitamin B.)	...	0.30 mg.
Ascorbic Acid (Vitamin C)	...	2.5 mg.
Nicotinic Acid Amide	...	5 mg.

The preparation has been preserved in a most suitable pH. to ensure maximum potency and stability of all the above ingredients. Available in 5 c.c. and 3 c.c. sterile ampoules

For detailed literature, please write to:

UNIVERSAL PHARMACEUTICAL WORKS LTD.
11/1, GARCHA 1ST LANE, BALLYGUNGE
CALCUTTA, 19

DEPENDABLE PRODUCTS.

TRACHORINE. Regd. No. 11410 } Cures tra-
& } choma its
LEUCOMINE. Regd. No. 11411 } complica-
tions and sequelae. Leucamine more useful
to clear opacities.

ASTHAMORINE Regd. No. 11415. Cures as-
thma & bronchitis.

LEPROSCINE Regd. No. 11416. Cures Lep-
rosy anaesthetic or Nodular by oral use.
No injections needed.

TOOTHORINE. Regd. No. 11414. Cures pyor-
rhoea. Ideal for daily use.

RINGORINE. Regd. No. 11412. Cures ring-
worm & allied skin diseases.

SHISHUKALYAN. (Gripe mixture) Valuable
for various ailments of infancy and child-
hood.

LEUCODERMINE, Cures Leucoderma.

HEALING BALM, Cures wounds & Burns.

Free samples on request.

The Jawahir Chemical Works,
AGRA.

DALIGUNJ, LUCKNOW.

Indian Medical Journal

(Journal of the All-India Medical Licentiate's Association)

Vol. 42. Madras: February 15, 1948. No. 2

CONTENTS

OUR MONTHLY SURVEY

Prohibition—Alcohol in Therapeutics—
Alcohol and Prostitution—Prohibition
and its Advantages ... 25

ADDRESSES AND ARTICLES

The Diet Survey of a group of Residents
in the Urban Area of Delhi ... 26
By G. S. Saharia

Puerperal Sepsis and its Treatment ... 28
By Dr. Ganja Saran Lal

Public Health and Co-operation ... 30
By Dr. Lalit Barooah

An Afebrile Case of Cerebro-spinal
Meningitis with severe Generalised
Convulsion and Obstinate Delirium ... 31
By Dr. S. C. Banikya, L.M.P.

SELECTED ARTICLES

Congenital Malaria in two Infants ... 32
By K. C. Chaudhri

Ophthalmology during the War and in
the Future ... 34
By Stewart Duke-Elder

Gastrectomy for Peptic Ulcer—selection,
Management and Care of Patients ... 38
By M. Gamal Eldin, M.B., F.R.C.S. (ED.)
F.R.C.S. (Eng.), and John W. Warriack,
M.R.C.S., L.R.C.P., D.A.

A SPECIFIC REMEDY FOR

DISPEPSIA **DIARRHOEA**

SPRUE **ACUTE**

CHRONIC **AMOEBI**

DYSENTERY **INTESTINAL**

AMOEBIASIS

Packings of
50, 100, 200
are available
Price list, literature,
Professional
Samples sent
free on request
without obligation—
THE HIMZINE PHARMACY LTD. BANGGA.

Indian Medical Journal

(Journal of the All-India Medical Licentiate's Association)

Vol. 42. Madras, February 15, 1948 No. 2.

President

Dr. M. D. Pustake, Gwalior.

General Secretary

Dr. V. D. Sathaye, 502, Narayanpeth, Poona City.

Treasurer

Dr. Khan Chand Wobra, Civil Hospital, Hoshiarpur (Retiring).
Dr. P. R. Trivedi, Dalia Buildings, Ellis Bridge, Ahmedabad 6.
(Elected newly but not yet assumed charge).

Finance Secretary

Dr. G. K. Kulkarni, Congress Nagar, Nagpur (Retiring).
Dr. C. Nathamuni Naidu, Ambur, Madras.
(Elected newly but not yet assumed charge).

Managing Editor

Dr. A. Viswanathan, Mylapore, Madras (Retiring).
Dr. A. N. Roy, P. 27, Princep Street, Calcutta.
(Elected newly but not yet assumed charge).

Subscribers and members of the Association are requested to remit their subscriptions or membership fees for the year 1948 to the Honorary Treasurer, Dr. P. R. Trivedi, Dalia Buildings, Ellis Bridge, Ahmedabad 6. If the remittance is not received by the end of this month, he will issue V.P.Ps., which may kindly be honoured. No further remittances of subscriptions should be sent to the office of the Journal as notified previously, since the Journal is under arrangements for transfer to Calcutta.

Changes of Address should be communicated to the office of the Journal, Mylapore, Madras, until further notice.

OUR MONTHLY SURVEY

Prohibition.—Thanks to Mahatma Gandhi, the campaign in favour of total prohibition of manufacture and sale of intoxicating liquors, such as toddy and arrack, has culminated in Governmental action. All the Provincial Governments have embarked on a graded scheme of prohibition and they hope that within the next five years it will be completed. Of all these Governments, that of Madras has been daring in encompassing nearly half the province within the compass of Prohibition Act during last year. From the reports so far published, it has been quite successful. Boot-legging and manufacture of illicit liquor may still be going on, but these will be controlled and ultimately prevented. We wish the Government of Madras every success in this great endeavour, while at the same time we hope

that other provinces also will rapidly extend their areas of prohibition. Of course, there is bound to be a great loss of excise revenue, but this is offset by better health and prosperity of the labourers and their families.

Alcohol in Therapeutics.—Time there was when in every big hospital in our country each ward had a bottle of brandy to meet any surgical or medical emergencies. Fortunately, professional opinion slowly crystallised itself and asserted that stimulants like alcohol are in no way necessary in the treatment of any disease. In 1917, the American Medical Association passed a resolution opposing the use of alcohol as a therapeutic measure and declared in no uncertain terms that, as a therapeutic agent, it should be discouraged. Very few hospitals in our country stock brandy for medicinal use nowadays.

Alcohol and Prostitution.—If only reliable statistics are available one can co-relate prostitution with alcohol and say that alcohol in 99 per cent of people who take it leads them to a life of evil with the inevitable consequences of venereal infection and gradual but certain decay of the community. There is no doubt in our mind that once prohibition becomes total and established among the masses, prostitution would be easily and successfully eliminated.

Prohibition and its Advantages.—It would rescue thousands of families from destitution and reduce the number of suicides arising from alcoholism. The money saved from drink will be spent on food-stuffs, clothing and better dwellings, thus improve the health and promote the happiness of individuals and families. Attendance at factories and mills would be more regular, leading thus to larger production. There will be less crime and much less domestic quarrels. Prohibition therefore is perfectly justifiable both from the individual and national point of view, and advantages accrue to both, individuals and nation.

If India succeeds in enforcing prohibition—our people are quite willing to help the Government in this respect—it would set an example to the Western countries where alcoholic beverages are taken as a routine without any stigma attached to this habit, except intemperance. That would be India's biggest contribution to world's happiness.

ADDRESSES AND ARTICLES

The Diet Survey of a group of Residents in the Urban Area of Delhi

BY

G. S. SAHARIA,

Department of Chemistry, University of Delhi.
(Formerly Parlakimed Research Scholar, Nutrition Research Laboratories I.R.F.A., Coonoor, S.I.)

The subject of diet survey has not only been engaging the attention of the nutrition and public health workers but in the recent times it has drawn the attention of almost every Government. The Planning Section of the Food Department of the Government of India have been all along making steady progress in this direction. Such surveys have been of immense value for planning a national diet as in fact a majority of the population had not been having a square meal let alone a balanced diet. This subject is important from more than one aspect especially about the equal distribution of the available food-stuffs, as the requirements of the needy always fall short of the optimum. Such surveys shall go a long way in drawing up plans for providing people with more food, better food and balanced food.

The primary workers in this field in India have been those associated with the Nutrition Research Laboratories, I.R.F.A., Coonoor. Considerable work has been carried out by Aykroyd and his co-workers in the Madras Presidency, Mitra in Bihar and Bashir Ahmed in Bengal and after careful scrutiny they have suggested some optimum diets for those surveyed areas.

Diet surveys in the rural areas of the Delhi Province were carried out by Shourie; Najafgarh, a village seventeen miles south-west of Delhi, was the place of investigation. No figures have so far been available about the dietary habits of the residents of the urban areas. In order to collect some valuable information on the subject and also looking to the present day difficulties in the procurement and fair distribution of food-stuffs, this investigation, the first of its character, was undertaken by the author.

A Delhi student's hostel was selected as the place for the investigation, with a view to discover the defects in diets if any and to indicate the change and improvements necessary from the standpoint of nutrition. The survey was extended for a period of ten days, of a mess run by the inmates of the hostel, which consisted of adult members the ages of the subjects lay between 18 and 22 years. Their general health appeared to be fair. It may not be out of place to mention that a single diet survey covering such a short period might not give a very correct impression of the dietary habits throughout the year because of seasonal variations. It is, therefore, proposed to

repeat the survey at a different period of the year, as it would be as valuable as an entirely new investigation.

The technic of the method consisted in weighing the raw edible portion of the foodstuffs, in the mornings and evenings; the number of the students partaking each meal was recorded every day. The average intake at the end of the period was taken and entered in column 1 of the Table I, which can be compared with an average intake calculated on the basis of a well-balanced diet (Health Bulletin No. 23) in column 2.

In this investigation, the diet of the inmates was purely vegetarian; it is also proposed to study the diet of the non-vegetarians.

The usual practice prevalent, in diet surveying, for weighing the raw food materials especially with the vegetables has been to weigh them as whole without removing the peels, etc., and this is likely to lead to conclusions expected otherwise. To get a correct idea on the point, actual weights of the food materials like potatoes, peas, beans, etc., after peeling off the skin were recorded.

Table I

Name of Food-stuff	Average consumption per day per adult in ounces.	Average consumption per day per adult recommended in ounces.
Cereals	12.23	15
Pulses	2.29	3
Vegetable—		
(a) Leafy	0.22	4
(b) Non-leafy	11.68	6
Vegetable oil	1.20	2
Fruits	1.90	2
Milk and Milk products	5.85	8
Total...	36.37	40

According to the above average intake per adult per day entered in column 1, the proximate principles have been calculated and arranged below in column 1 of the Table II. The figures in columns 2 and 3 show the standards of the proximate principles recommended by the League of Nations Health Committee (1936) and the Indian Nutrition Advisory Committee (1945) respectively.

Table II

Protein—			
(a) Animal	4.9 gms.	73 gms.	83 gms.
(b) Vegetable	70.80 gms.		
Fat—			
(a) Animal	4.96 gms.	74 gms.	
(b) Vegetable	31.68 gms.		
Calories	1,902.77	2,500	3,000
Carbohydrates	373.68 gms.	408 gms.	
Calcium	0.46 "	1.02 gms.	1.00 gms.
Phosphorus	0.46 "	1.47 gms.	
Iron	15.71 mgms.	4.400 m "	20-30m gms.
Vitamin-A	1159.20 I.U.	Over 7,000 I.U.	3000 4,000 I.U.
Vitamin-B	413.46 I.U.	Over 400 I.U.	1.0-2.0 mgms.
Vitamin-B ₂ —			
Complex (a)			
Nicotinic acid	10.63 mgms.	Over 25 mgms.	Estimated at 15-23 mgms.
(b) Riboflavin			2.2-3.3 mgms.
Vitamin-C	88.46 mgms.	30-50 mgms.	50 mgms.
Vitamin-D			400-800 I.U.

Discussions

On comparing the columns 1 and 2 in Table I, the first impression which is formed is that the quantity of food consumed is very much insufficient and hence the calorie requirements are of an extremely low order than the optimum required.

The main item of the diet among the cereals is wheat and this too is much below the needs. With this intake of calories the requirements of protein comes within range of the recommendations of the League of Nations Committee on Nutrition but falls short of those of the Indian Nutrition Advisory Committee, also the animal protein should form one-fifth the total quantity as the inclusion of the animal protein in the diet is very desirable especially for the growing boys.

Fat, phosphorus, calcium, iron and vitamins intake in general fall much below the two standards and their deficiency can be made up if the calorie intake is increased, so as to make the diet well balanced, as the one above is far from it. According to Sir John Boyd Orr, the well-known British authority on nutrition, "If one takes enough calories-minerals, vitamins etc., take care of themselves." This evidently means that every care of the calories needed for the maintenance and well-being of the body should be ensured.

Of the other food-stuffs, pulses are being consumed almost in the right proportions; the total quantity of vegetables taken is satisfactory except that the intake of the leafy vegetables is almost negligible.

Among the vitamins, Vitamin A consumed is nearly one-third of the recommendations of the Indian Nutrition Advisory Committee and very much less than those of the League of Nations Health Committee, mainly due to the reason that vegetable ghee is being used which does not provide any vitamin A. Owing to the use of whole-wheat flour the diet seems to provide vitamin B, in the required dosages; the intake of Vitamin B₂ complex is low. However, Vitamin C is taken in the right quantity.

Some of the inmates, it appears, make up the deficiency in their calorie requirements by supplementing their meals from outside sources, as the low figure of calories cited above are quite incompatible with the needs of the young students who are engaged in their hard studies. Those who cannot afford to add to their hostel diet by taking extras, do not seem to satisfy their needs and hence are likely not to have a sound health. With such a low standard of dietary intake it is far from expected that they can do well at their work. This habit of supplementing from outside not only tells upon the purse of the poor parents but endangers the health of the inmates as they are open to outside infection.

Suggestions

This deficiency can be made up, if the hostel provides firstly with enough food to satisfy the calorific needs of the individuals and secondly that the various essential and necessary food factors are not missed. If instead of serving two meals alone, the morning breakfast and tiffin in the afternoon,

comprising of broken wheat porridge and cheap fruits (like guavas, cucumbers, etc.) is included, this would not only satisfy the dietetic requirements but go a long way in saving the inmates from certain infections and securing a wholesome and palatable food at a considerable low cost.

It may also be suggested that the inclusion of roasted groundnuts, sprouted green-grams, skimmed milk, in case whole milk is not available and also because of its prohibitive price, would profitably add to the quality of the diet. It must be, however, emphasized that skimmed milk is as rich in good proteins and minerals as whole milk and its use in absence of whole milk should be advocated to dispel the ignorance and superstitions prevalent among the public in general. Butter milk of good quality is also useful source.

Fat being an important dietary because of its immense value to the body, should form a part of one's daily diet. Animal fat such as butter or ghee contains Vitamin A, whilst most vegetable oils contain no vitamin A. Pure butter or ghee shall be a very useful addition if skimmed milk is being used.

The need for the inclusion of green leafy vegetables being highly nutritious has been already emphasized as these ensure a supply of carotene (Pro-vitamin A) and Vitamin C.

The methods of cooking have a greater relationship to the quality of food as this along with the washing of the vegetables (especially after cutting), rice, etc, bring about certain loss of the proximate principles and every care should be taken with respect of the above two factors. Rice should not, as far as possible, be washed with water as this removes the important food factors present therein.

It may, however, be suggested that a whole-time man trained in the methods of nutrition may be profitably employed to look after the diet of the hostel inmates. This is being done by one of the local institution, and it is satisfying to note that the inmates of the hostel are being provided with a well-balanced diet in the form of two meals and morning breakfast under the most hygienic conditions and at a strikingly low cost. (Private information.) Such attempts should be made in fact by all the hostels to combat the ignorance and prejudices prevalent about diet and improve their dietary standards.

References.

1. Aykroyd and Krishnan. 1937. *I. J. M. R.* 24, 3 p. 667.
2. League of Nations Health Organisation. 1932. *Quart. Bull.* 1 p. 476.
3. Health Bulletin No. 23. 1941. *Govt. of India Publication.*
4. Report of the League of Nations Tech. Commission on Nutrition, 1936.
5. Ranganathan, Sundararajan and Swaminathan. 1937. *I. J. M. R.* 24, p. 689.
6. Shourie 1939. *I. J. M. R.* 26, 4, p. 907.
7. Saharia 1943. *Proceed. Ind. Sc. Cong.*
8. Saharia 1945. *Journ. Bom. Univer. Vol. XIII Part IV.*
9. Indian Nutrition Advisory Committee Report 1945.
10. Saharia 1947. *Proceed Ind. Sc. Congress.*

Puerperal Sepsis and its Treatment

BY
DR. GANGA SARAN LALL,
M.O. I.C. Gopalpur Dispy,
(Post Gopalpur, Dt. Patna.)

Definition.—"Any febrile condition occurring in a woman within 21 days of child-birth or miscarriage."

As a matter of fact the pulse of the parturient woman is slower than normal and the temperature may temporarily rise to about 100° F. on the 1st day after delivery as a rule in all cases, but if the raised temperature continues for 4 consecutive days or onward and not coming below 100° F., it should be suspected as puerperal pyrexia.

As the sepsis occurs after child-birth or miscarriage it is wise to divide cases into two categories: (1) Post Partum and (2) Post Abortum according to whether pregnancy was terminated following or prior to the 28th week of gestation.

Aetiology.—This is a vast field comprising all factors contributing to physical and psychological ill-health during pregnancy and therefore involving social and economic factors. As regards the infecting agents there are two main sources of sepsis, namely:—

Extrinsic.—Those infections which have been introduced into the genital tract of parturient woman from some outside sources through midwife, doctor, Dhais or relations. Recent studies have shown that streptococcal infection in the puerperium can often be traced to the attendant who is a carrier of haemolytic streptococci. Sometimes the infection is from the patient's own nose or throat.

(2) Intrinsic.—They are derived from the patient's own bacterial flora and are not introduced from outside. This intrinsic infection is facilitated by (a) laceration of the genital tract with consequent devitalization of tissues (more likely in primipara), (b) Retained placenta, partial or complete, after abortion or full term delivery.

Bacteriology.—Organisms of puerperal sepsis occur in the following order of frequency.

(A) Aerobes

- (1) Haemolytic streptococci.
- (2) Staphylococcus aureus.
- (3) Bacillus coli.
- (4) Non-haemolytic streptococcus.

(B) Anaerobes

Sporing:—

- (1) B. Welchii—chiefly.
- (2) B. Tetanus—rarely.

Non-Sporing:—

Non-haemolytic anaerobic streptococcus. In post partum sepsis the chief infecting organism is streptococcus haemolyticus and in post abortum anaerobic organisms are more common.

Routine Investigation.—Early investigation is of paramount importance. Prompt investigation is possible only where the laboratory help is available. In rural areas it is very difficult to obtain laboratory assistance. No time should be lost in laboratory diagnosis where laboratory is at hand. As a rule and for thorough investigation the following should be done:—

- (A) 1. Blood culture for organisms.
2. Differential and total counts and haemoglobin index.
3. Wassermann reaction.
4. Complement fixation test.

(B) Patient is put in lithotomy position and examined under complete surgical asepsis for discharges and tears; a vaginal speculum should be introduced and then inner parts inspected for the condition of the endometrium, presence of retained lochia and the position of the uterus. Preferably the discharge should be taken with a swab and examined under microscope.

(C) A catheter specimen of the urine should be taken and examined.

(D) The pelvis should be palpated, any tenderness and swelling demands special care.

(E) Obstetric history should be taken.

(F) History of past illness such as Kala-azar, Malaria, Dysentery, Gonorrhoea, Syphilis, T.B., should be taken and abdomen palpated for enlargement of spleen and liver.

Clinical Grades of Puerperal Sepsis.—Always keeping in mind whether the case is post-partum or post-abortion, the following clinical grades are made out:—

(1) **Sepsis of genital tract.**—Under this head we come across with (a) uncomplicated genital tract sepsis and (b) genital tract sepsis complicated with pelvic inflammatory states, or general peritonitis or septicaemia or all combined together.

(2) **Uncomplicated genital tract sepsis.**—About 70 per cent of cases fall into this category—that is to say, there is some form of sepsis of perineum, vagina, cervix and/or uterus. There is no spread of infection beyond the genital tract. In some cases there may be latent or subacute infection of urinary passages.

(3) **Complicated genital tract sepsis.**—Here the cases are more or less of some duration and in addition to the genital tract sepsis there is pelvic cellulitis, tubo-ovarian abscess, general peritonitis or/and septicaemia. These are all mostly due to chronic ill-health. In these cases the patients are generally restless—sometimes sweating profusely. In peritonitis the pulse rate rises and abdomen becomes doughy and tender, there is intense thirst and all the signs and symptoms of toxæmia are present. About 75 per cent of the cases of pelvic cellulitis and pelvic peritonitis go on to abscess formation and the pouch of Douglas becomes full with pus. Septicaemia is a very grave complication and is mostly caused by staphylococcus aureus, streptococcus haemolyticus and non-sporing anaerobes practically resistant to sulphonamide therapy.

Extra genital sepsis.—Under this head we may include (a) sepsis of the urinary tract and (b) sepsis of the breast (mastitis).

Sepsis of the urinary tract.—Is frequently associated with genital tract sepsis and sometimes it is difficult to say which feature predominates. The

majority of infections of the urinary tract are virtually a flare up of a pre-existing infection which either originated during pregnancy or is a chronic condition. Baird (1935) has made a close study of infection of the urinary tract during pregnancy and showed that the growing uterus at the 6th and 7th month of pregnancy tends to press the right ureter where it crosses, resulting in a degree of stasis sufficient to favour infection.

Primary infection of urinary tract in the puerperium occurs in a small number of cases and is probably due to a loss of muscular tone in both renal and genital tracts following the termination of pregnancy. Baird noted that the incubation period in such cases is usually prolonged. *Pyrexia occurring for the first time between the 8th and the 10th day of the puerperium is therefore suggestive of infection of urinary tract.*

Sepsis of the Breast.—Infection of the breast occurs independently of genital tract infection and is almost due to staphylococcus aureus. It has been traditionally accepted that the infection gains entrance through cracks or abrasions around the nipple. Experimentally it has been seen that more than half the milks examined from normally lactating breasts gave growth of staphylococcus aureus in numbers ranging upto 100,000 organisms per c.c. The organism is often present in the breast milk as a harmless contaminant until some predisposing factor, e.g., milk stasis through incomplete emptying, blockage of the ducts from trauma, from massage or breast pump, allowed infection to occur. The cracked nipple is often an antecedent factor, not as is generally believed by facilitating entry of infecting organism but by contributing to milk stasis because of the pain of suckling.

About half the cases of mastitis are non-suppurative. A large indurated mass forms and this is slow in subsiding. The remainder, which show suppuration, require incision and drainage.

Prophylactic treatment.—If we go by the saying "Prevention is better than cure", such malady will be rarely seen. The value of prophylactic measures must be emphasised in the treatment of puerperal sepsis. Any factor of ill-health during pregnancy is a possible predisposing factor to sepsis during puerperium. Efficient antenatal care is very important. Dental sepsis, urinary tract sepsis and anaemia should be corrected. Special care of the breasts, bowels, and adequate sleep is of paramount importance. Anaemia is still far too prevalent and we feel more could be done to correct it.

During pregnancy urine should be examined frequently for pathological conditions. Pickay, Wills and Brigham (1942) have brought forward evidences that anaemia in babies is partly due to anaemia in mother during pregnancy. A balanced diet is essential during pregnancy and puerperium. The daily caloric requirement during late pregnancy is about 2,660 and during lactation 3,220. Vitamin intake in sufficient quantity is also essential. There is no surety that introduction of infection from without can be arrested by early use of sulphonamides. It is only in the early stages of infection that sulpha drugs are likely to be effective.

Curative—(1) General.—This comprises mainly of good nursing and symptomatic treatment. The patient should be put in Fowler's position. This helps drainage of the discharges.

Special attention should be given towards the daily opening of the bowel.

Temperature, pulse, respiration should be charted daily both evening and morning.

When the toxic symptoms arise the I. V. injection of glucose (25 per cent) 25 c.c. or 50 c.c. (as the case may be) with redoxon or cetamid should be given. This may be given twice daily if the indications are such.

Hydrotherapy is very useful. Plenty of fluid by mouth should be advocated. Sponging with tepid warm water should be done once or twice daily according to the severity of the case. Glucose water should be given freely by mouth.

Cardiac and respiratory stimulants as coramine or campher in oil should be given to maintain the tone of the heart and lungs.

If the patient is restless and has no sleep, she should be given a dose of sleeping draught at night as follows:—

(2) **Specific.**—No time should be lost in starting the specific treatment. A reliable preparation of sulphonamide should be chosen. I prefer sulphadiazin and give it in good doses. If there is nausea and vomiting, nicotinic acid may be given, but I have found calcium gluconate intravenously more effective. Nicotinic acid and Calcium gluconate may be combined together if desired. No use pushing the sulpha drug beyond a total of 40 gm. if no response is forthcoming.

Diazil.—(Cilag, Switzerland) is a new product. Chemically it is 2-p-Aminobenzoyl sulphamoyl amino-4,6-dimethylpyrimidine. I have tried it in one well established case of puerperal sepsis and it proved very beneficial. The temperature came down after two days and all the toxic symptoms began to disappear after the administration of 12 tablets only.

It should be given as follows:—6 tablets (5 gm. each) at once followed by 2 tablets every 4 hourly till 30 gm. is given. No reactions were noted.

Along with the sulphonamide therapy, it is very essential to give an alkaline mixture.

Penicillin.—It has been advocated that when the sulpha drugs fail then Penicillin should be given. But in my opinion it is useless to waste time and is better to start Penicillin from the very beginning where facilities exist for its storage.

The usual method of giving Penicillin is through the intramuscular route. The usual dose is 25,000 units in 2 c.c. every 3 hours day and night. The total dose should be 10 to 15 lakhs units.

Recently E. R. Squibb and Sons (New York) has presented Penicillin in oil and wax (300,000 units). One injection of Penicillin in oil and wax is equal to 8 injections of Penicillin in saline solution. This maintains the therapeutic blood level up to 24 hours. This preparation is costly no doubt but following are the advantages:—

- (1) No refrigeration is required.
- (2) Unbroken rest for the patient.
- (3) Easy to administer—can be used in rural areas without any botheration.

Local Treatment.—(1) If there are any retained products in the uterus they should be removed manually or by ovum forceps under complete surgical asepsis.

(2) In case when there is profuse and foul discharge vaginal douche should be given twice daily and when it is less only one douche daily is sufficient. Good result can be obtained by douching with a solution containing 3 c.c. of penicillin (500 units in each c.c.) and 3 pints of sterile distilled water once a day as the canal is patent. Intra-uterine douche should be given when the uterus is also affected.

(3) If there is any tenderness and swelling over the lower abdomen or the pelvic region hot compresses should be frequently given.

(4) If the pouch of Douglas is full with pus, it should be let out.

(5) In post-abortion sepsis Ergometrine 0.5 mgm. or Erbolin capsules, three times a day, should be given for a few days so that the uterus may expel its contents. If this fails manual removal is indicated but no force should be applied. If there is cystitis it should be treated properly.

Public Health and Co-operation

BY

DR. LALIT BAROOAH,

Madhab Dewa Medical Hall, Nowgong.

It is a well-known maxim that there is 'no achievement in the world that is equal to perfect health'. If we are to aim towards this goal, the Public Health Department, the Local Bodies, the Medical Practitioners in general and other departments of the Government must realise that no progress can be made unless and until all co-operate with the Hygienist.

Signs of progress are not lacking in our country and when I think of opposition to Public Health measures I had to encounter in my early days of practice in my own native place, and compare it to the attitude of the people now, I cannot but feel hopeful. But preventive medicine is not a watertight compartment and it is not a small science independent of other medical sciences, nor is it one that can advance without the support of the man in the street.

Public apathy formed a bar to progress twenty years ago when I first began practice, and is still the obstacle we encounter now. The belief still persists that every man's health is his own affair, and that the conservancy of his house is the concern of the sweeper only. It is to combat such notions that lectures and exhibitions dealing with public health are needed. I like to mention in passing that the recent God-madecalamity at Nowgong in the way of devastating floods taught people to have common

kitchens and they were trained to use 'Bore-hole latrines'. It is really gratifying that the people have carried these ideas to their respective homes and thus learnt something at least out of this calamity.

We shall never have a substantial advance until the people have begun to recognise that laws of health are binding on them individually; it is as much for their own sake as for the sake of the community and the country in which we live.

Co-operation between Local Bodies

It is a well-known fact that the disease is no respecter of parochial boundaries. Some disease like cholera, dysentery, enteric fever, influenza, malaria, tuberculosis, small-pox and the venereal diseases spread widely and quickly. In dealing with them it is the duty of the Local Authorities to remember that if they are not completely stamped out, the places where they have been prevailing will serve as "Distributing Centres" to other places. The following extract from a letter written to the writer recently by Dr. Ukil, Director, Tuberculosis Research, Indian Research Fund Association, is enough to show the truth of my statement:

"I have reason to believe that Tuberculosis is fast spreading in Assam into areas which were very slightly or not at all invaded by the carriers of infection some years ago".

Kala-azar which travelled from Garo Hills and ravaged the whole district of Nowgong and the subdivision of Golaghat is a thing of living memory. The pandemic of Influenza of 1918 which spread into most parts of the globe, is an example of how certain diseases spread quickly. Not many years ago, I advocated the use of 'Fly proof netting in fish and meat markets' and 'Bore-hole latrines' in the suburbs and urban areas in Assam. But none heeded except a very few. This provides a sad example of a town serving as a disseminating centre of diseases due to the local authorities not realising their responsibilities towards the citizens. Many instances may be cited, there will not be space enough in the paper.

A perfect coordination of arrangements with mutual co-operation is essential to preserve the health condition of the people. To promote the interest of Public Health, co-operation between citizens and sanitarian and between the different local authorities and the Government is essential.

Scope of the Medical Practitioners in promoting the interests of Public Health

So far I have dwelt on the need of co-operation between people, Local Bodies and the Government. But those members of the medical profession who have selected the 'Curative' and not the 'Preventive' branch can also play a very important part in promoting the interest of Public Health. The general practitioners are more in touch with the people than the sanitarian, and he exercises a greater influence over them, and if every doctor would take the trouble to bring the preventive side of the disease he has been called in to cure, to the notice of the patients, and impart a few simple instructions on personal and domestic hygiene to those people among whom he works, he would render real humanitarian service in promoting Public Health progress. This

does not imply that medical practitioners are indifferent to the laws of hygiene or to the preventive side of the diseases. It is not necessary that medical practitioners should be vociferous in order to propagate the gospel of Public Health. Tactful and humorous ways would achieve the object, and that is what is emphasised here.

Main Branches of Preventive Medicine

Preventive Medicine may conveniently be divided into two main Branches:—

- (1) Research work.
- (2) Field work.

The 'Field Men' give help to and take help from the 'Research men' and their activities are interdependent. A good deal is being done to co-ordinate the work of these two branches but greater co-operation between them would undoubtedly further the interest of Public Health.

Co-operation between Governments

If the ravages of different diseases are to be controlled and the health conditions of different districts are to be improved, Public Health must be looked upon as a national and international concern, and to promote it all the component parts of the country and Governments should co-ordinate their activities.

The case of Public Health from the point of view of the State is a vital factor in the welfare of the country. But it has been moving slowly—far too slowly—and it has not yet been recognised that the greatest need is the machinery that is necessary for carrying out Public Health measures.

Outlook

Some people are apt to take a very gloomy view, particularly in Assam, when the needs of Public Health are mentioned; but even at present, considering the progress made in recent years, there is no cause for despondency.

In India, the death rate among the British Troops has been reduced from 20.37 per thousand in 1859 to 6.72 in 1931. During the same period, the death rate among Indian Troops has fallen from 19.73 to 9.81 per thousand. Then why is it the same is not achieved in civil life?

The figures given above are facts which show that when substantial efforts have been made to promote hygienic conditions and to control diseases, those have always been crowned with success.

Of all the different bodies and individuals on whom Public Health progress depends, the most important is "the man-in-the-street". It is with his money that works of Public Health utility are carried out and they are for his benefit, and these activities cannot achieve the success unless he is a willing partner in promoting these. It is for him to realise that it costs far less to keep well than to get well, and that good health depends on hygienic habits and good sanitation, and good sanitation has to be paid for.

Habits of mind are given greater importance than the habits of living, and the greatest obstacle in the way of sanitary progress in the country is the habit of attributing diseases to some outside power. Hence if an illness visits a place the man in the street

reasons out that since it occurred without his will and against the wishes of himself and those around him, it must be the result of some Supernatural Agency! With such a line of reasoning nothing is easier than to look upon diseases and death as things beyond human control. The only way to cure such habits of mind is by showing to the man in the street what causes disease and how they can be prevented; what are the results of bad sanitation and how they can be avoided.

The means by which such Public Health Propaganda work can be carried out are:—

1. Through articles on Public Health matters in popular news-papers and magazines.
2. Through Health Exhibitions.
3. Magic Lantern Demonstrations, Cinema Shows and Public Lectures.
4. Through placards and posters by distribution of leaflets.

Teaching of Hygiene in Schools

While these means are of use in propagating knowledge on questions concerning Public Health among the adult section of a community, yet in order to establish a lasting influence it is necessary that Hygiene should be taught in all Primary and Secondary Schools. This result will depend not only on the form in which the knowledge is imparted but also on the men selected to impart it. A teacher of Hygiene who uses the class room as a spittoon would be of as little use as a "living skeleton". One useful way of spreading knowledge on Public Health matters through schools is by distributing booklets dealing with such matters among the growing children and make them the subjects of class lessons, and allowing children to take them home to provide a topic of discussion in the family circle.

An Afebrile Case of Cerebro-Spinal Meningitis with severe Generalised Convulsion and Obstinate Delirium

BY

Dr. S. C. BANIKYA, L. M. P.,
Karimganj, Dr. Cachar (Assam)

Case History.—Patient aged 40 years. Muslim Bengali, male, well built muscular body. History of low fever with severe headache and vomiting for 4 days. The attending doctor treated the case with parenteral and oral Quinine. This treatment caused remission of fever. I was called to see the patient on 12-5-47 at 2 P.M.

Inspection.—The patient was found in unconscious state with severe generalised convulsion and obstinate delirium. Eye, half closed. Cold, clammy sweat all over the body. Offensive breath. Head retracted. The patient was lying in lateral decubitus.

Physical Examination.—Pulse 104 per min. Resp 32 per min. Temp, 97 F. Tongue heavily coated. Conjunctiva severely injected. Eyeball rolled up. Corneal reflexes sluggish. Kernig's

Sign strongly positive. Abdominal muscles rigid. Superficial reflexes absent, Knee Jerk not elicited. Lungs—Moist sounds heard.

Heart—Nothing abnormal detected. Spleen and Liver—Not palpable.

Bladder—full. No urine passed for 24 hours. Intestine—Distended. No stool for 3 days.

The patient could not even swallow any fluid.

Treatment 1st day 12-5-47 at 3 P.M.

Soluseptacine 20 per cent 10 c.c.

Glucose 20 per cent 75 c.c.

Hexamine 40 per cent 5 c.c. I.V.

Hyoscine Hydrobrom 1/100 gr. in 1 c.c. and Atropine Sulph 1/100 gr. in 1 c.c. injected subcutaneously. Bladder catheterised and a Glycerine Enema was given.

The following mixture was also given:—

Hexamine— $\frac{1}{2}$ dr.

Sodi Bicarb— $\frac{1}{2}$ dr.

Pot. Citras-20 gr.

Pot. Bromide-15 gr.

Syr. Aurantii-1 dr.

Aqua—ad 1 oz.

T. D. S

Cibazol—12 Tabs. Three tablets every four hours.

2nd day:—Patient did not show any improvement. Temp-96 F. Pulse-110 per min. Resp-32 per min.

Glucose 25 per cent 50 c.c. followed by Soluseptacine 20 per cent 10 c.c. were injected I.V.

3rd day:—No improvement except with great difficulty patient could swallow liquid. He was given Cibazol again-3 tablets every 4 hours and Hexamine mixture t. d. s.

4th and 5th day:—As on 3rd day.

6th day:—The patient was found in severely perspiring condition with ice-cold body. Temp.-below 95 F.

Coramine and Atropine-injected.

Glucose 25 per cent 50 c.c. I.V. followed by Soluseptacine 20 per cent 10 c.c. I.V.

The patient showed much improvement in as much as he was able to recognise persons. He complained of severe headache and could articulate speech with difficulty.

7th and 8th day:—Cibazol and mixture continued as before.

9th day:—Rigidity of neck diminished. Cibazol 6 tablets a day and Hexamine mixture was repeated.

This was continued upto the 15th day.

On the 16th day-Kernig's-negative. Patient was put on tonics for improvement of general health.

Comment:—The main characteristic of the case was that the patient was all along afebrile although he was unconscious for 6 days. It was a case of severe type of meningitis. Kernig's was positive upto 20 days. Blood could not be examined nor lumbar puncture was possible. The latter suggestion was not approved by the relatives.

Diagnosis was based on—

Kernig's-Positive.

Neck-severely rigid.

Abdominal reflexes lost.

Patient always assumed lateral decubitus position.

SELECTED ARTICLES

Congenital Malaria in Two Infants—By K. C. CHAUDHURI. (*From the Indian Journal of Pediatrics July, 1947*)

Case No 1:—Baby G. aged 6 weeks was admitted in my Ward on the 30th January, 1947 for intermittent fever for over a month, yellow discolouration of the skin 3-4 days after the onset of fever, swelling of the abdomen since 10 days, occasional vomiting and gradual emaciation and weakness.

Family History:—This is the second child. The mother comes from highly endemic malarial district and suffered from several bouts of malarial fever during pregnancy and before. The other child also suffered from Malaria.

Examination:—Very pale, gravely ill, puny baby, deeply jaundiced, lips are white, laboured breathing, protuberant abdomen, extremities thin and puffy. Nothing in the respiratory system. Heart: Apex beat is in the fourth interspace, soft systolic murmur heard at the mitral region. Superficial abdominal veins very prominent; liver enlarged to the level of the umbilicus, firm, margin sharp; spleen enlarged down to the iliac fossa, very firm, margin sharp.

Laboratory Examination:—Blood. on 30-1-47. Haemoglobin? (Sahli) R. B. C. 2.1 Mil. per cmm. W. B. C. 6200 of which neutrophils are 55 per cent, lymphocytes 40 per cent, Monocytes 5 per cent, eosinophiles nil, anisocytosis, poikilocytosis, normoblasts in large numbers. Benign tertian trophozoites and gametes present. A subsequent blood examination on 5-2-47 shows Haemoglobin 40 per cent (Sahli) R. B. C. 24 Mill. per cmm. W. B. C. 5400, neutrophils 54 per cent, lymphocytes 40 per cent, monocytes 1 per cent, Eosinophiles 5 per cent. No Malaria parasites or other abnormality.

Van den Berg reaction on 2-2-47:

Direct delayed reaction, Icteric Index 25 units.

Urine:—Alkaline, albumen trace, bile-salts nil, bile-pigments trace.

Stool:—A few pus cells. R. B. C. present. occult blood test positive.

Progress and Treatment:—For the first few days the baby ran an irregular temperature rising to 103°F and subsequently it never elevated to more than 97°F. Baby had 7-8 loose stools with mucus but no blood for over a week. He had one course of sulfaquandine and was cured. Quinine hydrochlor gr. 1½ was injected intramuscularly for the first four days and then given orally gr. 1 every four hours for 8 days. He had also Ferri et Ammon Citras gr. 2½ with alkali every 4 hours and combex (P. D.) injections 1 c.c. intramuscularly twice weekly. He had 8 injections.

He was breastfed with two complementary feedings of cow's milk diluted with equal part of water and 3 per cent sugar—2 oz. each time.

He became afebrile, gained in weight, his sallow complexion changed and was discharged on 11-2-1947.

B.D.H.

ŒSTROGENS

OESTROFORM

STILBŒSTROL B.D.H.

DIENŒSTROL B.D.H.

B.D.H. Œstrogens give relief in all conditions attributable to deficient secretion of the Œstrogenic hormone of the ovary. The natural Œstrogen, Oestroform, or the synthetic Œstrogens, Stilbæstrol B.D.H. and Dienæstrol B.D.H., are indicated in the female for menopausal disturbances, delayed puberty, amenorrhœa, oligomenorrhœa, dysmenorrhœa and sterility associated with uterine hypoplasia, pruritus and kraurosis vulvæ and vulvo-vaginitis.

Dienæstrol B.D.H. may be given to patients who have reacted adversely to other synthetic Œstrogens. Stilbæstrol B.D.H. or Dienæstrol B.D.H. may be given to the male in prostatic carcinoma in those cases in which the malignancy of the lesion has been established.

Details of dosage and other relevant information on request

THE BRITISH DRUG HOUSES LTD.

(Incorporated in England)

Post Box 1341

BOMBAY No. 1

STANDARDIZED VITAMIN B-COMPLEX
(ORAL)

"B-VITAMINS ELIXIR"

(ALBERT DAVID)

A scientifically balanced product from synthetic and rich natural sources yielding the maximum therapeutic benefit in all stages of vitamin B deficiencies.

COMPOSITION

Vitamin B ₁ (Thiamin hydrochloride)	...	...	10 mgm.
Vitamin B ₂ (Riboflavin)	...	...	5 mgm
Vitamin B ₆ (Pyridoxin hydrochloride)	...	...	2 mgm
Nicotinic acid	...	...	25 mgm
Calcium pantothenate	...	...	4 mgm

in a base rich in natural Vitamin B-Complex

ALBERT DAVID LIMITED

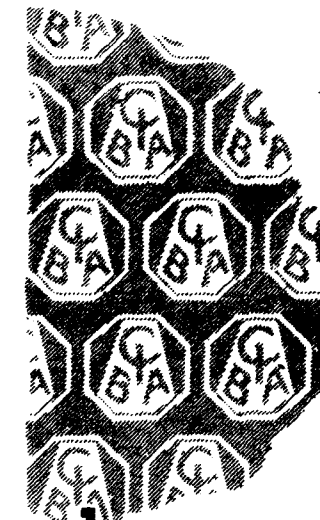
15, CHITTARANJAN AVENUE, CALCUTTA

BOMBAY
Sind Building,
Near Sassoon Docks,
Colaba, Bombay.

NAGPUR
128, Dakhinamurthy Road,
Mahal

MADRAS
2/27,
Broadway

GONORRHOEA
PNEUMONIA MENINGITIS
STAPHYLOCOCCAL INFECTIONS
BURNS INFECTED WOUNDS
IMPETIGO and other
CUTANEOUS INFECTIONS



Competent Chemotherapy with
CIBAZOL



Systemic Administration

Cibazol Tablets 0.5 g.
Bottles of 20, 100 and 250
Cibazol Ampoules 5 c.c.
Boxes of 5 and 20

Local Application

Cibazol Ointment 5%
Containers of 40 gm.
Cibazol Powder
Containers of 20 g., 100 g. and 500 g.



SOLE IMPORTERS:
CIBA PHARMA LIMITED.
P. O. Box No. 1123,
BOMBAY



Two teaspoonfuls of Akta-Vite contain—
 Vitamin A 2,000 int. units
 Vitamin B₁ 300 int. units
 Vitamin C 300 int. units
 Vitamin D 1,000 int. units

—together with dextrose and calcium phosphate in a delicious chocolate-malt base.

Nicholas Ethical Division

J. L. MORISON, SON & JONES (INDIA) LTD.
 BOMBAY MADRAS CALCUTTA KARACHI COLOMBO RANGOON

Case No 2:—Baby, aged 4 weeks was seen by me in consultation on March 17, 1947 for intermittent fever, progressive jaundice, gradual emaciation.

Family History:—The baby is the first child born at full term. The mother suffered from Malaria during pregnancy and also off and on for 2 years previous to that. The baby is breastfed.

History of present illness.—Two days after birth baby looked jaundiced, and gradually became more and more ill; unable to suck breast, he also ran low grade irregular temperature from the 5th day. On examination the baby was found very pale, slightly jaundiced, lungs nothing abnormal, heart nothing abnormal. Abdomen was slightly protuberant, liver was palpable, spleen enlarged 1" below the costal margin. Extremities thin. Baby looked very weak. Skin loose.

Laboratory Examination. Blood.—Haemoglobin 72 per cent (Sahli) R.B.C. 3.5 Mill. W.B.C. 9,200 per cmm. of which neutrophils are 60 per cent, lymphocytes 35 per cent, monocytes 3 per cent, eosinophiles 2 per cent. Malaria parasites (B.T.) found.

Treatment.—Baby had iron and alkali mixture. He was breastfed every 3 hours. He had quinine bi-hydrochlor gr. 1 every 3 hours for 15 days. His spleen was reduced in size, became normal, and the baby looked cheerful and vigorous after 2 weeks' treatment.

Comment

Palit reported one suspected case of Malaria in 1942. Newborn babies may be infected with Malaria soon after birth or acquire it due to direct infection through the placenta. The incubation period is usually 8—10 days though it can be as long as 50 days. In our first case the baby had fever on the tenth day, and in our second on the fourth day. It is likely that in both instances Malaria may be of congenital origin. Children are very susceptible to Malaria infection. There were recorded cases of congenital infection.

Congenital Transmission: This does not occur normally even when the mother has heavy infection. Stuckland and Baird reported six cases. Malaria parasites were detected in blood. In one case it was noted within 15 minutes of birth. Das Gupta showed that in a pregnant monkey, though the maternal circulation contained large number of plasmodia the foetal side of the placenta showed none, but any breach in the dividing line Malaria may allow parasites to pass from maternal to the foetal side.

Malaria in infants does not always run a classical course. Most often they are lethargic, querrulous, apathetic, paroxysms of fever may be present but may also remain unobserved. In infants the temperature will seldom run the usual course; it is nearly always a high remittent or even continuous fever but shows great irregularity. Anaemia is progressive, and the spleen gets considerably enlarged in a few days. In both our cases spleen and liver are enlarged, and marked jaundice is present. In differential diagnosis the possibility of primary blood disease should be remembered, and complete blood examination should be invariably done. It usually shows

abundance of Malaria parasites as in our cases, and profound anaemia.

In newborns and very small infants the treatment is an art and should be done with considerable care as they recover quickly.

The oldest remedy of Malaria is quinine, and used since 1632. Relapses are inevitable however frequently and however large the doses of quinine may be, because the Malaria parasites are not influenced to the same extent at various stages of development. The youngest form is most susceptible and the oldest have the strongest power of resistance. When quinine is given continuously in daily doses over a long period, the therapeutic action becomes progressively less pronounced. At the same time there may appear unusual side-effects. Excessive doses have no advantage over moderate doses. Children tolerate quinine very well.

Up to 1 year	...	1—1½ grains daily
1 to 10 years	...	1½—12 " "

(increasing with age)

But to be effective quinine must be present in the body in sufficient quantity at the time when the youngest parasites make their appearance, i.e. at the beginning of an attack, before and during the shivering stage and immediately afterwards. For this purpose it is advisable to administer small doses of quinine at short intervals.

Quinine administration is best done orally but in cases of fulminant malignant Malaria, it may be given intravenously with proper precaution. For intramuscular injections solution of readily soluble preparations must be used. Quinine is given as long as there is fever and for five days after the temperature has dropped to normal. Subsequent routine is as follows:—

2 days pause followed by 3 days quinine

3 " " " 3 " "

4 " " " 2 " "

5 " " " 2 " "

or alternately:

4 free days followed by 3 days quinine for 6 weeks.

As regards choice of quinine preparations, there are many. Quinine Hydrochloride contains 81.7 per cent quinine 81.6. per cent in quinine bihydrochloride. Quinine sulphate contains 37.5 per cent. Equinine (quinine ethyl-carbonate) contains half the quantity contained in quinine hydrochloride, i.e., 25—30 grains of Equinine is equivalent to grain 15 of quinine hydrochloride.

Quinine is a very toxic drug and should not be used indiscriminately. Side-effects should be carefully watched and if evident quinine administration should be immediately discontinued.

Quinine is absorbed very rapidly, within quarter of an hour after quinine administration it appears in the urine.

Atebrin is the dihydrochloride of 2-methoxy-6-chloro-9-a-diethylaniline-8-pentylamino acridine; it occurs in the form of a yellow powder.

The action of atebrin on the asexual forms and also on the fever in all kinds of malaria is in every case at least equal to that of quinine. In malignant tertian malaria atebrin is more effective than quinine.

Atebrin is usually given by the mouth. The small, slightly bitter tablet (0.1 gm.) being taken on a full stomach and washed down with plenty of liquid.

Children, even unweaned babies, tolerate atebrin well and the following daily doses are recommended:—

Up to 1 year	... 0.5 gm.
1—4 years	... 0.1 "
5—8 "	... 0.2 "
Over 8 "	... 0.3 "

Atebrin is best given in milk. Regardless of patients' temperature, administration of atebrin is begun immediately and continued uninterruptedly for 7 days. Intramuscular or intravenous injection of atebrin may be given in severe cases but is not usually recommended.

Whatever the method of administration, absorption is very rapid and atebrin may often be detected in the urine after one hour.

Toxic effects should be looked for. Yellow staining of the skin is a frequent secondary effect. Abdominal pain, headache, giddiness, vomiting may also occur.

Plasmoquine is N-diethylam isopentyl-8-amino-6-methoxyquinoline. Plasmoquine has a selective action on the gametocyte of malignant tertian, which disappears permanently. The pure plasmoquine salt can alone be given orally. It is fairly well tolerated by small children for whom the following doses are recommended:—

Infants	005—.01 gm.
1—5 years	005 gm.
6—15 "	... 0.01 gr.

The dose is varied according to the physical condition of the child. About .001 gr. kgm. Toxic effects of plasmoquine should be carefully guarded. Cyanosis of lips, tongue, palate, occasionally of the finger and ear lobules, abdominal pain, toxemia, or anaemia may occur. If any secondary symptoms appear, the drug should at once be stopped.

The treatment of Malaria is more effective if combined treatment with various drugs is instituted. Quinine or atebrin treatment followed by plasmoquine simplex. Seven days' quinine treatment followed by 3—5 days of plasmochin treatment.

Ophthalmology During the War and in the Future*—BY STEWART DUKE-ELDER, London, England (From the *American Journal of Ophthalmology*, September 1947).

It is indeed with the greatest diffidence that I am presenting you with this paper. I am profoundly aware of the honour which your Society has done me at this time, and I feel, as is perhaps natural, that the least I should be able to do in reply is to attempt to return the compliment by making this the occasion of a great effort on my part to present something really new and striking to you.

Such, alas, is not to be; for new conceptions do not come lightly but only after much work and

* Read at the 82nd annual meeting of the American Ophthalmological Society at San Francisco, California, June, 1946.

thought, and the years which have just passed have been years of destruction rather than of construction. For six of them I have been away from my clinics and my laboratories, and, apart from enrichment from many types of experience—not the least of which was meeting large numbers of friends and colleagues from this side of the Atlantic in many parts of the world—on the whole, the content of these years must be added to the mountain of waste which seems always to be characteristic of war. And so I have come to you empty handed, with little more than apologies. But, knowing you, I have little fear that these apologies will readily be accepted.

Having nothing new to offer you, I hope you will not think it out of place if I spend a little time considering what ophthalmology has done in the war in the clinical sense—not in the technical sense—and what we may hope it will do in the immediate years to come.

Looking back, it seems to me extraordinary how few are the surgical advances that have arisen directly out of the war. One always associates the experiences of war with its mass mutilation and its herding together of great numbers of people in artificial circumstances and its consequent opportunities for large-scale coordinated investigations and controlled experiment, with considerable advances in the science of medicine and the technique of surgery.

The advances in general surgery in the first World War were great. In ophthalmology during these years, to quote two instances, our technique in dealing with intraocular foreign bodies was revolutionized and our conceptions of the minute central localization of the visual functions were for the first time put on a secure observational basis.

In this war, fundamental progress in surgery has been less striking. It is true that there have been innovations in surgical technique, but most of them have been incidental and detailed, and even the holocaust of intraocular foreign bodies with which we were inundated in the field and at home through bombing has left the position relatively unchanged. It is also true that new ideas such as the ingenious Berman locator have been elaborated, and that methods, some of them more ingenious than safe, have been suggested for the extraction of non-magnetizable foreign bodies.

Novel and probably fruitful suggestions have also been made in the fitting of artificial eyes. But in the main these, and other surgical innovations, are incidental refinements of already accepted principles. There has been nothing completely new of first-class importance and revolutionary scope such as the introduction in the previous decade of operations for the reposition of retinal detachments or the popularization of the technique of corneal grafting.

Advances in Chemotherapy

In ophthalmic medicine the greatest advance has, of course, been made in chemotherapy. The original sulfonamides introduced before the war have benefited by mass application and intensive study, and their place in ophthalmology—a very useful one—has now become firmly established. Newer compounds, improving on the old by increased effectivity

and decreased toxicity, have followed each other in rapid succession. Furthermore, the magic of penicillin, locked up in obscurity in a laboratory in London for more than a decade, has been exploited and has produced revolutionary results quite unequalled in its field in ophthalmic history. It must be admitted that neither of these advances was primarily ophthalmological; but we can claim that ophthalmology has not been behindhand in their exploitation.

It is probably the case that most ocular inflammations are not infective but rather allergic or reactive, corresponding in a sense to the so-called rheumatic inflammations of synovial membranes, and, therefore, the bacteriostatic drugs are less applicable to our specialty than many other parts of the body. But the advances of the last 10 years whereby many organismal intraocular infections can be aborted or controlled by the sulfa drugs, and more extraocular infections can be still more dramatically overwhelmed by penicillin—when, for example, gonococcal conjunctivitis can be cured in fewer hours than it took weeks in a previous generation—are indeed remarkable.

It is true that Florey would have abstracted penicillin from Fleming's laboratory if there had been no war; but without the war to stir our two governments from their customary lethargy toward medical progress to throw all their resources into the fullest and most rapid exploitation of these drugs, we would, I am sure, be much further behind than we are today in our therapeutics.

Physiology of Vision

Practical Applications.—As a direct result of the war most work—at any rate in my personal experience—has concerned itself with the practical applications of the physiology of vision. Most of the work on which large numbers of people in both our countries were employed was very specialized and much of it has not been published. At any rate, my knowledge of the optics of gunsights, range-finders, periscopes in tanks, gratitudes in telescopes, viewing and scanning devices, the lighting of instrument panels, dials and controls, the uses of goggles, problems of dazzle, scatter and haze, and, above all, of night vision and dark adaptation has increased beyond all bounds. But most of this has been the meticulous application of the detail of principles already known to a type of practice which demanded the utmost refinement of exactitude.

Two real advances have been made—or rather have been begun—both of which may yield results of great practical and constructive value: the study of the performance of the eye at high altitudes, and the study of the scotopic or rod fields. It is an extraordinary thing that all the work done upon the visual fields—and it has been great in volume and in achievement—has been upon the daylight field of the photopic eye. Only recently, so far as I know, since it was started by Livingston in London, has the rod field of the dark-adapted eye been investigated with some of its vagaries in pathologic states. Although the technique is laborious and time-consuming, the further exploitation of this may lead to results in clinical ophthalmology of more than usual interest.

Fundamental Aspects.—On the more fundamental aspects of the physiology of vision, however, I think we are on the threshold of a big and exciting revolution in thought—despite, and not because of, the war.

On the photochemistry of vision and the role of visual purple and its relationship to vitamin A, our knowledge is becoming much more precise. In this connection the outstanding work of Seliş Hecht in New York and George Wall at Harvard must receive very special mention. Our knowledge of the photochemistry of the cones is just beginning.

What is more intriguing, studies in dark adaptation—particularly those conducted in London by Lythgoe whose early death is a great tragedy for this branch of our subject—are beginning to show that the mechanism of adaptation is not entirely chemical but that a nervous mechanism comes into play as well. Possibly there is a rearrangement of the inter-retinal synapses by which there develops a decreasing ability to perform the finer visual judgements and at the same time an increasing ability to initiate a cruder impulse on minimal stimulation.

This brings us at once to the monumental histologic research of Polyak in Chicago on the inter-retinal association and integrating systems. It is curious that since the early work on the intimate anatomy of the retina conducted about the middle of the last century by such investigators as Muller, Schultze, and Schwalbe which culminated about the end of the century in the classical researches of Ramon y Cajal, little or no investigation has been undertaken, and it is difficult to realize that the numerous schematic diagrams of the intimate morphology of this tissue that appear so established in our text-books, all of them copied from Cajal's work are based more upon speculation than upon established neurohistologic fact.

Our classical conception of the structure of the retina is insufficient to explain many phenomena of vision related to visual acuity, colour vision, sensory gradients, the interrelation of retinal areas, and so on. Histology has remained very far behind the advances in the physiology of vision. Some of Polyak's theoretical deductions from his studies may be open to question, but there can be no doubt that the possibilities of an anatomic ground work for integration and association, as well as of inhibition in the photoreceptive apparatus, are full of promise and must be explored further.

Electrophysiology.—In the meantime further—and, to my mind, still more fascinating—evidence has come from another quarter—electrophysiology with the use of the microelectrode technique whereby the impulses of single nerve fibres are picked up and analyzed, work commenced by Adrian in Cambridge and continued by Granit in Stockholm.

This microelectrode technique which picks up and amplifies changes in potential of a single fibre in the optic nerve when a cone or rod is stimulated by light is a beautiful procedure, demanding great skill and aptitude on the part of the experimenter. It has brought to light results of exceptional interest.

When the response-curves are assorted into groups, eight separate types are found in most animals. The first type, which has a broad response-curve, is

stimulated by nearly all parts of the spectrum. This Granit calls a "dominator." The remaining seven types, all of which have a narrow response, are stimulated by one part of the spectrum only. These Granit calls "modulators."

This discovery does not seem very hopeful for the survival of the trichromatic theory of vision; a polychromatic theory would appear to be indicated. The results so far have been obtained only on experimental animals, but it is probable that similar results would be obtained on man, a question the testing of which is now being investigated.

Other physiologic observations recently made are disturbing for the old hypothesis of Thomas Young, according to which certain cones respond to red, others to green, and others to blue light—the establishment by Shleier in America and Hartridge in London, for example, that the acuity of the eye in coloured light was identical with that in white of equal intensity. Equally interesting is the demonstration that the spurious colours of the chromatic aberration of the eye are not neutralized physically but are eliminated by a nervous response.

There is little doubt, I think, that with the elaboration of microtechniques applied to the visual system and the facilities offered by the new electrophysics which gave us radar, great advances are due in our knowledge of the mechanism of photoreception whereby it is possible that many of our old ideas, accepted so long that their status as hypotheses has almost been forgotten, will require drastic revision.

When the same process is carried further into the central nervous system after the manner of Talbot and his co-workers in Baltimore, there is no knowing where we shall end. The next 10 years promise plenty of excitement, and I would like nothing better than to pass them with a microelectrode.

Vegetative Physiology

Let us turn to what I like to call the vegetative physiology of the eye. Here I think developments no less exciting are impending. Let us look at the most fundamental problem in this branch of our subject—the formation and the elimination of the intraocular fluid and the control of the ocular tension.

When at the end of the last century Leber brought forward his theory of the transudation of the intraocular fluid from the ciliary capillaries and its drainage through the canal of Schlemm, it seemed for a long time as if the last word had been said upon the subject.

The advances of physicochemistry in the first quarter of this century revealed that this hypothesis was inadequate, and in the later twenties I elaborated the theory that the aqueous was a dialysate of the blood in physicochemical equilibrium with it and that superimposed on this dialysation was a secondary circulation determined by pressure differences.

Now, in the forties, history is repeating itself. While to the relatively crude experimental methods which were at my disposal 20 years ago the postulates of dialysation seemed fully satisfied, the finer and more accurate methods of today have shown them to be insufficient. During the last 12 years, Jonas Friedenwald in Baltimore, in a prolonged series of

brilliant and sustained researches (whose value I appreciate most highly), has been attacking the hypothesis of dialysation. From Philadelphia Francis Adler, in a quieter way, has been doing much the same thing. And, just recently, typically without any warning, David Cogan and Kinsey have thrown an atom bomb into the arena, and, using heavy water and radioactive elements from the cyclotron at Harvard, have shown that we all will need to start to think again.

Twenty years ago, in the arrogance of youth, I thought I had found the last word. Today, as I grow old, I also grow modest. But still I think I am fundamentally correct in the view that the aqueous is essentially a dialysate, although its constitution is almost certainly modified by the interposition of a membrane or membranes, of which we know little, between the blood and the chambers of the eye, and certainly is modified by metabolic processes within the eye.

Lest Friedenwald may think that some of the excitements of battle have gone out of his life, I would suggest that some of his work may bear alternative explanations. I do not think his demonstration of the unidirectional permeability of the ciliary epithelium to water is wholly convincing; I do not agree that the irreciprocal permeability of the ciliary epithelium to acid and basic dyes—which he has demonstrated most beautifully—implies a similar permeability to all ions: in fact just before the war, I satisfied myself that it was not so.

If the penetration of dyes is to be relied upon as an index of a secretory activity, then we must endow, for example, the membrane of the red blood cell with secretory activity. Friedenwald's demonstration of an oxidation-reduction system based on vitamin C in the ciliary stroma is a beautiful piece of work, and his finding that diminution of the vitamin impairs the formation of the plasmoid aqueous formed after paracentesis would suggest that it has considerable significance; but what that significance is I do not know.

It is conceivable, for example, that it may be associated with the capillary endothelium, in the vitality of which there is some evidence that the oxidative vitamins of the B group are intimately concerned. At any rate in the next 10 years it is to be a great adventure to try to find out. My next 10 years, you will observe, are to be fully occupied; for the spare time left over from the microelectrode should be spent spiritually between the Wilmer Institute and the cyclotron at Harvard.

Physiology of the Cornea

About the vitreous there is little fundamentally new, but, with the electron microscope and radioactive tracer elements at our disposal, there is the prospect of further advances in our knowledge of its structure and metabolism.

To a considerable extent the cornea has come to life again. Leber in 1873 advanced his theories on the lymph circulation in this tissue, and there our knowledge remained substantially until the studies of Fischer in 1928 elucidated its respiratory mechanism. Recently Cogan and Kinsey have taken up the subject

and have suggested in a very conclusive way a new mechanism for the fluid-traffic of this tissue.

This opens up a new approach to the physiology of the cornea, about which we know so little. Even about its autoxidation mechanisms we know nothing. It always strikes me as peculiar that we know so little about the pathology of the cornea for it is a transparent tissue, exceedingly accessible and relatively isolated. It was used by the early pathologists in the middle of the last century to appreciate the general changes characteristic of inflammation, and since their relatively crude observations little more has been added.

It has always been a disappointment to me that the great amount of time that so many of us have expended on the study of the action of the war gases on this tissue was so dominated by the immediate emergency and led to no more fruitful results. It seems not without the bounds of possibility, however, to suggest that, with all the refinements of technique available today, of this tissue in disease might not only add to our local knowledge but also provide the ground work for further advances in the fundamentals of the pathology of inflammation generally.

Physiology of the Lens

So, too, with the lens. Our knowledge of this tissue, particularly of its respiratory mechanism and the essential part played therein by the vitamins of the B and C groups, is increasing rapidly—work of great interest wherewith the name of Bellows of Chicago is closely associated.

Here again we have a system unique in the body, readily seen, easily manipulated, and perfectly isolated for experimental purposes whose continued health seems dependent essentially on the integrity of its intracellular oxidative systems. I do not think it is too much to expect that in the next 10 years, given sufficient enthusiasm, not only may some of the problems of cataract disappear but valuable pointers may be provided for the understanding of the general problems of sclerosis and senility wherein an oxidative failure of the same type is probably a crucial factor.

Evaluation of Experimental Opportunities Complete Revolution in Methods

It would seem that the program for the next 10 years is very heavily booked up. I may speak hopefully, but I do not think I am expecting too much. For now we have available to us a complete revolution in methods.

I am not suggesting that the classical modes of inquiry by clinical examination and cellular pathology are outmoded or have yielded their full harvest, but there seems little prospect of further revolutionary advances with their aid.

Recently it has become possible to change our method of inquiry. Instead of busying ourselves with the structural ruins which disease has left behind it, as is the province of pathology, we are now able to probe more deeply and examine the more subtle nature of the initial defect, to pass from the study of structures composed of cells to the study of cells composed of molecules and atoms.

Now, equipped with techniques whereby microanalyses of a minute drop can be undertaken more accurately than the gross analyses of a generation ago, whereby it is easy to estimate the pH of a single cell or pick up and analyze the action current in a single nerve fibre excited by a single band of wave lengths, when we look not with microscopic or even ultramicroscopic eyes but with electron microscopes whereby viruses can be seen rather than believed and a single cell is too gross an object for adequate study, when we can follow metabolic processes with labelled elements throughout all the intricacies of metabolism—with all this equipment opening up all these new worlds, we should make great strides.

Some months ago I read in one of our more inaccurate newspapers—we have this kind of newspaper in my country as well as yours—that the discovery of carbon 13 would shortly revolutionize medicine and yield up the secret of life itself. The reporter did not know that at the time he wrote carbon 13 was already old-fashioned; but the fact remains that this may be an overstatement and it may well not. But, whether it is or not, no one can complain of the variety and scope of the opportunities that are offering themselves, or of the difficulty, the complexity, and the interest of the problems facing us.

There is another very important matter. The older methods were observational only: the newer ones can make fuller use of the experimental method. They can take nature and, so to say, put her in the witness box, and, taking purposely one variable at a time, analyze her secrets much more thoroughly. It is entirely owing to the exploitation of the experimental method that medical knowledge has bounded forward in the last half century out of all comparison with its previous progress; and nowadays we can get down to the experimental method in real earnest.

Science of ophthalmology—It may be said that the advances of which I speak are physiological rather than clinical. But advances in the practice of medicine can only go as far as the fundamental sciences on which they are based have advanced. That, I think, is the most hopeful aspect of the matter, for it may be that we are at last approaching a stage where *science of ophthalmology* may begin to emerge. By that I mean an organized system of knowledge dealing with first principles upon which a study of disease of the eye can be philosophically based.

What, for example, are the common denominators whereby a cell in the cornea, the lens, or the retina changes its reaction, loses bipolarity, and dies? Suppose, to look at it the other way, I take one fundamental process, a failure in intracellular oxidation caused, of course, by many factors—how many of the hundred diseases of the cornea would that embrace in a single rational generalization—as well, perhaps, as the whole of the pathology of the lens?

The defect of ophthalmology at its present stage of development is that it is too compartmentalized, lacking an ordered sequential philosophy of cause and effect.

Observational ability is indeed plentiful, but the wisdom required to assess the mass of observations is at a much higher premium.

Can I illustrate this in two ways? In the first place, in our clinical thinking and in our text-books, we tend to visualize diseases as if they were specific entities like butterflies or flowers to be labelled or classified in a museum. In like manner we demonstrate to our students an unending series of disease-pictures which they are supposed by prodigious feat of memory to collect and store, each in a separate compartment, before they go out into the world.

If medicine did not progress, there might be some practical reason in this. But as medicine advances the disease-pictures alter, new descriptions of associated symptoms appear, and new conceptions call for a new nomenclature; and furnished only with dogmatic teaching and untaught to reason and synthesize from first principles, because the first principles are as yet not clear, he is often lost if the groove in which his mind has been trained changes its shape.

Each new disease, however, that appears in the literature is not a new morbid entity discovered as Columbus discovered America. It is merely the recognition of a reshuffling of the basic reactions of the tissue cells; and, although the disease-pictures are artificial and ephemeral, if we go deeply enough, the underlying basic reactions to disease are perpetual and always remain unchanged.

Integration of Research So, too, with research: it is yet in large measure the making of a mass of observations, most of them disparate, with too little of the philosophy of synthesis and integration. For too long we have been forced to accumulate masses of apparently unrelated facts which swell beyond all reason a vast literature. As yet, they await adequate interpretation and integration into a body of coherent thought.

As the pile of information gets higher we require more and more time to acquaint ourselves of it and have less and less time to think about it. Like George Bernard Shaw we shall require to go back to Methuselah and liver for 400 years if we are to be really wise, unless someone can find the common denominators, the basic generalizations by which our vast knowledge can be synthesized into a coherent scheme.

This stage may not be so very far away. And even if our first schemes are temporary—partly or even largely wrong—they will certainly serve a useful purpose if they merely act as a scaffolding for further constructive building.

Responsibilities of the Future

I would like to close with a remark on our responsibilities at the present time. I have seen most of the European countries since the war ended, excluding those, of course, in the East which are guarded with such secrecy by our allies. They all show the same physical picture of destruction and abolition of facilities, the same mental condition of fatigue and apathy. Out of Europe and particularly out of Germany a great amount of research and original thought used to emanate year by year by which our science was constantly enriched.

For a generation at least, and probably for two, this rich reservoir will be dried up. Research is not

an easy thing to start, and, apart from individual brilliant exceptions, the student requires to be inspired by teachers who themselves have grown up in the stimulating atmosphere and philosophic background of research.

I do not think that European culture is dead: it is too traditional and fundamental in European thoughts and life to be killed so easily. But it is very tired: and, if I am right in thinking that as a result of the catastrophic break in the continuity of original scientific thought in a collapsed Europe, a whole generation will need to live and die before a full renaissance of research can be expected, it follows that the duty and responsibility of maintaining progress, of keeping alive the traditions of research and handing them back again to a recovered Europe devolves upon the English-speaking world, for there is no other competent. That means, at the moment, at any rate, that the survival and the revival of ophthalmology—the realization of all these intriguing potentialities—depend upon the United States of America, with its greater size, its larger facilities, and its escape from material destruction, that is, essentially upon you in this Society.

Gastrectomy for Peptic Ulcer—Selection, Management and Care of Patients—BY M. GAMAL ELDIN, M.B., F.R.C.S. (E.D. F.R.C.S., ENG.) AND JOHN W. WARRICK, M.R.C.S., L.R.C.P., D.A., St. Alfege's Hospital, Greenwich (From the Post-graduate Medical Journal, Oct. 1947.)

The majority of gastrectomies is carried out for chronic peptic ulceration, whether gastric or duodenal, which fails to respond to, or recurs more than twice after, a strict ulcer regime has been instituted. A patient may be regarded as a candidate for operation if, after one or two years' treatment, he still suffers from the ulcer. During that time 2 to 3 diet regimes should have been tried with intervals of 3 to 6 months as necessary. Repeated small haematemeses or melaena, or more than two severe haemorrhages are other indications for operation. Penetration into the pancreas is usually accompanied by such constant severe pain often referred to the back that the unfortunate patient begs for an early operation.

For chronic gastric ulcers all agree that gastrectomy and not gastrojejunostomy is the operation of choice. These ulcers heal less readily than those in the duodenum and about 10 to 20 per cent. become malignant.

In chronic duodenal ulceration, however, gastrojejunostomy has been adopted by some surgeons as the better operation because duodenal ulcers tend to heal more rapidly than gastric ulcers, they do not become malignant and the operative mortality is low. The tendency now is to perform gastrectomy for duodenal ulcers as results are more satisfactory and permanent, the ulcer bearing area being removed; the acid stimulating area of the stomach is diminished and the tendency to anastomotic ulceration is minimized. Furthermore the mortality of the operation is little more than that of gastrojejunostomy. The indications for gastrojejunostomy nowadays should be

pyloric obstruction or a very scarred and adherent duodenal ulcer in a patient who is a poor operative risk.

The preliminary investigations are usually carried out in the Medical Out-Patients Department. These include general and specific examination to assess the patient's fitness for a major operation and to determine the nature, position, etc., of the ulcer.

In the general physical examination particular attention is paid to the cardio-vascular and respiratory systems. Hypertension, unless it is of the malignant type or accompanied by severe renal dysfunction, does not preclude operation. Red cell count and haemoglobin percentage are estimated and any degree of anaemia corrected. The blood group is determined in case serious bleeding necessitates transfusion later. Respiratory complications are the commonest cause of trouble after upper abdominal operations. Any serious pre-existing disease such as severe bronchitis or bronchiectasis is a contra-indication to gastrectomy. If surgery is essential it may be necessary to do the less formidable operation of gastrojejunostomy. Minor chest troubles such as mild bronchitis or a recent history of acute upper respiratory tract infection should be treated by aerosol penicillin inhalations.

The teeth should be in a healthy condition. Wholesale extraction is not a routine procedure and only loose or obviously septic teeth should be removed some days before admission to hospital.

The usual investigations on the stomach are carried out. A positive barium meal is of great value as it verifies the existence of an ulcer, or any other lesion, and shows its size, shape and position. Screening is more important than filming as it not only discloses an ulcer which occasionally escapes a film, but also demonstrates the gastric behaviour as regards mobility and peristalsis. A lateral or oblique view is necessary to show a posterior or anterior wall ulcer. Negative barium meal is not definite proof of the absence of an ulcer; we have met with cases which on laparotomy carried out on purely clinical grounds showed posterior wall ulcers that failed to show radiologically. On the other hand deformity of the duodenal cap may mean a completely healed ulcer or adhesions around a healthy duodenum, i.e., from the gall bladder.

Fractional test meal (alcohol test preferred) should be carried out. The most valuable information is obtained from the acid curves. The degree of acidity should be a rough guide as to the correct operative procedure to be adopted and the extent of the gastric resection.

The value of gastroscopy before gastrectomy is debatable but in the average case where the clinical picture is typical and the X-ray findings confirmative gastroscopy is not essential. It is indicated when the clinical features are suggestive but repeated radiological investigations are negative. This is especially the case in small non-curvature ulcers (anterior or posterior wall ulcers).

The general behaviour of the patient should be such as to ensure co-operation after operation and it is always wise to explain to him beforehand the

procedures such as passing a Ryle's tube that may be necessary when he is in hospital.

Immediate pre-operative care. It should be stressed that the less the patient is prepared and disturbed before the operation the smoother will the post-operative period. The patient is admitted two days before the operation, having already had all the investigations considered necessary in his particular case. He is thus spared the inconvenience of further investigations in the immediate pre-operative period and his morale is not disturbed. He is allowed out of bed and encouraged to move about the ward; he is given a full diet for the first day but a lighter diet on the eve of the operation. He begins a course of breathing exercises soon after admission, which is continued after the operation. Soneryl two capsules (4½ gr) is given at night time if required. On the morning of the operation he is given a cup of tea. Stomach lavage should not be carried out as a routine as it disturbs the patient unduly and serves no purpose other than to remove the antiseptic acid of the stomach. Likewise blood or plasma transfusion before or during operation is not recommended and is only indicated if there is severe haemorrhage during or after the operation.

The Operation

(a) *Anaesthetic technique.*—In view of the duration of the operation it is considered that the patient should be unconscious throughout. Heavy premedication is not indicated since in all cases anaesthesia is induced with i.v. Pentothal and large doses of respiratory depressants are bound to do more harm than good. Omnopon gr. 1/6 with Scopolamine gr. 1/3000 1½ hours pre-operatively is quite satisfactory and there is no indication for a large dose.

There are three periods during the operation when extreme relaxation is essential in order that the surgeon can work under the best possible conditions. These are during the preliminary intra-abdominal manoeuvres; when the duodenal stump is being dealt with; and during the suture of the peritoneum when the wound is being closed. During the anastomosis moderate relaxation only is necessary. At all times respiration must be quiet and unaccompanied by increased diaphragmatic activity. There are two techniques above all others which are particularly indicated since they combine the above criteria with minimal after-effects.

(i.) Regional anaesthesia with light general anaesthesia.

(ii.) Curare with light general anaesthesia.

In either method after a Pentothal induction anaesthesia is maintained in a light plane with nitrous oxide. When regional anaesthesia is to be used the patient is turned on to his side and the thoracic nerves 6 to 12 are blocked at the angle of the ribs using 1:1000 Amethocaine-Adrenalin solution. Small additional amounts of Pentothal may be required during the course of the operation; it is better to do this or to add small amounts of Trilene or Cyclopropane than to lower the oxygen percentage should the plane of anaesthesia become too light. When curare is to be used anaesthesia is established as above and a small test dose of Tubarine mgm. 5 is given intravenously. Just before the operation begins the main

dose of Tubarine mgm. 15-20 is injected. It is essential to have a gas-tight fit between the face and the anaesthetic mask when curare is used; if this is difficult to obtain a cuffed endotracheal should now be passed. It is important that an adequate tidal exchange be maintained and aided respiration by manual compression of the rebreathing bag is a wise procedure and is essential if respiration is depressed. Further small injections of Tubarine mgm. 5-6 i.v. may be necessary before the duodenal stump is dealt with and before the peritoneum is sutured. Should there be any degree of respiratory depression at the end of the operation Prostigmine mgm. 5 with Atropine gr. 1/50 is injected i. v.

Observation of the blood pressures and pulse rate shows that with regional analgesia there is little alteration in these figures both initially and during the operation. When curare is used the systolic pressure tends to rise without corresponding change in the diastolic figure. When Cyclopropane is the inhalation anaesthetic there are often variations in the pulse rate; the reason for this is uncertain and does not appear to have any definite relation to the depth of anaesthesia.

The degree of muscular relaxation can readily be determined by the ease with which the patient's expiratory efforts can be overcome by manual compression of the rebreathing bag.

(b) *Operative Technique.*—The incision is a matter of choice, but the median incision is good as it is quicker to make and to close and allows better retraction and equal exposure of both sides of the abdomen. The usual, but unfair, objection to it is the alleged more frequent sequela of incisional hernia. The main cause of incisional hernia is inadequate closure of the peritoneal layer leaving gaps or perhaps tears which invite the intestine or omentum to glide through and work its way out until it lies under the skin. This could occur in any incision in which there were peritoneal gaps. The linea alba is made of scar tissue. The incision heals by scar tissue which should restore the normal anatomy of the area. Thus it is more natural to perform the median than the paramedian incision. In our experience results of median incision are excellent.

The operation should be bloodless however difficult the case be if the omenta with their unsupported vessels are handled gently and are cut between two Spencer Wells. The greater omentum should be dealt with first, starting preferably nearest the fundus as it is much easier to get into the lesser sac in this region. Care should be taken lest the mesocolon should be adherent to the omentum and be cut with it. Not uncommonly another folded layer of peritoneum is found in the lesser sac between the posterior wall of the stomach and the pancreas and is mistaken for adhesions. This may cause confusion but it is bloodless and should be easily snipped without bleeding.

The amount of stomach removed varies but should include the lesion present whether gastric or duodenal. In the average case the line of section in the stomach is indicated on the greater curvature by the region where the right and left gastroepiploic vessels end by turning up on the surface of the stomach without obvious direct anastomosis.

Utmost care should be exercised in closing the duodenal stump as many post-operative deaths are due to its leak or rupture. A very secure procedure is to close it with a running through-and-through suture under the occluding duodenal clamp—which is then removed—and then followed by Lembert's invaginating suture. Should the area be very fibrosed the duodenum could be cut across without clamps, the mucous membrane identified and closed with a continuous suture and this finally covered over by the tissues around. A penetrating gastric ulcer should be separated boldly from the pancreas without fear of bleeding. The resulting perforated area on the surface of the stomach should then be closed momentarily by a deep mattress stitch.

One of the difficulties in dealing with high gastric ulcers is the application of occluding clamps above the ulcer area. The clamp can be dispensed with by cutting across the stomach with the cautery thus preventing bleeding, and sucking out the stomach contents, thus avoiding soiling, after fixing the posterior seromuscular layer between the posterior gastric surface and the jejunum. The jejunum likewise should be opened with the diathermy. We do not use rubber on clamps as it makes them cumbersome. Contrary to general belief uncovered clamps if properly used do not harm the tissues more than the covered ones.

A modified anterior Polya operation (Hoffmeister's technique) gives good results. Catgut is used throughout the operation. The incision is closed in two layers, tension sutures being fixed after closing the peritoneal layer. Should the peritoneum tear, the peritoneum and linea alba should be closed in one layer with interrupted catgut. No peritoneal gaps should be overlooked. The wound is covered with gauze fixed with elastoplast. The elimination of bandages and binders in abdominal surgery has done much to lower the incidence of post-operative chest and thrombosis complications.

Post-operative Care

(a) *Immediate.*—When curare has been used morphia should be given as soon as the patient returns to the ward. It is repeated the same evening. Morphia, if indicated, should never be withheld during the first 48 hours; it relieves pain and anxiety and promotes local and general rest.

As mentioned above breathing exercises are continued until the patient is out of bed on or about the 12th day. Should there be any unexplained rise of temperature or pulse rate the chest is X-rayed in order to determine whether there is any degree of atelectasis.

During the first 24 hours nothing is given by mouth, which, however, should receive due hygienic care. Fluid should be provided by rectal water given slowly and in the same rate and manner as an intravenous drip. It is simple to administer and is always tolerated if given slowly. Intravenous saline is not recommended as the patient has not lost any chlorides; the only indication for intravenous saline should be excessive vomiting. Stomach washouts are not allowed unless dilatation of the stomach or bleeding is suspected as indicated by repeated vomiting.

We have rarely had to pass a Ryle's tube after gastrectomy much to the comfort of the patients.

As a routine we give patients 8ms. 1 of Sulphamezathine 4 hourly for 2-3 days, the first dose starting with the first feed 24 hours after operations. This acts locally by passing over the suture line, and generally after absorption; thus it is a good prophylactic against local and general infections, including respiratory troubles.

Diet in the second 24 hours is made up of water 1 ounce hourly for 6 hours; whey or water 2 ounces hourly for 6 hours, and then 3 ounces hourly for 12 hours. On the third day citrated milk and water in 4 ounce feeds alternatively with whey hourly for 24 hours. Next milk and egg and chicken broth are allowed, and later boiled eggs, steamed fish, bread and butter, custard and jelly are added to the diet.

Just out! Just out! AIDS TO HUMAN PHYSIOLOGY

By Dr. S. N. CHAKRABARTI.

Third Edition—Revised, rewritten and enlarged with 22 Coloured plates, Diagrams and Charts.

An invaluable guide-book for Medical Students appearing for their examinations. All possible questions—written, oral or practical—on Physiology with full and lucid answers. It is a student's VADE MECUM.

Price Rs. 8. Postage extra

PIONEER BOOK Co.,

18, Shama Charan De Street, CALCUTTA 12

NOTICE.

Applications are cordially invited from Licentiate Doctors to undertake and conduct some research work in medicine, surgery and allied sciences likely to be useful from treatment point of view. The applicant should kindly state (1) the problem of his research, (2) the location of his research with the facilities he has, (3) the period he might require to complete the research and (4) the amount he might spend on it till its completion. The applicants are earnestly solicited to note that it should be purely a labour of love for the cause of Science and with a view to raise the Licentiate class in estimation of others.

P. H. SANTI,

Secretary, Scientific Committee,
Bilaspur, C.P.

PROVED BY U.S.A. 'AGAR PLATE' METHOD

FAR SUPERIOR TO CARBOLIC, BORACIC AND OTHER OINTMENTS
IN COMPARATIVE TESTS ON B. COLI., B. MEGATHERIUM, STAPH.
FAECALIS, STAPH. ALBUS. SKIN SPECIALISTS AND HOSPITALS
REPORT AMAZING RESULTS IN TREATMENT OF IMPETIGO,
SYCOSIS AND OTHER PYOGENIC INFECTIONS OF THE SKIN.

Sole Agents: Thcs. Cook &
Son Ltd., Distributors, P.O.
Box 291, Hornby Road,
Bombay.



VALDERMA contains two powerful, yet soothing antiseptics, each deadly to different groups of bacteria. This makes it entirely unlike old-fashioned ointments: and being an oil-in-water emulsion it gets straight at the germs in the affected place, so that its special elements can start their healing work immediately. What's more, Valderma is an emulsion. Exudates, which might otherwise re-infect the sore place can thus pass out freely—that's why it's so speedy in action.

Valderma is white, non-greasy, almost invisible on the skin and stains neither linen nor bedclothes.

DAE HEALTH LABORATORIES LTD., 25/27 BERNERS ST., LONDON, W.1



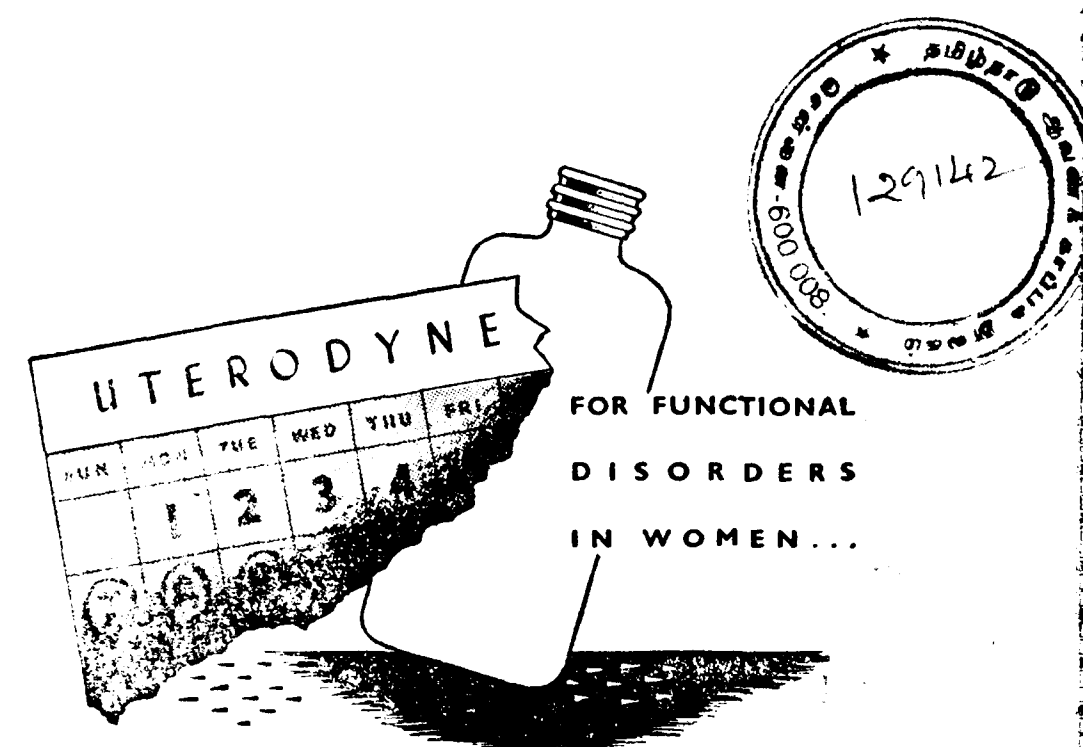
Supplies are still not sufficient to meet every demand... But

today we are sending to our dealers more stocks of the purest form of anhydrous dextrose. The position has greatly improved, and we trust being able very soon to supply all dealers with the stocks they require.

DEXTROSOL

PUREST ANHYDROUS DEXTROSE B. P.
(pure d-glucose powder)

CORN PRODUCTS CO. (INDIA) LTD., P.O. BOX 994, BOMBAY.



Uterodyne is a reliable uterine tonic which also acts as a sedative anodyne for ovarian and climacteric disorders.

Combining the potent action of vegetable principles, haemostatics, vasoconstrictors, sedatives and general tonics, Uterodyne is unrivalled in correcting Uterine turgescence and improving the tone of the neuro-muscular apparatus.

INDICATIONS:

Dysmenorrhoea, congestion of the uterus, ovaries and pelvic disorders, sub-involution of the uterus, troubles after miscarriage and as a sedative in bleeding from the womb and threatened abortion.

COMPOSITION: Each fluid drachm contains:—

Ext. Ashok	...	12.0	mm.
" Alstonia	...	6.0	"
" Shatavari	...	6.0	"
" Ashwagandha	...	6.0	"
" Glycyrrhizae	...	3.0	"
" Mustoka	...	1.5	"
" Lodhra	...	1.5	"
" Myrrh	...	1.5	"
" of Malt	...	6.0	gr.
Potash Bromide	...	4.5	"

RELY ON *Alembic* ALWAYS

ALEMBIC CHEMICAL WORKS CO. LTD. BARODA.

AL. 394.

AS we finished reading of the previous proof sheet, the Delhi Radio announced the death of Mahatma Gandhi at the hand of an insensate assassin at 5-20 p.m. on Friday the 30th January, 1948.

The whole world is in mourning—literally.

To us, the people of India, Mahatmaji was more than a political leader who fought and won her independence by following non-violent methods. He was considered as an Avatar—an incarnation of God in human embodiment for human uplift. Like Lord Buddha, he practised what he preached, taught the people incessantly the Gospel of Truth, Love, Brotherhood and Ahimsa. The similarity in the life and teachings of these two great Masters shows he may be an incarnation of Lord Buddha Himself.

We pay our humble homage to Mahatmaji—the Avatar of this age.

Our sorrow is too great for words.

EDITOR,
INDIAN MEDICAL JOURNAL.

MEDICO-POLITICAL SUPPLEMENT

TO

THE INDIAN MEDICAL JOURNAL

Vol. 6, No. 2]

MADRAS

[February, 1948.]

CONTENTS

	Page		Page
LEADING ARTICLE:		The General Medical Council and Medical Education	15
Dr. U. Krishna Rau	13	By Herbert L. Eason, C.B.C.M., G.M.S.	
The New Mayor of Madras		Reasons for the Backward State of Public Health in India	19
OTHER ARTICLES:		By Dr. T. S. Tirumurti, B.A., M.B. & C.M., D.T.M. & H.	
A Plea for Provincialization of the Medical Services of the Local Bodies	14	ASSOCIATION NOTES	22
By Dr. K. P. Varma		LETTERS TO THE EDITOR	26

LEADING ARTICLE

Dr. U. Krishna Rau,
The New Mayor of Madras.

We heartily welcome the unanimous election of Dr. U. Krishna Rau as the Mayor of the Madras Corporation for the year 1948, and congratulate him on this well-merited honour conferred on him by the City fathers.

This is the second time when a general medical practitioner of Madras has been elected to this great office.* It certainly redounds to the credit of the medical profession as a whole, particularly of the City of Madras. Dr. Krishna Rau is one of the most brilliant and popular general medical practitioners, and there is none in our city to our knowledge, lay or medical, who has not appreciated and admired his great qualities as a medical practitioner. Affable and kind to his patients, poor or rich; available to them at all hours despite his other time-consuming public activities; up-to-date and efficient in his methods of treatment, he is a typical family doctor of whom any country may be proud.

* Before him was another general medical practitioner, Dr. Syed Nizamutullah, L.M.P.

He is also the Editor of one of the leading medical journals—*The Antiseptic*—and through it he has been serving the profession and safeguarding its interests. He is thus not only a typical family doctor but also the friend and guide, if not the philosopher, of the medical profession in this province. We are therefore glad that one of our own medical men and leading medical journalist has been honoured as the Mayor of the Madras Corporation.

It is not only as a medical man or journalist, but also as a political, and more as a civic, worker he has shown his brilliance and proved his usefulness to the people.

As a politician, he belonged to the Congress and worked for the fulfilment of its ideals within the sphere of his influence. If he is not in the public gaze as a politician, it is because of his humility and his desire for unostentatious and silent work. As a civic worker, he has done a lot of good work through the Madras Corporation of which he was a councillor for a number of years, and till recently its Deputy Mayor. He therefore enters the office of the Mayor with a great experience of civic work and as a sound and

steady politician, though, of course, as a Mayor he will be above politics and political parties.

Of all the men who acted as Mayors of our City's Corporation, Dr. Krishna Rau is certainly one of the most brilliant of them, and is equal in talents and debate, wisdom and wit, to the late lamented Sri S. Sathyamurthy, one of his predecessors and acknowledgedly the greatest Mayor of Madras.

We wish him every success in his new task.

OTHER ARTICLES

A Plea for Provincialization of the Medical Services of the Local Bodies

By DR. K. P. VARMA,
Kessariya, Bihar.

Through the columns of our Journal, I beg to invite the kind attention of the A.I.M.L.A. & I.M.A. towards the most deplorable conditions of the service of the Medical Officers of the Local Bodies all over India. They are treated with humiliation, beggarly remuneration and provoking conditions of service. They enjoy no status and position worthy of the noblest profession. There is no security of service, devoid of all future scopes, placed in water-tight compartment with no chance of gaining better experience or promotion. Merit and efficiency does not count in Local Bodies' service. Most of their time and energy and attention are wasted in keeping in tune with so many members of the District Boards and other authorities concerned who are non-medical men and who do not care or attach any importance to the advancement of their scientific knowledge or their efficiency of professional work which they cannot judge. This is one of the greatest block which stands in the progress of the Local Bodies' medical officers. There are about 3,000 medical licentiates in service all over India and 85 per cent of them are in Local Bodies' service, placed in rural areas with all sorts of humiliation and devoid of all scientific facilities.

Provincialization of the services of the Local Bodies' medical officers is the only remedy. The sooner the better for all concerned—doctors and public alike.

The whole medical profession stands for Provincialization of the medical services of Local Bodies and abolition of the subordinate medical service. The I.M.A. in its last Madura Conference unanimously resolved for the above. Other Provincial Medical Conferences have also resolved unanimously for the same.

One thing is very striking. Our Association rightly and justly stands for the abolition of the subordinate medical service. Although our President Dr. M. L. Kapur advocated Provincialization of the Medical Service of the Local Bodies in his presidential address at Poona Conference,

it is to be regretted that there was no mention of it in the form of resolution in the Poona Conference. Our Bihar Branch of the A.I.M.L.A. in its last Darbhanga Conference unanimously resolved on my motion to provincialize the services of the Medical Officers of the Local Bodies of Bihar and to create a composite Provincial Medical Service in which should be absorbed all Government Sub-Assistant Surgeons and all Local Bodies medical officers.

Professor B. N. Ghosh, M.B.E., F.R.F.P.S. (Glas.), F.R.S. (Edin.), President of the Bengal Branch of the I.M.A., rightly observed while addressing the Calcutta Members on 30.3.47:

"I am fully conscious of the reason why the present licentiates are so much dissatisfied and want to be made graduates. It is because of artificial barriers. They have been classed as so-called untouchables. They are not allowed ordinarily to aspire for the posts which the graduates can occupy, though the licentiates as man to man may be very much superior."

I appeal to both Medical Associations viz., I.M.A. and A.I.M.L.A. to consider the matter seriously and to press the Provincial Governments to make the following changes immediately in their Medical Administration till complete National Health Service is introduced according to Bhoré Committee's recommendations,

(1) Medical and Public Health Service should be the direct concern of the State, viz., Provincial Government.

(2) The services of the Medical Officers of the Local Bodies (District Boards and Municipalities) be provincialized immediately in all the provinces and provincialization of all the hospitals and dispensaries be effected within the next 5 years.

(3) Pending provincialization of the hospitals and dispensaries the Local Bodies be asked by the respective Governments to equip the hospitals and dispensaries at a standard to be fixed by the Government and sufficient grant be made to the Local Bodies for this purpose.

(4) Subordinate Medical Service be abolished and amalgamated with the Provincial Medical Service. In this respect the recommendations of the Administrative Medical Officers of all the Provinces held under the chairmanship of D.G., I.M.S., in November, 1945 be accepted.

(5) Merit and efficiency be given due consideration irrespective of qualifications in matters of promotion to higher posts.

Medical licentiates are so much disgusted that there is whisper of direct action from all quarters. Let us leave the matter to the noble and just decision of our National Leaders and Ministers. Let us not embarrass our own Government by resorting to strikes. But, of course, if our grievances which are just are not redressed, let us start individual satyagraha (I mean hunger strike). I shall be the first man to come in front line for such satyagraha. Satyagraha is the weapon of the helpless. We are helpless because we serve poor masses. Our poor masses have always been neglected and so too we are neglected.—JAI HIND.

The General Medical Council and Medical Education

By HERBERT L. EASON, C.B., C.M.G.M.S.

President of the General Medical Council

(From the British Medical Journal, Sept. 6, 1947).

My colleagues on the General Medical Council thought it desirable that I should respond to a kind invitation from the Editor of the Journal by trying on their behalf to explain where the concern of the General Medical Council with medical education begins and ends, and what the Council has tried to do, within the bounds of that concern, in its new Recommendations as to the medical curriculum.

Extent of G.M.C.'s Function, as to Medical Education.

When the Council published the Recommendations in May, 1947, one of the full and fair reviews which they received in the medical journals drew a contrast between "a dry precision" to be found in the Council's language and the vigour and reforming zeal displayed in the language of the Goodenough report.

The General Medical Council is a body incorporated by statute to discharge the functions assigned to it by Parliament—no less and no more. The Acts passed for this purpose are not easy to read or construe as a whole, and if the Council, in describing any part of its functions, can attain precision, it need not resent the imputation of dryness. Any attempt to indicate shortly the limits of the Council's functions as to medical education is not intelligible without a preliminary statement of the reason why the General Council of Medical Education and Registration of the United Kingdom (to quote the statutory title of the Council) is concerned with medical education at all.

Why G.M.C. is concerned with Medical Education

Parliament has constituted the Council predominantly of twenty-seven representatives of universities and of medical corporations which grant medical qualifications conferring the right of registration under the Medical Acts. It is the duty of these representatives (with seven direct representatives elected by members of the profession and five Crown nominees as colleagues) to secure "that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners" (the object of the Act of 1858 as described in its preamble). That Act contemplates that persons requiring medical aid shall be enabled to make this distinction by looking for the names of practitioners in a book compiled and kept up to date by the Council which contains only the names of "legally qualified" or "duly qualified" practitioners; and that such practitioners shall have obtained qualifications which guarantee to the public that those who hold them were at the time of qualification competent to render medical aid.

It follows that the Council, as the body which has to keep the book, the Medical Register, for public reference, must also be responsible for seeing (1) that no person's name is entered in the book unless the

Council is satisfied that he has a qualification which guarantees his competence; and (2) that, as a condition of registration on the production of a qualification, the course of study and examinations on which the qualification is granted in fact furnish that guarantee. Hence the Council became concerned from the first with the education of all persons desirous of entering the medical profession.

General Powers of G.M.C. as to Medical Education (Medical Act, 1858)

The means with which Parliament equipped the Council in 1858 to help the public to protect themselves against the medical attentions of unqualified persons took the form of provisions requiring universities and medical corporations which grant registrable qualifications:

1. To furnish the Council as and when required with information about (a) the courses of study and examinations to be gone through in order to obtain such qualifications; (b) the ages at which such courses and examinations are required to be gone through, and such qualifications are conferred; and (c) the requisites for obtaining such qualifications generally.

2. To admit to examinations (including final or qualifying examinations) for such qualifications any Visitors appointed by the Council to attend and be present at such examinations.

The sanctions which Parliament has attached to these powers are that:

1. If it appears to the Council that the course of study and examinations (the conjunction is important) for any such qualification "are not such as to secure the possession" by persons obtaining the qualification "of the requisite knowledge and skill for the efficient practice of their profession," the Council may "represent the same" to the Privy Council.

2. On any such representation the Privy Council may order that the qualification shall not confer any right to registration; but the order may be revoked if His Majesty in Council becomes satisfied that effectual provision has been made, to the satisfaction of the General Medical Council, by the body or bodies concerned, for the improvement of the course of study or examinations (the disjunction is again important), or the mode of conducting the examinations.

Further Powers of G.M.C. as to Final or Qualifying Examinations

By the Medical Act, 1886, which for the first time debarred any person from registration except after passing a final or qualifying examination in the three fundamental branches of professional knowledge—medicine, surgery, and midwifery—Parliament supplemented the powers of the Council as to medical education by charging it with special responsibility for maintaining the standard of such examinations. The Act provides that the standard of proficiency required from candidates at such examinations "shall be such as sufficiently to guarantee the possession of the knowledge and skill requisite for the efficient practice of medicine, surgery, and midwifery: "that it shall be the duty of the Council to secure the maintenance of this standard;

that for this purpose the Council shall appoint Inspectors to attend, as the Council may direct, all or any qualifying examinations; that Inspectors "shall not interfere with the conduct of any examination," but shall report of the Council "their opinion as to the sufficiency or insufficiency of every examination which they attend," and any other matters relevant to the examination which the Council may require them to report; and that the Council shall send copies of Inspectors' reports to the body or bodies which held the examinations inspected, and further copies, with any observations thereon by the body or bodies, to the Privy Council.

The sanctions which Parliament has attached to these further powers are that :

1. If it appears to the Council that the standard of proficiency in medicine, surgery, and midwifery, or in any of them or any branch of them, required from candidates at a final or qualifying examination is "insufficient" to furnish the guarantee of professional competence required by the Act, the Council must make a representation to that effect to the Privy Council.

2. On any such representation the Privy Council, after considering any objections by the body or bodies concerned, may by order declare that the examination shall not be deemed to be a qualifying examination "for the purpose of registration under the Medical Act"; but His Majesty in Council may at any time revoke the order on further representation from the General Medical Council or from the body or bodies concerned.

3. During the continuance of any such order (1) any qualifications granted to persons who pass the examination do not entitle them to be registered under the Medical Act; (2) no body concerned is to be represented on the Council; and (3) any sitting member of the Council who represents any such body is suspended from taking part in the proceedings of the Council.

Limitations of G.M.C.'s Powers as to Medical Education

Parliament seems to have contemplated in 1858 that the power to require information from universities and medical corporations about "courses of study" would so far enlighten the Council about what the Act calls "defects" in such courses as to enable the Council on occasion to represent to the Privy Council that the course of study and examinations for a particular registrable qualification did not guarantee the professional competence of persons who obtained the qualification.

To regard the course and the examinations in conjunction seems sensible. But while the Act proceeded to empower the Council to assess examinations by sending Visitors to see them, it gave the Council no power to assess courses of study by sending Visitors into the medical schools. The omission has curious consequences. Before the Council decides, under the Act of 1886, whether a qualifying examination is "insufficient," it can follow the method conformable both with science and with common sense by causing the examination to be visited or inspected on its behalf. The standard

maintained at examinations, and in particular at qualifying examinations, which is essential for the safety of the public depends much more on the efficiency of clinical and other teaching in medical schools than on any influence which the Council can exert by visiting or inspecting examinations; but the Council has no right to acquire information otherwise than on paper about the course of study which leads up to an examination.

Though, therefore, the Council's assessment of the sufficiency of a curriculum depends on the answer to the question whether the course of study and examinations for a qualification, taken together, sufficiently guarantee the professional competence of candidates who obtain the qualification, and the Council has, in homely language, been given the job of assessing the sufficiency both of examinations and of courses of study, it has not yet been given the tools without which it is powerless to do the more important part of the job—namely, the assessment of the sufficiency of the courses. All that is needed to reconcile the law with the apparent intentions of the framers of the Act is to give the Council the same power to visit medical schools as it has had since 1858 to visit examinations; and it is for this simple and pragmatic reason that the Council concurs with the recommendation of the Goodenough Committee in favour of such an amendment.

G.M.C.'s Recommendation on the Medical Curriculum

Universities and medical corporations who wanted their qualifications to continue to be registrable began to ask very soon after 1858 how they were to safeguard the position assigned to those qualifications by the principal Act. It might have frightened, but could hardly have helped, a body which was designing a syllabus of instruction, or still more a teacher who was drafting a course of lectures, to impress upon them or him that a qualification may be deprived of its value as a title to registration if at any moment the Council ceases to be satisfied that it guarantees professional competence when it is obtained; and the comparable provision of the Act of 1886 as to the standard of proficiency to be required from candidates at final or qualifying examinations did not in itself shed further light on the problem.

The practical question was: "What minimum course of study, and what minimum examinations, will from time to time satisfy the Council?"; and the Council, itself a microcosm of the world of medical education in that it represents directly all the bodies granting registrable qualifications, and indirectly many of the schools where candidates for the qualifications are taught, has recognized from the sixties onwards that bodies and schools are entitled to a practical answer. That answer has necessarily taken the form of public statements, revised periodically as knowledge of medicine advanced, of the subjects in which students should be instructed and examined, the order in which the subjects should be taken, the period to be covered by the curriculum and its main subdivisions, and the general scope of the examinations, for any qualification which the Council will continue to regard as entitling its holders to registration.

The statements in which the views of the Council have been published are in principle, as they are now (1947) called, Recommendations to Bodies and Schools. For they indicate only a minimum of instruction and examination, do not impose a detailed or a uniform curriculum, and designedly leave bodies and schools free to teach and examine at a standard above the minimum, and, whether they do so or not, to provide courses and set examinations which, subject to the attainment of the minimum, may vary as much as the bodies and schools please. In short, all that the Council do or ever have done in making recommendations as to the medical curriculum is to indicate in concrete terms, for the assistance of bodies and schools, how the Council will for the time being interpret the references in the Medical Acts to standards of medical education which Parliament in its wisdom has inevitably laid down in the abstract.

Notes on G.M.C.'s Recommendations (1947)

Space and time forbid more than a brief series of notes on those parts of the new Recommendations of the Council as to the medical curriculum which are perhaps of special interest.

Importance of Education of the General Practitioner

The Council found itself in general agreement with the Goodenough Committee in the following statement of the main object to which the minimum curriculum for a registrable qualification outlined in the Recommendations should be directed:

"In deciding the importance that should be attached to the various subjects and the type of instruction that should be given, the bias should be towards the needs of the future general practitioner. All parts of teaching or of clinical practice that relate only to the fields of work of the clinical or laboratory specialist should be reserved for postgraduate education, and adequate attention should be given to those problems which constitute a large part of a general practitioner's work."

Minimum Length of Curriculum

The Goodenough Committee, who were entitled to anticipate legislation which Parliament has not yet been invited to approve, found themselves able to recommend a reduction in the minimum length of the curriculum to four and a half years. They arrived at this happy result by assuming, not only that the labourers in the field of medical education would effect "a ruthless pruning of the curriculum," but also that a compulsory year of internship after qualification would be required of entrants to the profession, so that some things necessary for independent medical practice need not be imparted to the student because they would have to be imparted to the intern. The Council was unable to hold out similar hopes of a reduction in the minimum length of the curriculum because (1) its statutory responsibilities in relation to medical education oblige it to deal with things as they are and not with things as they may be; (2) even if a year of internship required by law were in sight, the Council does not agree that any part of that year should be spent in completing incomplete instruction given before qualification; and (3) the Council holds in principle that, if instruction in any subject is

necessary in order to make a student a safe practitioner on the public, adequate time for his instruction in the essentials of the subject must be found before he takes a final or qualifying examination. The Council, as a trustee for the public, did not therefore think it right to encourage any belief that professional competence at the time of qualification could be sufficiently guaranteed except after a curriculum lasting at least five academic years (made up of a period of preclinical studies of at least five academic terms, an introductory clinical course lasting three months, and a subsequent period of clinical studies covering not less than thirty-three months).

Subjects of the Curriculum General and Pre-medical Education

On this, not the least important, part of the education of candidates for the profession, which extends backwards from the moment of admission to a medical school to a point in secondary education which may be reached at a tender age, there is little difference of opinion about what is wanted, but much difficulty in making sure that applicants to deans for admission to schools have always got it. What is wanted is that potential doctors should have a good general education, and that this education should not omit the principles of physical and biological science; but that, above all, it should not lose its breadth by permitting excessive concentration either on general or on scientific subjects. The Goodenough Committee, who were entitled, if not bound, to dip into the future, found that this end could not be attained without changes in the secondary-school curriculum and examinations, more and better teachers of general science in secondary schools, and changes in the arrangements for teaching physical and biological science in the medical schools. The Council, confined as it is within the boundaries of present conditions, could do no more in its Recommendations that postulate that admission to the study of anatomy and physiology should be open only to students who have passed a preliminary examination in general education which admits to a British or Irish University, or is recognized as equivalent thereto by such a university or by a medical corporation; and have also passed an examination in physics, chemistry, and biology conducted or recognized by the university or corporation concerned. For the rest the Council can only leave to the authorities of schools the responsibility of selecting for admission, in competition for the places available, those candidates who seem to an informed judgment most likely to make good doctors at least five years afterwards.

Period of Pre-clinical Studies

The Goodenough Committee's criticisms of medical education as it is include the statement that "there is an urgent need in every school for a new viewpoint on the part of the teachers of the pre-clinical subjects and for the drastic elimination from the curricula, and therefore from the examinations in these subjects, of a mass of detailed information which serves only to clutter up the student's mind and to deaden his interest in subjects that can and should make the liveliest appeal to him." Parliament has not charged the Council to teach teachers of pre-clinical or other subjects how to teach, and the Council has from the

first been scrupulous to refrain from seeming to assume any right to do so. It is therefore not in a position to go far to satisfy the hopes that this statement must have excited in the minds of candidates if not of others. But it has done what it thinks it can by way of Recommendations to leave the way clear for any change of heart in teachers and examiners in pre-clinical subjects that may in fact be desirable.

Human Anatomy.—The Council has adhered in the Recommendations to its former view that instruction in human anatomy should include dissection of the whole body. But in the introduction to the Recommendations it is pointed out that: "If on a review in detail of the present methods of instruction in dissection it should be found possible to shorten the course without sacrifice of essentials, the saving of time will also contribute towards the amelioration of the position indicated by the comprehensive finding of the Goodenough Committee."

Social Medicine and Public Health.—By omitting, on the other hand, from the Recommendations any express provision as to instruction in social medicine during the period of pre-clinical studies, the Council believes that it can for the moment best encourage full liberty of scope and method in the teaching of this subject, which, as the Goodenough Committee say, "can be satisfactorily settled only in the light of experience gained from experiments." It may perhaps be safe to assume that no course in human anatomy and human physiology is likely to leave the student without enlightenment on "the factors concerned with the promotion and maintenance of mental and physical health" and "the fundamental importance of health and the prevention of disease" which the Committee specified as aspects of social medicine to which he should be introduced during the period of pre-clinical studies.

Introductory Clinical Course

Whether the apparent finiteness of the scientific subjects or the infinite variety of clinical medicine attracts particular students more or less, it seems undisputed that the transition from pre-clinical to clinical studies should be eased and emphasized by the provision of an introductory clinical course. The Recommendations therefore contemplate a course, lasting three months, of instruction in the methods of clinical examination which will precede the beginning of clinical studies.

Period of Clinical Studies

Medicine, Surgery and Midwifery.—Since the Council could not assume, as the Goodenough Committee did, that a compulsory year of internship would follow qualification, the Recommendations provide in medicine for a period of six months to be spent in medical appointments in hospital wards and in a medical out-patient or equivalent department (whereas the Committee appear to contemplate a slightly shorter period partly spent in work leading up to internships); and in surgery for practical instruction in minor operative surgery on the living (which the Committee think had better be postponed to the period of internship).

Three important changes in the Recommendations as to instruction in midwifery have been made with the support both of the Council's Inspector in

that subject at the Inspection of Qualifying Examinations, 1942-46, and of the Goodenough Committee. The number of cases of labour which every student should be required to attend has been reduced from the minimum of 20, often found impracticable, to a minimum of 12 (the first 5 at least to be attended in the lying-in hospital or wards). It is provided that a student should not be admitted to a final or qualifying examination in midwifery unless it is properly certified that (1) in each of the cases covered by the certificate the student has been in personal attendance on the patient during the whole course of labour; and (2) no such case has been credited to more than one other medical student or to more than one pupil midwife.

Paediatrics, Psychiatry, Social Medicine.—The Goodenough Committee give special prominence to paediatrics, psychiatry, and social medicine as the three branches of medicine in which "the developments . . . in the training provided" for students need "fuller consideration than the branches in which few changes are required." The Council in revising its Recommendations concluded that further weight ought to be given to these subjects on the different ground that since the previous revision in 1936 the advance of knowledge, combined with a veering of popular as well as professional interest towards them, means that there is more to be taught and learnt about them, and that a curriculum primarily designed to equip the potential general practitioner must give new prominence to them as branches of medicine. The Council has therefore done what is in its power to promote the recognition of paediatrics, psychiatry and social medicine as major subjects in the curriculum by assigning to each subject for the first time a separate main heading in the Recommendations, and by suggesting alterations, not only in what the Goodenough Committee called "emphasis and approach" in relation to these subjects, but also in the kind and length of instruction to be given in them.

(1) The Recommendations contemplate that time should be found for a clinical clerkship in paediatrics lasting three months (as compared with the period of one month recommended in 1936).

(2) The Recommendations emphasize the importance of giving first place in the instruction in psychiatry to potential rather than established disorders of the mind, and of securing that throughout the period of clinical studies (and not only during the time specifically devoted to psychiatry) the attention of the student is continuously directed to the interrelation of physical and psychological aspects of disease.

(3) Social medicine, by that name, is a young and vigorous graft on the old public health tree. To the Goodenough Committee it signified a conception of medicine "that regards the promotion of health as a primary duty of the doctor, that pays heed to man's social environment and heredity as they affect health, and that recognizes that personal problems of health and sickness may have communal as well as individual aspects." The Committee thought it essential that "the ideas of social medicine," so described, "must permeate the whole of medical education," and were of opinion that for this purpose no less was needed than "a new orientation of medical education,

a big expansion in the social work of teaching hospitals, and fundamental changes in the outlook and methods of most of the teachers."

The problem that presented itself to the Council was, of course, much more restricted, but perhaps not much less difficult. How much, and what kind of, instruction could advisedly be specified so as, on the one hand, to give medical schools and students some idea of the minimum amount of the subject which teachers should attempt to cover, and on which candidates at final or qualifying examinations must expect to be questioned; and, on the other hand, to avoid any apparent encouragement of stereotyped form or method in presenting a subject on which the Goodenough Committee pointed out that "the arrangements which a medical school should make to secure that its students are properly trained in social medicine are matters on which there is much room for experiment"? The answer of the Council as expressed in the Recommendations is (a) to bring up to date the provision made in 1936 for instruction in the part of the subject then described as "hygiene and public health"; and (b) to emphasize that throughout the period of clinical studies the attention of the student should be continuously directed to the social aspects of medicine by such means as the utilization, for purposes of instruction, of public health and social welfare services, health centres, and ancillary workers in the medical field.

After-care and Rehabilitation: Chronic Sickness

After-care and rehabilitation also appear for the first time under a separate main heading in the Recommendations; and the Council has drawn attention in the introduction to the Recommendations to the great and growing importance of the investigation and treatment of chronic sickness as a subject of instruction for students.

Recommendations as to Professional Examinations

Much has been done by the Council in the revision of the Recommendations of 1933 as to professional examinations to make the Recommendations easier to follow, and to enlarge the discretion of examining bodies in matters in which the Council no longer thinks the public interest requires it to interfere. But I propose to concentrate attention, in the last of the many paragraphs in which I have tried to give a short account of the Council's long task, on a few new or amended Recommendations which will, I hope, interest those who read the Educational Number as prospective candidates. (1) The Council recommends that at least two examiners should adjudicate on all written papers. (2) It emphasizes that proper time should be given to practical work in all clinical examinations. (3) It recommends that every candidate at oral and clinical examinations should be examined by at least two examiners, who should settle the candidate's marks jointly. (4) It recommends that no part of a final or qualifying examination should be taken before the end of thirty months of clinical study, and that the examination should not be completed before the end of the period of clinical studies of thirty-three months. (5) It has abandoned the recommendation of 1933 that candidates should be required to complete the three

portions (medicine, surgery and midwifery) of the final or qualifying examination within a period of nineteen months.

It would be less than frank not to add that the Council's decision on the last point was not inspired by sympathy with the chronic student but by confidence that examiners can be trusted to guard the public against candidates incapable of passing at a reasonable standard. In short, the aim of the General Medical Council is to ensure that the medical practitioner will not (to borrow from H. A. L. Fisher) have to navigate the sea of knowledge without the charts and compass of an adequate education.

Reasons for the Backward State of Public Health in India

BY RAO BAHADUR Dr. T. S. TIRUMURTI,
B.A., M.B. & C.M., D.T.M. & H.

Retired Principal, Stanley Medical College, Madras.

The study of Public Health in India and in the other progressive self-governing countries is a study in contrast. It is very depressing but interesting to compare the progress made in Public Health during the last one hundred years of British administration in India with that in England during the same period. It was about one hundred years ago that the first steps were taken to organize public health measures in England. It is stated that the stimulus for it was an epidemic of cholera. Chadwick and Symon and the Victorian Sanitarians, who planned the broad lines for the progress of public health, will ever be remembered. Compare the organized medical profession of England which has become the all powerful social service organization of that country today with the state of the medical profession in India. It is surprising why a people who have been able to do so much in their own country for the progress of Public Health have failed miserably in India.

What is the reason for the marked difference between the Public Health progress in England and that in India? In the opinion of General Meġaw, who was the Director of the Calcutta School of Tropical Medicine and later D.G., I.M.S., in England, sanitation has achieved its victories not merely by the preventive measures taken against disease but also because the public co-operated, and an improvement in the economic standards of living was taking place at the same time as the work of disease prevention; whereas in India the progress in Public Health has been poor, because it was difficult to pour the new wine of scientific sanitation into the old bottles of antiquated customs and superstitious beliefs.

But General Meġaw's reason by implication condemns the Indians as a non-co-operating uncivilised people. It is however gratifying to see that his statement is flatly contradicted by no less an authority than Col. W. G. King, the best part of whose service was spent in laying sound foundations of Public Health in this Presidency, which brought him into intimate contact with the people; he says: "the average educated Indian is not only capable of grasping the benefit of but of receiving, with very

much gratitude, health education by practical demonstration of sanitary works of the community." To condemn a people without educating them and providing for them sanitary amenities is most unbecoming and unkind.

It cannot be doubted that education is the most desirable ally of sanitation, though it might be contended, not without some reason, that the educational policy of the alien Government has not pursued profitable paths. This is realized by the present popular Government and the people. They have awakened to a consciousness that all is not well with education in this country and that it needs a re-orientation and reform in all its branches.

A Short History of Public Health Policy in India

Col. King had rightly remarked that Politics cannot disregard Political Economy, nor Political Economy disregard Sanitation—in its broadest sense—as applicable to man and beast; and that, if sanitation be an integral part of politics, equally must laws be levied for restraint of the selfish instincts of the individuals, which endanger the health of their neighbours and their corollary multiples of communities and nations.

From the early days of the East India Company, officers of the Indian Civil Service played the role of politicians in the Central and Local Governments, and these politicians were provided with sanitary advisers. In 1859, a Royal Commission was appointed to enquire into the heavy mortality among the officers and ranks of the British and Indian troops. The Commission issued a report in 1863. In 1864 Sanitary Commissions were appointed for Madras, Bengal and Bombay. The Sanitary Commissioners of Madras and Bengal recommended the organization of the Public Health Service. This was safely pigeon-holed with the remark that the funds must be provided by the Provincial Governments. The Sanitary Department was represented as an unproductive department and Politics showed no sympathy with it. The plea that education should precede sanitation was advanced to prevent any public health progress. The Government considered it inadvisable to force public health on a population that was by presumption resisting the innovation. It wanted to create goodwill by curing diseases and by widening education to prepare, as it were, the ground on which the seeds of Public Health could be sown later.

In 1869, the appointment of the Sanitary Commissioner was transferred from the Military to the Civil Medical Department. A junior Army Medical Officer was considered enough and was placed in a subordinate position to the Surgeon-General. Some time later plague broke out and the Plague Commission, which was constituted to enquire into this disease, recommended that the Sanitary Commissioner should have a status of equality with the Surgeon-General, the Head of Curative Medicine. The Sanitary Commissioner became the Head of the Sanitary Department. Subsequently, within a few years the Sanitary Commissioner was again made a subordinate of the Surgeon-General. Later, his name was changed from that of the Sanitary Commissioner to that of Director of Public Health, a really ironical title to a person to whom the direction of Public

Health policy is not entrusted even now. In like manner, the Public Health Commissioner of the Government of India was made a subordinate of the Director-General of the Indian Medical Service.

Public Health in the Madras Presidency

In 1889 the Madras University undertook to institute the qualification of Licentiate in Sanitary Science, which was later designated Bachelor of Sanitary Science, a qualification equivalent to that of D.P.H. in Great Britain. Other Indian Universities followed the example of the Madras University. Civil Assistant Surgeons qualified themselves for degrees in Sanitary Science. Sanitary Inspectors were trained. At an earlier date Col. King recommended the appointment of qualified men for Public Health work in Municipalities and District Boards. In those days, the District Medical Officer was also the Sanitary Officer of the District. I have held such an appointment.

From personal experience I may state that no District Medical and Sanitary Officer could have carried out satisfactorily either the medical or the sanitary duties. He clamoured for a special assistant for the discharge of the sanitary duties. Civil Assistant Surgeons were thereafter appointed as Sanitary Assistants. The Surgeon-General appointed these officers and kept them under his control and discipline. The Local Boards protested that those who paid the piper should have the right to call for the tune. The Sanitary Commissioner was a mere passive witness in this ugly squabble for power.

Later, steps were taken to start a regular Public Health Service; almost every Municipality and District Board was compelled to entertain a medical officer qualified in Public Health to look after the sanitation of the local bodies concerned. These District Health Officers and Municipal Health Officers of Public Health. Subsequently, Assistant Directors of Public Health were appointed. This Presidency is greatly indebted to Col. Russell for the inauguration and expansion of the present Public Health Service. Madras took the lead in public health-organization and set an example to the other provinces.

It should however be acknowledged that public health appointments under Municipalities and Local Boards were at the beginning not attractive. Even now, these appointments are not sought after but they are taken up because more lucrative ones are not available for qualified men. The report of the Ministry of Local Self-Government for 1921 contains the following statements:—

"The reluctance of professional men to accept service under Municipal Council is a menace to the future of sanitation of this Presidency. . . . Even men qualified as sanitary inspectors avoid service under local bodies, if they can get other employment. Things have improved since, but the improvement is due to unemployment and overcrowding in the profession."

The important impediments to Public Health progress have been the *laissez faire* policy of the I.C.S. officers, who put the cart before the horse, in taking a brief for education to precede sanitation and

the unseemly and ill-advised squabble for power among the administrative officers of the Indian Medical Service.

Plea for a Planned Public Health Policy

Dr. Jameson has said that a service like the Indian Medical Service which is based essentially on the military needs of a country, in which promotion goes by seniority and a Director-General holds office only for four years, is hardly flexible enough for modern civil administration. He says further, "One looks almost in vain for evidence that Public Health problems are really the concern of those connected with the Central Government of India. . . . India, contrary to the experience of most great countries of the world, seems to feel no need for a strong Department of Public Health in its Central Government." In the discussion on Dr. Jameson's paper, Col. Megaw observed as follows:—

"I think throughout the paper, there ran a suggestion that the Public Health Officers belonging to the Indian Medical Service have not organized a co-ordinated policy of Public Health for India. They certainly have not done so; but the reason is not lack of will nor lack of energy, but the fact that the administrative system in India has deprived them of even the limited influence, which they once had in the affairs of the Central Government. . . . Prof. Jameson points out that the Indian Medical Service has been allowed to develop especially along clinical rather than Public Health lines. But "allowed" is not the right word; the service has been "compelled" by force of circumstances to develop along clinical lines. The members of the Indian Medical Service are recruited to do certain work which is allotted to them; they have not been engaged to frame the administrative policy of Government. Members of the service consider that as a great pity but the fact remains that they have not had much to do with administration and practically nothing to do with the development of policy."

In the above discussion Sir Malcolm Watson has said that the Government itself has never put the public health of the people first and that the fault lay primarily not with the officers of the Indian Medical Service but with the Civil headquarters and the Military headquarters.

Without apportioning the blame for the poor progress in Public Health between the officers of the I.M.S. and the I.C.S., it is enough if we realise that we as a nation are still at the bottom of the Public Health ladder. The officers of the Indian Medical Service have been put into many extraordinary jobs. "They operated telegraphs in India; they ran mints; they superintended jails; they directed Botanical and Geological (and Zoological) surveys; apart from these things, their chief duties have been to look after the health of the Army in peace and war, and in Civil life to develop hospitals and medical schools, carry on research and act as advisers in Public Health matters."

But things changed subsequently with the Indian Medical Service but not with the Indian Civil Service.

We must reckon with the fact that "Preventive Medicine" has come to occupy a higher place in other progressive countries than that assigned to "Bottle Medicine". "Medicine" is defined as "the art of curing, preventing and alleviating disease." This is due to a general realization that the physician

should be equally interested in both Curative and Preventive Medicine. The example set by such eminent persons as Dr. Jameson, Col. King, General Megaw, Col. Russell and others should be followed by the members of the medical and health services. The profession and the public should realize the fact that the most essential factor in the development of Public Health is the question of cost. To the question of Sir William Osler why malaria should not be stamped out of India as it was done in Panama, Sir Leonard Rogers is reported to have pointed out the impossibility of doing so, because in most municipalities in India the whole of the work—teaching, hospitals, schools, roads, sanitation—had to be paid for out of an income of 2 or 3 shillings per head of the population.

Public Health vs. Public Expenditure

A healthy nation is largely a question of money. Health has to be purchased with money. Like all other good things it cannot be had for the mere asking. A nation must be healthy to become wealthy and it is only wealthy nations that have attained to high standards of health. Judicious expenditure of wealth can create health. The absence of health inevitably leads to absence of wealth of the nation as of the individual. Every one should remember that the "first wealth is health" and that "within human limits health is purchasable by communities."

Medical and Public Health Departments are accused of being mere spending departments and the Indian Civil Service officers of Government, who are the guardians of the purse, have not shown much practical sympathy except in theoretical appreciations. Capitalists and bankers, industrialists and organisers of big concerns have given proofs of a better appreciation of economics—savings and dividends—than those who have guided Public Health in this country.

I earnestly hope that the truth of Col. Russell's statement, that in no sphere of human activity can richer dividends be earned than by judicious investment in the preservation and promotion of the health of the people, will be fully understood.

Cruel catastrophes, harrowing horrors of famines and highly sponsored appeals for the treatment of the sick have proved successful in arousing public sympathy and in the collection of the necessary funds. But the voice of the appeal of Preventive Medicine seems to be a cry in the wilderness. Philanthropists have come forward to endow beds or build wards or dispensaries but I am yet to hear of a single endowment by any one in this country for an Institute of Preventive Medicine, the services of which are non-spectacular. Preventive medicine, though despised to-day in India, will be enthroned in its proper place to-morrow. Our philanthropists will, I hope, bear in their mind the saying of Sydenham that the effect, even the slightest reduction in the incidence of sickness, suffering and death must always be a matter of greater felicity than the riches of a Tantalus or a Croesus.

The Bhoré Committee Report is now before the popular Governments. Let us wait and see how far the recommendations of this expert body will be implemented. The report cannot be shelved.

In implementing the various recommendations of the Committee, the authorities should show a sense of values and put first things first.

ASSOCIATION NOTES

The Provincial Secretary, All-India Medical Licentiates' Association, Bengal Provincial Branch, had an interview with the Director of Health Services, Bengal and had discussion on various points regarding education, service conditions, health planning, condensed M.B. course etc., D.H.S. agrees to the following:—

1. To put a stop to dual system of education within 1950 and upgrading of the schools to college standard starting with Campbell Medical School from 1948.

2. Special consideration regarding pay, etc., will be made of the Sub-Assistant Surgeons who are whole-time servants or whose special type of work preclude them from private practice. S.A.S. with ten years service should according to D.H.S. be promoted to Assistant Surgeon cadre.

3. Regarding admission of extra students in Lake Medical College in vacancies caused by absence of candidates from other provinces, such vacancies will be filled up by candidates from Bengal (Ex. I.A.M.C.)

He does not agree to the following:—

1. Overhauling of service conditions at present.
2. Advisory Medical Council with representation of our Association though recommended by D. H. S., Government do not agree.
3. Joint electorate in Bengal Medical Council.

Hon'ble Mr. A. P. Choudhury, Minister-in-charge of Health Department, received a deputation with the following members of the association:—

1. Dr. A. D. Mukherjee
2. Dr. A. M. Malik
3. Dr. A. N. Roy
4. Dr. K. P. Sen
5. Dr. J. Mojumdar

At 8, Theatre Road, Calcutta when deputationists placed the following for his consideration:—

1. Unitary type of medical education, e.g., university standard should be introduced in West Bengal, i.e., Campbell, Jalpaiguri and Burdwan Medical Schools be converted into colleges one every year from 1948. Further, suitable grants be made to the three private medical schools to achieve this objective. Selection of teachers should be on consideration of merit and special aptitude for teaching and research.

2. The Condensed M.B. Course in Calcutta Medical College should be continued and at least 100 students be admitted every 6 months.

3. The number of seats in the Lake Medical College for Bengal is very meagre and should not be less than 50 each term, viz., every 6 months. Financial assistance to Ex-I.A.M.C. candidates be continued.

4. The Association visualises uniform medical service with provisions for two special categories for educational services and specialists services as ideal. Till it is achieved the Sub-Assistant Surgeons with 10 years service be absorbed in Assistant Surgeons' cadre and for the rest a special cadre namely, Assistant Surgeon grade II be provided and the scale of pay should be revised so as to provide with a basic

pay of Rs. 200 per month. The whole-time officers and those in the teaching services should be given allowance of not less than 50 per cent of their pay. The posts of responsibility held by medical licentiates such as charge of sub-divisional and sadar hospitals which are gradually being taken away from them in spite of their efficient and meritorious service, be restored.

To safeguard the interest of medical licentiates serving the Government it is felt that a liaison officer be appointed from this group in the office of the Director of Health Services.

5. (A) The Provincial Medical Council Act should be amended to bring about election of members on joint electorate basis with an elected President.

(B) The constitution of the governing body of State Medical Faculty be revised so as to provide for larger representation of Medical Licentiates in it.

6. Association strongly urges upon the Government of Bengal to implement the Bhore Committee's recommendations so that every individual in the rural and industrial area is provided with proper medical aid.

7. In order to scrutinize the Health Plan and to determine policy of medical education and research, training of secondary health personnel and manufacture of standard medicine, an advisory Medical Council with official and non-official representatives be formed to which our association should have proper representation.

Branch Report No. 48

(Khed Branch Dist. Poona)

In the annual meeting held on 7-10-47 following were elected to officiate as the President and Secretary for the year 1947-48 respectively:—Dr. D. B. Dhavale and Dr. L. B. Apte. Dr. Mrs. K. Y. Sakhardande and Dr. L. B. Apte were also elected as members of the Provincial Standing Committee.

Branch Report No. 49

(Poona Branch)

Annual meeting of the Branch was held on the 12th October 1947. Dr. G. T. Ghaisas was in the chair. About 70 members were present. Secretary submitted his annual report which evoked discussion. The following were the salient points from the report:—

1. The membership of the branch was steady throughout the year and ten new members were enlisted.

2. Clinical meetings were held regularly and a large number of members participated in the discussions. Following is the analysis of the clinical cases that were discussed during the year under the report:—

Dr. Kukday—(1) Hepatic abscess bursting in the lung, (2) Pleural effusion, (3) Three atypical cases of continuous temperature, (4) Discussion on the prevalent skin diseases in Poona, (5) Pulmonary Tuberculosis.

Dr. Bahulkar—(1) Mumps, (2) Spontaneous Pneumothorax, (3) Two cases of round worms with nervous complications, (4) A case of T. B. abdomen diagnosed as pregnancy, (5) Eosinophilia of lung, (6) Perinephric abscess in Typhoid, (7) Intestinal Myiasis.

Dr. Damle—(1) Atelectasis of lung, (2) Sub-acute combined degeneration of the cord, (3) Bronchiectasis, (4) Giardia Lamblia, (5) Psychoses in Typhoid fever.

Dr. V. G. Paranjpe—(1) Tetanus, (2) Spontaneous Pneumothorax.

Dr. Joshi—A typical case of Senile Urethritis.

Dr. Nande—Infantile Convulsions.

Dr. Kolhatkar—A case of Amoebic Dysentery.

Dr. Paradkar—(1) Five cases of Plague, (2) Hiccough.

Dr. Sathaye—(1) Iridocyclitis, (2) Cerebral Haemorrhage with exudates in the eye, (3) Syphilitic episcleritis.

Dr. Sathaye and Dr. Bhide—A paper on Intra-Ocular Haemorrhage.

3. The Independence Day was observed with all the pomp and dignity.

4. On their election to the Bombay Medical Council Dr. V. D. Sathaye and U. B. Narayanrao were congratulated.

5. Dr. V. G. Gokhale who submitted his thesis on indigenous drug—Pimpli—and obtained M.Sc. degree was also congratulated.

6. The Branch secretaries were also successful in getting monthly sugar-quota for its members.

The annual meeting also elected following office-bearers for the year 1947-48:—

President	...	Dr. G. T. Ghaisas.
Vice-President	...	Dr. H. G. Dharwadkar.
Jt. Secretaries	...	Capt. M. G. Bhide.
		Dr. V. B. Nigudkar.

Following are the members of the Managing Committee:—

(1) Dr. M. P. Joshi, (2) Dr. D. V. Paradkar, (3) Dr. N. M. Deshpande, (4) Dr. B. L. Patharkar, (5) Dr. V. P. Bapat, (6) Dr. N. G. Bhade, (7) Dr. V. G. Paranjpe.

Members on the Provincial Standing Committee:—

1. Capt. M. G. Bhide
2. Dr. V. P. Bapat

Branch Report No. 50

(Darbhanga Branch)

In a meeting held on 3-11-47 the following resolutions were passed:—

1. This Association resolves that the proper authorities of the Central Government be requested to make the qualification of the licentiates registrable by the All-India Medical Council.

2. Further resolves that the All-India Medical Council be requested to open a common Register forthwith for all registered medical practitioners and that with for all registered medical practitioners and that the licentiates' qualification be included in Schedule I of the Act.

3. This Association resolves to request the Central Government to enact a law in the Legislature stopping quackery in the country, inasmuch as the stopping quackery is a menace to humanity. They cheat unsophisticated village men and do more harm than good to the suffering humanity by administering allopathic medicines by mouth and injections injudiciously causing untold misery and even death to the unfortunate victims who are not able always to distinguish between a quack and a qualified practitioner.

Further resolved that the quackes must be immediately stopped by law from storing allopathic drugs, patent medicines and injections and using themselves and trading in them in any way without proper licence for the same.

4. This association resolves that the Central Government be requested to standardise the Homeopathic, Unani and Ayurvedic systems of medicines and those who pass the prescribed course of training from a recognised college by the Government shall be allowed to practise only and the net work of these so-called practitioners be made to undergo a short course of training before they be allowed to be let loose in the community to treat its diseases.

Branch Report No. 51

(Pandharpur Branch)

In the annual meeting of the branch held on 10-11-47 following members were elected to the respective post for the year 1947-48:—

President ... Dr. V. R. Shrikhande.

Secretary ... Dr. G. G. Patwardhan.

Dr. B. D. Nadgaud has been elected as the delegate to the ensuing Conference to be held at Bombay in December 1947.

Branch Report No. 52

(Ahmednagar Branch)

In annual meeting of this branch following were elected as office-bearers for the year 1947-48:—

President ... Capt. Dr. D. K. Vaidya.

Vice-President ... Major Dr. G. T. Mhaskey.

Hony. Secretary ... Dr. S. V. Kulkarni.

Dr. S. V. Kulkarni and Dr. V. S. Deshpande were unanimously elected as delegates for the Bombay Conference.

Branch Report No. 53

(Nadia Branch)

Annual Report

Due to partition of Bengal, this branch will henceforth be handicapped from the warm and active assistance of its many enthusiastic members who are now citizens of East Bengal.

Barring this unfortunate incident, this branch tried its best to establish and gain confidence of the public in general of this district.

The position of the branch during the year is as follows:—

1. This branch has got 51 members on its roll.
2. There were 8 meetings, of which one was general.

3. This year the branch made an intensive propaganda for the condensed M.B. course to all the licentiates of the Nadia district and with a satisfactory response.

Branch Report No. 54

(Trichinopoly District Branch)

At a meeting of the Medical Licentiates of the Trichy district held on the 24th of August 1947 it was resolved to continue the Branch till all the differences in the classification of medical licentiates were removed. About 20 members from all parts of the district were present. Major A. Devasagayam was elected as the Hony. Secretary of the Branch.

Dr. N. S. Narasimha Iyer, F.R.C.S., one of the eldest members of the Association, addressed the meeting and gave his opinion that the licentiates' organisation had done good work for the cause of the Service and the existence of the Association was necessary for its uplift and progress compatible with the times in which they were living. He remarked that their organisation was started mainly for the

benefit of the Service men and hence its existence is absolutely essential for the redress of their grievances.

Dr. D. V. Venkappa then spoke about the activities of the Provincial Branch of the A.I.M.L.A., and the resultant Government order published in the Press about the unification of the Civil Medical Services and what endeavours the Committee of Action are making on its behalf. He stressed on the necessity of consolidating and strengthening the Branch with a view to safeguard their own interests. He appealed to all those present to enroll themselves as members which they promised before the next big general body meeting.

A resolution requesting the Government to have on one cadre of Civil Assistant Surgeons was passed.

Dr. P. A. S. Raghavan thanked both the distinguished members of the profession, Drs. N. S. Narasimha Iyer and D. V. Venkappa for having taken the trouble of going over to Trichinopoly and given them the necessary lead and impetus to the local branch.

Branch Report No. 55

(Annual Conference of the Trichinopoly District Branch)

An Annual Conference of the Trichinopoly District Branch was held in the premises of the Trichy K-Rays Ltd., Trichinopoly, when Dr. D. V. Venkappa and Dr. T. S. Tirumurti, President of the Provincial Branch of the Indian Medical Association, addressed the gathering on the important matter concerning the future of the licentiates. Over 30 members attended the function and vigorous membership drive was launched, some becoming members on the spot and other promised to join later.

Earlier there was a clinical demonstration of interesting cases for the benefit of those who came from distant parts of the district at the District Headquarters Hospital on Medicine, Midwifery, Surgery, Tuberculosis and Pathology by the local specialists which lasted from 9.30 A.M. to 12 noon. There was a lunch arranged at 1 P.M.

At 3 P.M. the Conference began when Drs. T. S. Tirumurti and Dr. D. V. Venkappa touched in detail about the G.O., recently published by the Government and how it did not satisfy the profession by the existence of classification in the single cadre of Assistant Surgeon I and Class II. Further the differentiation of the one being gazetted and the other not and the Selection Grade for choice from Class II to Class I are detrimental to their interests and keenly resented by the profession, as perpetuating class distinctions when the real unification of the services was the need of the hour. They assured the members that all endeavours would be made to revise the G.O., in the light of the resolutions passed both by the I.M.A. and A.I.M.L.A., and that the combined deputation on behalf of both the organisations which met the Minister and the Surgeon-General has already pressed on the items under consideration which they expected would result very favourably as the Minister has promised to go through the items sympathetically in consultation with the Surgeon-General.

With a vote of thanks to the distinguished visitors the meeting ended. A number of members were enrolled on the spot.

Branch Report No. 56

Inauguration of the Bellary Branch of the A.I.M.L.A.

The licentiates of the Bellary district gathered together at a meeting held on Sunday the 31st August 1947 in the premises of the upstairs of the Bellary Medical Surgical Stores at 5 P.M. in response to the invitation issued by the conveners, Drs. U. K. L. Narayan Rao and N. S. Vishwanath Aiyar to welcome Dr. D. V. Venkappa, Provincial Secretary, A.I.M.L.A., and hear him on the outstanding problems of the licentiates and the present G.O., issued by the Government. Tea being over, the proceedings commenced with Dr. M. Sitaram Sarma in the chair.

Dr. D. V. Venkappa spoke at length about the activities of the Association, traced its history from the beginning up to the present day and its achievements and the resultant G.O., after their interviews and negotiations with the Government. He dwelt upon the Communique issued recently and remarked that that was a step in the right direction for the unification of the services despite its defects, here and there which must be rectified. He pleaded strongly for keeping their organisation alive till all their legitimate grievances were redressed and for its final consummation for single solid medical organisation for our country as in Britain and America.

Dr. U. K. L. Narayan Rao spoke of the necessity of a combined action on the part of the licentiates to shake off their differences and drew attention to the pioneer work done by the Association complementing Dr. Venkappa on its achievements and the status of the licentiates up till now. He argued and stressed on the necessity and formation of a branch to carry on the usual work to completion and the fulfilment of its objects.

Seven members took part in the discussions specially commenting the G.O., the Bellary Branch of the A.I.M.L.A. was inaugurated on the spot. members were enrolled and election of office-bearers took place as follows:—

President—Dr. N. S. Vishwanath Aiyar.

Vice-President—Dr. K. Kamaraju

Hon. Secretary and Treasurer—Dr. U. K. L. Narayan Rao.

Members of the Committee—Drs. M. Sitaram Sarma, T. Y. Narayan Rao and P. Sudarsanam.

The President in his concluding speech thanked profusely Dr. Venkappa for the great trouble he had taken to come over to Bellary to fulfil his long-standing ambition and mission of opening a branch in the Ceded districts and said that the branch formed under such auspices would prove worthy of its existence. Dr. Venkappa felt grateful, thanked the organisers and wished the branch all success.

Dr. U. K. L. Narayan Rao was "At Home" to the members. The Proceedings terminated at 9 P.M.

Branch Report No. 57

(Ramnad District Branch, Karaikudi)

The Annual General Body meeting of the above Branch was held in Dr. Jabbar's Nursing Home and Hospital at 4 P.M. on Thursday the 9th October 47. Dr. Jabbar Proposed the Provincial Secretary, Dr. D. V. Venkappa to the Chair and requested him

to address the meeting about the recent G.O., published by the Madras Government. After the minutes of the last meeting were read and confirmed Dr. Venkappa spoke at length about the interviews and correspondence with the Minister and the Surgeon General. He also placed before the meeting the resolutions passed by the Committee of Action. The members present took part in the discussions and reiterated the same for being forwarded to the Government. The election of Office-bearers took place for the year 1947-48:

President—Dr. A. Jabbar.

Hon. Secretary—Dr. T. V. Appaswami.

Members of the Committee—Drs. V. Muthunayagam, Miss Rajamrutham and Capt. G. D. Ebenezer.

Capt. G. D. Ebenezer and the Hon. Secretary were elected as members of the Standing Committee for the Provincial Branch. Dr. Jabbar was elected as a delegate to represent the Branch at the Bombay Annual Conference in December 1947.

Dr. Venkappa thanked all the members for renewing their activities and in particular Dr. A. Jabbar who made the function a great success and he was At Home to the members. The meeting terminated late in the evening with a vote of thanks to Dr. Venkappa, after a very enjoyable function.

Branch Report No. 58

Annual Report and Proceedings of the General Body Meeting of the Madura Branch

The Annual General Body meeting was held at 6 P.M. in the Naganath Nursing Home, Sandapet, Madura. Thirteen members were present. After tea, the Annual Report was read and adopted. The Report says that only recently in March last the General Body meeting was held and the Office-bearers were elected. After the receipt of the Circular No. 14 from the General Secretary the Office-bearers for the year 1947-48 were re-elected as per Rule No. 70. Two meetings were held during the short period of the year. There were 34 members on the roll and there are now forty-four members at the end of the year under report of whom seven are new members and three are renewals. The following Office-bearers for the year 1947-48 were elected unanimously:—

President—Dr. S. Kanthimathinathan.

Secretary and Treasurer—Dr. N. Suryanarayanan.

Joint Secretary—Dr. M. Venkatachalam Chetty.

Members of the Committee—Drs. M. V. Natesan, T. S. Ranga Aiyangar, R. Devadas, H. Shama Rao, R. S. Krishnan.

Members of the Prov. St. Committee—Drs. N. Suryanarayanan and N. Krishnamurthi.

Delegates to the Bombay Conference.—Dr. N. Suryanarayanan and Dr. R. S. Krishnan.

Substitute Delegate in case any one of the delegates fails to go:—Dr. K. G. Ramabhadran.

The following message sent to the Secretary on the opening of the One Day Conference held on 12-10-47 by the Madras Branch at Poondi Reservoir was read by the Secretary:—

"After the declaration of our National Independence, in this first Conference of yours especially when the Minister opens and the Head of the Medical Department presides we are sure to achieve oneness

in the Medical services without caste distinction not only in India but also throughout the world."

The following resolution was passed unanimously:—

"This Branch emphatically protests against the G.O., passed recently in the creation two of grades in the cadre of Assistant Surgeons, this perpetuating caste distinction. This Branch requests the Government to take every non-gazetted Medical man now in the service and also entering service whether licentiates or graduates and thus be accorded the gazetted rank and that this rank should be extended to every other Service especially L.F., Municipal and Railway."

The Meeting terminated after a vote of thanks by the Secretary.

Branch Report No. 59

(Budge Budge Branch)

In the annual meeting held Dr. A. N. Roy and Dr. B. C. Mitra were unanimously elected as President and Secretary respectively of the Branch for the year 1947-48. Dr. Miss S. De was elected as delegate to the Bombay Conference.

Branch Report No. 60

(Nowgong Branch, Assam)

In the annual meeting held of this branch following were elected as President and Secretary for the year 1947-48:—

President ... Dr. H. N. Choudhury.

Hon. Secretary ... Dr. C. R. Dutta.

Branch Report No. 61

(Madras Branch)

An extraordinary meeting of the above Branch was held on 10-8-47 at No. 216, Govindappa Naik Street, Dr. K. Rama Rao's residence with Dr. P. B. Anangarachari in the chair. The following resolutions were passed on the G.O. P.S. No. 2711/P.H.:—

The Madras Branch warmly approves the contents of the G.O., No. P.S. 2711/Public Health, and thanks the Madras Government for the same. The Association is, however, of the view that these Class II Officers who have rendered more than 18 years' service should be started on the scale of pay of the Assistant Surgeon, Class I, dating the calculations from the 15th year of service of the scale of pay of the Assistant Surgeon, Class I. If this is not possible, 50 P. C. ante-date may be given in fixing the initial salary. The Association hopes that the reform should be brought as early as possible. Dr. D. V. Venkappa of T. Nagar was proposed to be the President for the ensuing Conference in Bombay in December 1947. The following members were elected delegates to represent Madras for the Bombay Conference:—Drs. K. Rama Rao, S. Rama Krishnan & D. S. Srinivasan.

Branch Report No. 62

(North Arcot District Branch, Vellore)

The Annual General Body Meeting of the above Branch was held at Vellore at the residence of Dr. S. Ponniah, the President of the Association, on Sunday the 9th November 1947 at 4 P.M., when members representing the services and the independent profession were present. The agenda began with the reading of the Annual Report which was unanimously adopted. The election of the Office-bearers took place for the

year 1947-48, Dr. S. Ponniah being re-elected as President and Dr. C. Nathamuni as Hony. Secretary. Two delegates were then elected to represent the branch at the Annual Conference at Bombay during the Xmas week and they were Drs. C. Nathamuni and Kumaraswamy.

Apart from the other resolutions passed the discussion centred round the Sales Tax on medical practitioners and the matter was referred to the Provincial Secretary for necessary action. The Shop Assistants' Bill was then discussed as reported in the Press and it was generally agreed to endorse the views of Dr. A. Lakshmanaswami Mudaliar.

Dr. Venkappa then addressed the gathering and gave a concise summary of the activities of the Committee of Action ever since its formation at the Ambur session of the Provincial Branch up to the present day giving the gist of the interviews with the Surgeon-General and the Minister for Public Health from time to time and the results of their endeavours in the issuing of the Government Order recently about the unification of the Civil Medical Services. He remarked that the G.O. was misinterpreted and misunderstood in its various aspects, how resolutions from the various branches of their Association and the sister organisations were received by him in this connection and how he set about to clarify the same by further interviews and negotiations with the Government in which the Indian Medical Association collaborated with their organisation by a combined deputation before the Government and the Surgeon-General when the details of the G.O. were discussed in all their aspects stressing on the need to revise the order in the light of their discussion. The Minister for Public Health, he said, gave a very sympathetic consideration and promised to do his best in consultation with the Surgeon-General of Madras.

Dr. C. Nathamuni Naidu proposed a vote of thanks to all those present and in particular to Dr. D. V. Venkappa who came all the way from Madras and spoke about the activities in connection with G.O. and the issues raised.

Dr. S. Ponniah was At Home to the members.

Announcement

A new branch of the Association was some time back formed at Balingar with Dr. G. C. Panda as its secretary.

Secretary:—Dr. G. C. Panda.
Balanagar, Eastern States Agency.

Announcement

In the elections of the Bombay Provincial Branch of the A.I.M.L.A. held recently Dr. L. D. Kukday and Dr. V. M. Bahulkar were elected as Provincial President and Provincial Secretary for the year 1947-48.

LETTER TO THE EDITOR

A CRITICISM

on

"First Things First in Public Health including Medicine"

Writing under the caption "First Things First", in the I.M.J. (Medico-political Supplement) of December 1947, Rao Bahadur Dr. T. S. Tirumurthi expresses the hope that our popular Government will not reject the Bhore Committee's report and points out that the chief stumbling block in implementing the recommendations of this committee is finance. He has made 13 valuable suggestions which are capable of immediate solution. In this connection I desire to make the following constructive criticism:—

(A) Dr. Tirumurthi's suggestions are primarily meant for consideration by the Government of Madras, but they are worth the careful and earnest consideration of other Provincial Governments in the Indian Union.

(B) The existence of caste system in the medical profession of our country is the root cause of bickerings in our midst and has undermined all efforts at creating solidarity in the profession. Hence Dr. Tirumurthi's last suggestion, viz., "Abolition of all castes in the profession of medicine—in service and in independent practice," should receive top priority at the hands of both the Central and Provincial Governments.

(C) Civil Medical Officers for Military Service (Dr. Tirumurthi's Suggestion No. 5):—During the days of our erstwhile British rulers, certain category of officers entering the Civil Medical Departments had to sign a bond that when called for, they would be prepared to serve with the Fighting Forces. Failure to answer such a call entailed loss of appointment and payment of a fine to the Government (I do not know if this system is in vogue after 15th August 1947); a good many during the recent war chose this path. If the Indian Union is ever involved in a war, it would certainly introduce conscription—which means that Government can compel any able-bodied person to join the Colours. So the question of obtaining a "bond" would be superfluous. Hence the alternatives would be (a) All future entrants to the Government Civil Medical and P.H. Departments should be given periodical compulsory military training and in the case of those already in service this training should be made optional. Or (b) A high proportion of future recruits to the Civil Medical and P.H. Departments should first be asked to enroll themselves, in the Reserve of officers, the I.T.F.N.C., etc.; in addition, the younger element among the existing incumbents, should also be encouraged to do so.

Ahmedabad.

P. R. PANDIT,
Capt. I.A.M.C. (Late).

GILAG PHARMACEUTICAL SPECIALITIES

METHURAL

N.N. dioxymethyl carbamide 0.2 gm., glucose and excip.ad.0.7 gm.



Highly effective and absolutely innocuous disinfectant for the cavity of the mouth and throat. Prophylactic and therapeutic.

Advantages of Methural tablets:

Many-sided action. Varied possibilities of use and dosage. Absolute innocuity. Colourlessness and freedom from metal. Pleasant taste. Can be taken by children and adults.

Indications:

As a prophylactic: Against aerogene and droplet infection, particularly during period of DIPHTHERIA EPIDEMIC (also scarlet-fever, influenza). During danger of infection at schools, in military service; when taking part at meetings, sick visits etc.

As a therapeutic: At the beginning or during the course of angina, colds, dysphagia, coughs etc. DIPHTHERIA bacillus carriers, DIPHTHERIA convalescents.

Dosage:

For children and adults: 8 to 12 Methural tablets daily, (i.e. 1 every hour), to be dissolved slowly in the mouth. When danger of infection is greater, or as a therapeutic, one tablet to be taken every half hour.

Packages:

Tins of 36 0.7 gm. tablets.

References:

O. Acklin (Therapeutic Review No. 4, 1945).



GILAG PHARMACEUTICAL SPECIALITIES

MANUFACTURED IN SWITZERLAND.



Sole Agents for India:

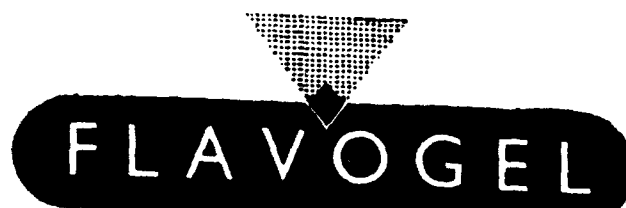
THE PLASTIC & INDUSTRIAL CORPORATION LIMITED

Pharmaceutical Division
P. B. 1930, Bombay I.



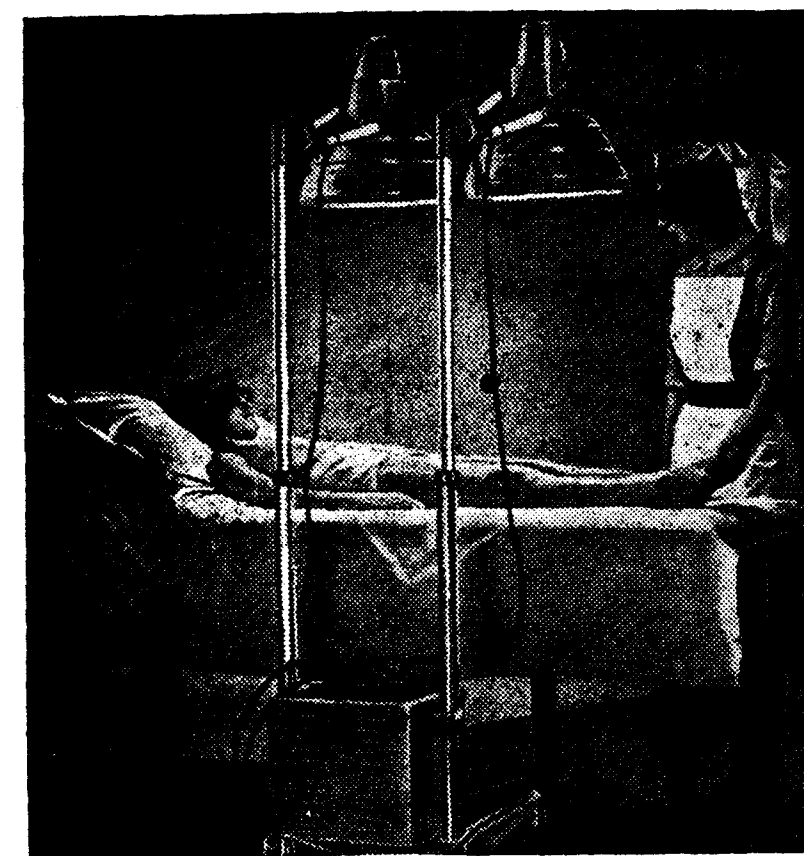
PROLONGED CONTACT *antiseptic*

'Flavogel' is a Glaxo preparation. It is a potent antiseptic in a water-miscible jelly base for use on cuts, wounds and protective dressings, etc. 'Flavogel' is valuable also as an antiseptic lubricant for catheters, cystoscopes, and specula, and in ante-natal examinations. 'Flavogel' has a powerful antibacterial activity, is effective in the presence of serum and is prolonged in action. The consistency of the jelly base maintains the antiseptic in contact with the tissues enabling it to exert the maximum antibacterial effect. 'Flavogel' is ready for application direct from the tube. It is convenient to carry, clean to use and does not stain skin or clothing.



Acriflavine in water soluble jelly base. 1-oz. tubes.

GLAXO LABORATORIES LTD., GREENFORD, MIDDLESEX, ENGLAND.
Representatives in India
H. J. FOSTER & CO LTD., BOMBAY, CALCUTTA, MADRAS, LAHORE.



'Hanovia is prescribed.'

THE LARGEST ORGAN IN THE BODY

Irradiation is a method of administering medicine through the skin—the largest organ in the body—in a form readily absorbed by the organism. As ultra-violet energy, radiation evokes tonic reactions which affect all the processes of metabolism and extend to the remotest cells in the system. Infra-red and luminous rays produce local hyperaemia, and speed up the processes of nutrition and phagocytic healing. Administered in concert, both groups of radiations interact in a harmony equivalent to

sunshine, and are invaluable in a great variety of conditions. The Duo-therapy Unit affords full facilities for the application of every form of actinic irradiation: ultra-violet, radiant heat, infra-red can be used separately or conjointly, with absolute accuracy, convenience and constancy. Our brochure No. 147 contains a description of the unit, with illustrations, output diagrams and details. It can be obtained free on request by professional inquirers.



HANOVIA LTD.
The Specialists in Actinotherapy Equipment
SLOUGH • ENGLAND

Hanovia Agents in India:

MALGHAM BROS.
26 Custom House Road, FORT BOMBAY
ADAIR, DUTT & CO. LTD.
5 Dalhousie Square East, CALCUTTA

ADVERTISEMENT

The next session of the All-India Institute of Hygiene and Public Health, Calcutta, will commence from the 2nd June 1948. The courses proposed to be offered are:

1. Diploma in Public Health.
2. Diploma in Public Health and Hygiene.
3. Diploma in Maternity and Child Welfare.

Medical graduates and medical licentiates of recognised institutions are eligible for admission to the D.P.H. and D.P.H. & Hy. courses respectively. Women medical graduates are admitted to the D.M. & C.W. course.

Candidates with approved war service are exempted from payment of the tuition fee for courses mentioned above. Students are, however, liable to payment of other fee prescribed. Limited accommodation is available in the hostel attached to the Institute.

Applications from intending candidates will be received up to the 15th April 1948. A separate application in writing should be submitted for accommodation in the hostel.

For prescribed forms of application and prospectus apply to the Director, All-India Institute of Hygiene and Public Health, 110, Chittaranjan Avenue, Calcutta 12.

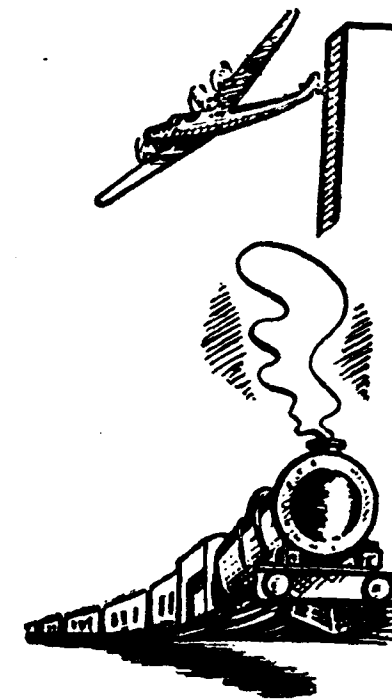
ADVERTISEMENT

A course in Master of Engineering (Public Health) will be offered at the All-India Institute of Hygiene and Public Health, Calcutta, commencing from 2nd June 1948. The course is newly inaugurated in India to give Engineers a general background of Public Health Problems and special training in the principles of design, construction and maintenance of public health engineering works. The course will extend for a period of 8 months for academic instructions and demonstration followed by an examination. On successful completion of this part of the course the student should undergo a supervised practical training for a period of 12 months at certain selected centres.

The course is open only to candidates who possess a recognised Degree in Engineering or its equivalent. Engineers sponsored by their employers and Civil Engineers will be preferred for the course. Students attending the course will be charged tuition fee of Rs. 300. In addition a fee of Rs. 10 for use of instruments, Rs. 25 for field demonstration and a refundable caution money of Rs. 100 will be charged. Accommodation for a limited number of students will be available in the hostel attached to the Institute.

Applications from intending candidates will be received up to the 15th April 1948. A separate application in writing should be submitted for accommodation in the hostel. For prescribed forms of applications and prospectus with further details please apply to the Director, All-India Institute of Hygiene and Public Health, 110, Chittaranjan Avenue, Calcutta 12.

A GOOD COMPANION



No matter how you travel by land, sea or air, let Tata's Eau-de-Cologne be your constant companion. It will keep you clean and cool on a dusty journey. It will make you fresh and ready to arrive.

Wherever you go take Tata's Eau-de-Cologne.

Tata's
EAU DE COLOGNE
 THE TATA OIL MILLS COMPANY LIMITED.

VENOM THERAPY

Bee Venom	Arthritis, Ascites, Pleurisy
Cobra "	Collapse, Coma, Dyspnoea
Viper v. B.	Rickets, Epilepsy, Climaxis
Red Ant v.	Arthritis, Polypus
Blistering Fly v.	Burns and Scalds, Uremia
Orange Spider v.	Caries, Galloping Phthisis
Cuban " v.	Chorea
Rattlesnake v.	Malignant hematic jaundice
Toad venom	Pains of cancer

Descriptive Booklet free to the Medical Profession.

LEXIN LABORATORY

MIHJAM, E. I. R. (S.P.) INDIA.

In CARDIAC AND RESPIRATORY FAILURE

The MODERN ANALEPTIC

NIKARDIN

NIKETHAMIDE B. P.
25% Solution

Supplies

Boxes of 6 ampoules of 2 c.c.
also
Phials of 15 c.c. for oral use.

BENGAL CHEMICAL
CALCUTTA ••• BOMBAY



Agents: N. Dasai Gownder & Co., 41, Bunder Street, Madras

OUTSTANDING Vitamin PREPARATIONS

R.

- **AVIMIN** • **NICKETAMIN**
(Vitamin "A") (Niketamide)
- **BVIMIN** • **VEEBIN**
(Vitamin "B") (Vitamin "B₂")
- **CVIMIN** • **VIMALT**
(Vitamin "C") (Vitamins-Minerals-Mix)
- **DVIMIN** • **VITALYN**
(Vitamin "D") (Vitamin "D" Complex Injection)
- **EVIMIN** • **VITALYN "FORTE"**
(Vitamin "E") (High concentration vitamin "B" complex)
- **IRADIN** • **VITALYN SYRUP**
(Vitamins "A" & "D" concentrate) (Vitamins-Minerals compound)
- **NICTAVIMIN**
(Nicotinic Acid)

VITALYN & VITALYN "FORTE" TABLETS
CONTAIN ALL THE FACTORS OF THE VITAMIN "B" COMPLEX INJECTION.



Index & Price List from Continental Drug Co., Ltd., Worli, Bombay 18.

For effective treatment of acute and chronic amoebic dysentry and intestinal Amoebiasis

the best chemotherapeutic agent

VIO-ENTEROL

tablets of Iodochlorohydroxyquinoline

Issued in tubes of 20 tablets of 0.25 gm. each

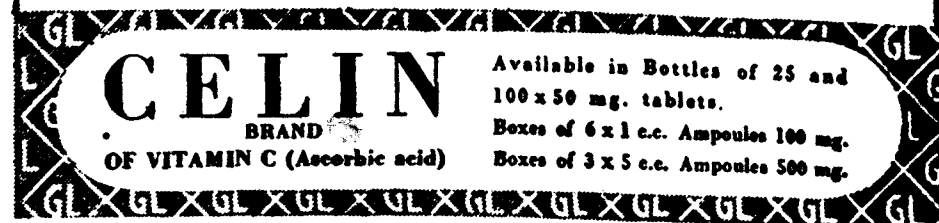
For further particulars please write to:—

ADCCO LIMITED,
CALCUTTA-27.

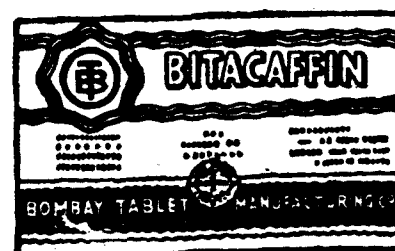
Extended use of Vitamin C

Vitamin C (ascorbic acid) is specific in scurvy, but it also plays an important part in the treatment of diseases associated with an increased metabolic rate, such as fevers. In gastro-intestinal diseases absorption of vitamin C is inefficient and patients with gastric and duodenal ulcer need more vitamin C. It is useful in infections, tonsillitis, diphtheria and in anaemia. Delayed healing of wounds is shown in patients with low vitamin C reserves. Vitamin C is useful in haemorrhagic states. Experimental work suggests that it is of value in blackwater fever.

The daily requirement of vitamin C is 25 mg. — 75 mg. daily. In illness, up to 1000 mg. daily.



Available in Bottles of 25 and 100 x 50 mg. tablets.
Boxes of 6 x 1 c.c. Ampoules 100 mg.
Boxes of 3 x 5 c.c. Ampoules 500 mg.
GLAXO LABORATORIES LTD., Greenford, Middlesex, England.
Sole Representatives in India
H. J. FOSTER & CO. LTD., BOMBAY, CALCUTTA, MADRAS, LAHORE.



BITACAFFIN

(HEADACHE TABLETS)

Relieves all kinds of pains: Such as head-ache, tooth-ache, pain in the legs and joints, insomnia, pain during menses time etc., and cures Malaria Fever.

No harm to Heart or Stomach.

Available at all Chemists.

Per packet of 3 Tablets 1 Anna.

BITALAX

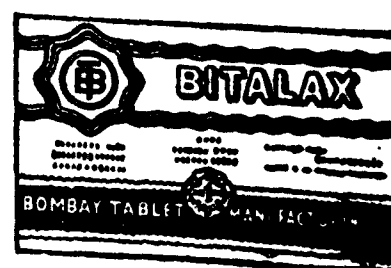
(SWEET CHOCOLATE LAXATIVE TABLETS)

Mild, pleasant and effective remedy for constipation.

Available at all Chemists.

Per packet of 2 Tablets 1 Anna.

Stockists:—M/S. DADHA & CO., P.T., MADRAS.



Manufactured by:—

BOMBAY TABLET MANUFACTURING CO.,

Post Box 2092,

176, ZAVERI BAZAR, BOMBAY 2.

FOR THE MANAGEMENT OF WEAK INFANTS
and RECONVALESCENCE THERAPY IN CHILDREN
PRACTICE



A PALATABLE PREPARATION OF
PROTEOLYSED LIVER FOR ORAL USE

It contains all the haemopoietic factors of liver, the vitamin B-Complex including folic acid, iron, traces of copper and manganese, calcium, glycerophosphates, glucose and malt extract.



TEDDINGTON CHEMICAL FACTORY LTD., BOMBAY.

Sole Distributors:
W. T. SURÉN & CO., P. O. BOX 229, BOMBAY 1

Branches:
Calcutta: P-28, Ganesh Chandra Avenue
Kerachi: 54, Forbes Bldg., Dundas Rd.
Madras: 12 Sunkurama Chetty St., George Town, Lahore: 1, Nehru Park, Gordon Road.

Vol. 42, No. 3
March 15, 1948

1. M. J. ADVERTISER

Antistine

a new **ANTI-HISTAMINE** preparation

For the Treatment of
Allergic Asthma
Urticaria
Anaphylactic Shock
Pruritus etc.

CIBA PHARMA LIMITED
 P. O. BOX NO. 1123 BOMBAY

MANUFACTURED BY DR. A. VISWANATHAN, NO. 32, SULLIVAN GARDEN STREET, MYLAPORE, MADRAS,
 IN CONNECTION WITH THE ALL-INDIA MEDICAL LICENTIATES' ASSOCIATION. PRINTED BY MR. M. B. THAKURTHALA,
 AT SUDHAKAR PRESS, 780-770, HIGH ROAD, TRIPLIKANE, MADRAS.

INDIAN MEDICAL JOURNAL

Journal of the All-India Medical Licentiates' Association with which the Agra Medical Club Journal is incorporated
 (WITH MEDICO-POLITICAL SUPPLEMENT)

Vol. 42, No. 3
March 15, 1948

Editorial and Publishing Office
32, Sullivan's Garden St., Mylapore, Madras 4.

Annual Subscription:
 Members Rs. 4-0
 Non-Members : 6-0
 Foreign : 7-0

the latest advance in
INJECTABLE SULPHONAMIDES

'SOLUTHIAZOLE'
 neutral soluble sulphathiazole derivative

The soluble sodium salts of the heterocyclic derivatives of sulphanilamide, such as sulphapyridine, sulphathiazole and sulphadiazine are strongly alkaline in reaction and their employment both parenterally and topically, is subject to limitations. 'Soluthiazole' is the sulphathiazole analogue of 'Soluseptasine' and presents sulphathiazole in the form of a soluble compound which produces approximately neutral solutions in water. It provides a means for the parenteral administration of sulphathiazole by either the intravenous or intramuscular route, and for its topical application. The chief clinical indication of 'Soluthiazole' is to initiate therapy in patients who are acutely ill or to treat patients who are unable to take sulphathiazole by mouth.

The manufacture and sale of sulphathiazole is fully protected by Indian Patents Nos. 26513/39 and 26850/39 (May & Baker Ltd.), and by corresponding patents in many other countries.

Manufactured by
MAY & BAKER LTD.
 Distributed by MAY & BAKER (INDIA) LTD.

SUPPLIES
 'Soluthiazole' is supplied in 45 per cent. solution (5 cc. contains 20.25 gm. sulphathiazole) and in 5 cc. ampoules of 25 gm.

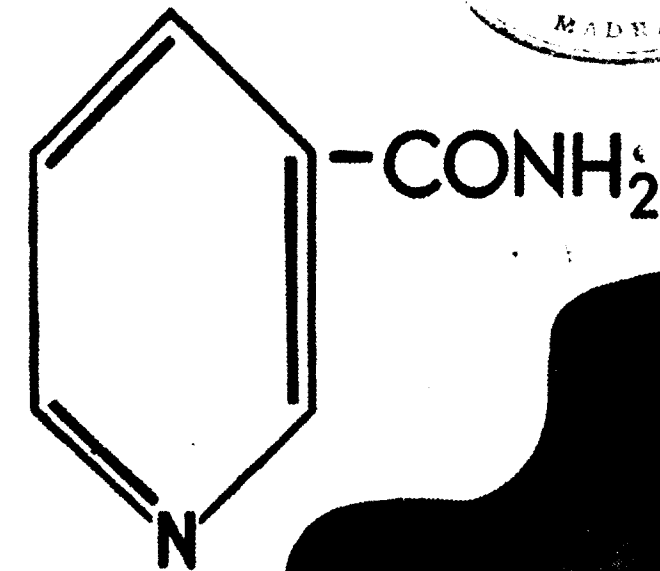
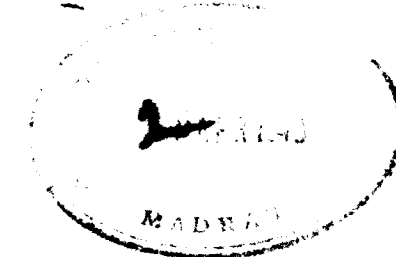


CIBA PHARMA LIMITED

P. O. Box No. 1123

BOMBAY.

A PRODUCT OF THE HOUSE OF DR. A. WANDER S. A., BERNE - SWITZERLAND



TABLETS

(NICOTINIC ACID AMIDE - PELLAGRA PREVENTIVE FACTOR PP)

Sole Importers:

"WANDER" PHARMACEUTICAL DEPARTMENT
GRAHAMS TRADING CO., (India) LTD., P. O. Box 90, BOMBAY I.

[March, 1948]

MAXAMIN

VITAMINS A, B COMPLEX C, D
WITH
NATURAL MIXED TOCOPHEROLS

COMPOSITION

Vitamin A	5000 U.S.P. Units
Vitamin D, (Irrad Ergosterol)	1000 U.S.P. Units
Thiamine HCl	30 mg.
Riboflavin	30 mg.
Pyridoxine HCl	0.25 mg.
Vitamin C (Ascorbic Acid)	750 mg.
Calc. Pantothenate	50 mg.
Niacinamide	200 mg.
Natural mixed Tocopherols equivalent in biological activity to Alpha Tocopherol in each capsule	5 mg.

INDICATIONS

Acute Vitamin Deficiencies giving rise to night blindness, beri beri, polyneuritis, pellagra, scurvy, glossitis, keratitis.

Minor Vitamin Deficiencies with symptoms of aching pains in the arms and legs, loss of appetite, anorexia, vague pain in the joints, swollen gums with buccal sores. Surgical and Medical Tuberculosis are benefited by multi-vitamin treatment.

DOSE

One capsule twice or thrice daily.

PACK

Bottles of 25, 50, 250 and 1000 Capsules.

**FERROPLEX**

VITAMINS B COMPLEX C
WITH
IRON AND LIVER

COMPOSITION

Thiamine HCl	1.5 mg.
Riboflavin	2 mg.
Vitamin C (Ascorbic Acid)	30 mg.
Calcium Pantothenate	1 mg.
Niacinamide	10 mg.
Liver Fraction	25 mg.
Ferrous Sulphate dried U.S.P. in each capsule	0.774 grs.

INDICATIONS

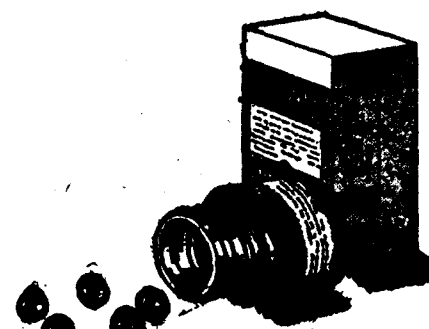
Secondary or iron deficient anaemias accompanied by actual or suspected Vitamin B Complex or C deficiencies. In convalescence following pregnancy, malaria, influenza, dysentery and enteric disorders.

DOSE

1 to 2 capsules three times a day.

PACK

Bottles of 25, 50, 250 and 1000 Capsules.



THE ANGLO-FRENCH DRUG CO. (ESTD) LTD.
CHURCHGATE STREET, BOMBAY 1

March, 1948]

I. M. J. ADVERTISER

3777

GONORRHOEA
PNEUMONIA MENINGITIS
STAPHYLOCOCCAL INFECTIONS
BURNS INFECTED WOUNDS
IMPETIGO and other
CUTANEOUS INFECTIONS



Competent Chemotherapy with CIBAZOL

Systemic Administration

Cibazol Tablets 0.5 g.
Bottles of 20, 100 and 250
Cibazol Ampoules 5 c.c.
Boxes of 5 and 20

Local Application

Cibazol Ointment 5%
Containers of 40 gm.
Cibazol Powder
Containers of 20 g., 100 g. and 500 g.



SOLE IMPORTERS:
CIBA PHARMA LIMITED.
P. O. Box No. 1123,
BOMBAY



For minor ills...

Aches and pains rapidly yield to the effective yet safe action of 'Tabloid' brand 'Empirin' Compound. In general practice it is well established as an analgesic and sedative.

**'TABLOID'—
'EMPIRIN'
COMPOUND**

Acetylsalicylic acid, gr. 3½
(0.227 gm.)
Phenacetin gr. 2½
(0.162 gm.)
Caffeine gr. ½
(0.032 gm.)
Bottles of 25 and 100

'TABLOID'—'EMPIRIN'
(ACETYSALICYLIC ACID)
COMPOUND



BURROUGHS WELLCOME & CO., LONDON
(The Wellcome Foundation Ltd., Incorporated in England)
AND COOK'S BUILDING, HORNBY ROAD, BOMBAY

DIPHTHERIA—WHOOPING COUGH

ONE Immunological course

Vital statistics for diphtheria and whooping cough illuminate the need for one immunological course to deal with both diseases. The Glaxo preparation of combined diphtheria-pertussis antigens, officially described as "Diphtheria-Pertussis Combined Prophylactic 'Glaxo'" enables immunisation to be undertaken simultaneously. Each c.c. contains, in equal proportions, the customary Diphtheria A.P.T. (at least 1:25) and 20,000 million *H. pertussis* alum-precipitated.

Immunisation should start at 4 to 6 months of age and consists of three injections—0.5 cc., 0.5 cc., and 1 cc.—at monthly intervals. Reinforcing doses may be given 2½ years later and again before entry into school. Intra-muscular injection is advised on the outer side of the buttock.

The anti-pertussis vaccine is prepared from Phase 1 strains tested for virulence and protection. Alum-precipitation prolongs the antigenic stimulus as in the case of diphtheria.

This preparation of the combined antigens affords protection at those ages when whooping cough and diphtheria are most dangerous.



Thick lines. Whooping cough cases notified.

Thin lines. Diphtheria cases notified. Vital statistics embodied in this graph (England and Wales) were supplied by the Minister of Health in the House of Commons on 16th October 1946 (Hansard, 1946, 197, 427, 227).

**DIPHTHERIA PERTUSSIS COMBINED
PROPHYLACTIC 'Glaxo'**

In bottles of 5 cc.

GLAXO LABORATORIES LTD., GREENFORD, MIDDLESEX, ENGLAND.

Representatives in India and Pakistan:

M. J. FOSTER & CO. LTD., BOMBAY, CALCUTTA, MADRAS, LAHORE, KARACHI.

THE PERFECT
FOR A NERVOUS
RUN-DOWN PATIENT



As a definite fortifier of the nervous system, it is recognised that the body requires an appreciable amount of Magnesium. To meet this need, Nestlé's have taken care to ensure that 'MILO' is rich in organic Magnesium.

When a Tonic Food is indicated, as in cases of nervous debility, overstrain, sleeplessness, overwork, etc., you cannot do better than prescribe

MILO FORTIFIED TONIC FOOD

Write for literature to:
NESTLÉ'S
Post Box 180, Madras.

M-14

A NESTLÉ PRODUCT



AN IDEAL MEDICAL AID

Tata's Eau-de-Cologne is an ideal medical aid for every home. In sickness its cool soothing touch comforts and soothes and a few drops whilst sponging refreshes the patient. A spray in the sick room and bath room leaves a pleasant fragrance all around.

It is a good stimulant and a sure remedy for giddiness, fainting fits and headaches. Because of the purity of the spirit this cologne can be safely used as an antiseptic on cuts, wounds, abrasions, stings and bites. No home should be without it.

Tata's
EAU DE COLOGNE

THE TATA OIL MILLS COMPANY LIMITED.



Cilag Pharmaceutical Specialities

CILOPRINE

For the local treatment of otitis. Containing new compound 4-carboxymethylamino-4'-aminodiphenylsulfone.

Indications: Ciloprime is an excellent specific for local treatment of otitis media, otitis media purulenta, otitis chronica and other infectious processes of the auditory passage in infants, children and adults. Its action is specially striking in cases of perforation, where the fetid suppuration rapidly decreases under its influence.

Dosage: Every three hours 5 drops.

Packages: 6 gm. and 80 gm. bottles.

References: O. Acklin, (Ars. Medici 1946, No. 12).
O. Acklin, E. Rossi, M. Schmid, (Helv. Paed. Acta, Vol. I, 1946, Fasc. 6).



CILAG PHARMACEUTICAL SPECIALITIES
MANUFACTURED IN SWITZERLAND

Sole Agents for India:

THE PLASTIC & INDUSTRIAL CORPORATION LTD.

Pharmaceutical Division
P. B. 1930 Bombay I.



Cilag Pharmaceutical Specialities

PYRIDACIL

3-phenylazo-2,6-diaminopyridine hydrochloride

Disinfectant of the uro-genital tract for peroral use.
Anti-rheumatic.

Indications: Acute and chronic cystitis, pyelitis, cystopyelitis, pyelonephritis, cervical discharge.

AS AN AID in the treatment of post-gonorrheal diseases (complex infections) gonorrheal complications (prostatitis etc.), acute and chronic rheumatic disorders.

Dosage: Adults: 2 pills 3 to 4 times daily.
Children: 1 pill 3 times daily.

Packages: Glass-tubes of 20 0.1 gm. pills. Bottles of 50, 100, 250, 500 and 1000 0.1 gm. pills.

Reference: W. Haubensak (Practice No. 18, 1943).

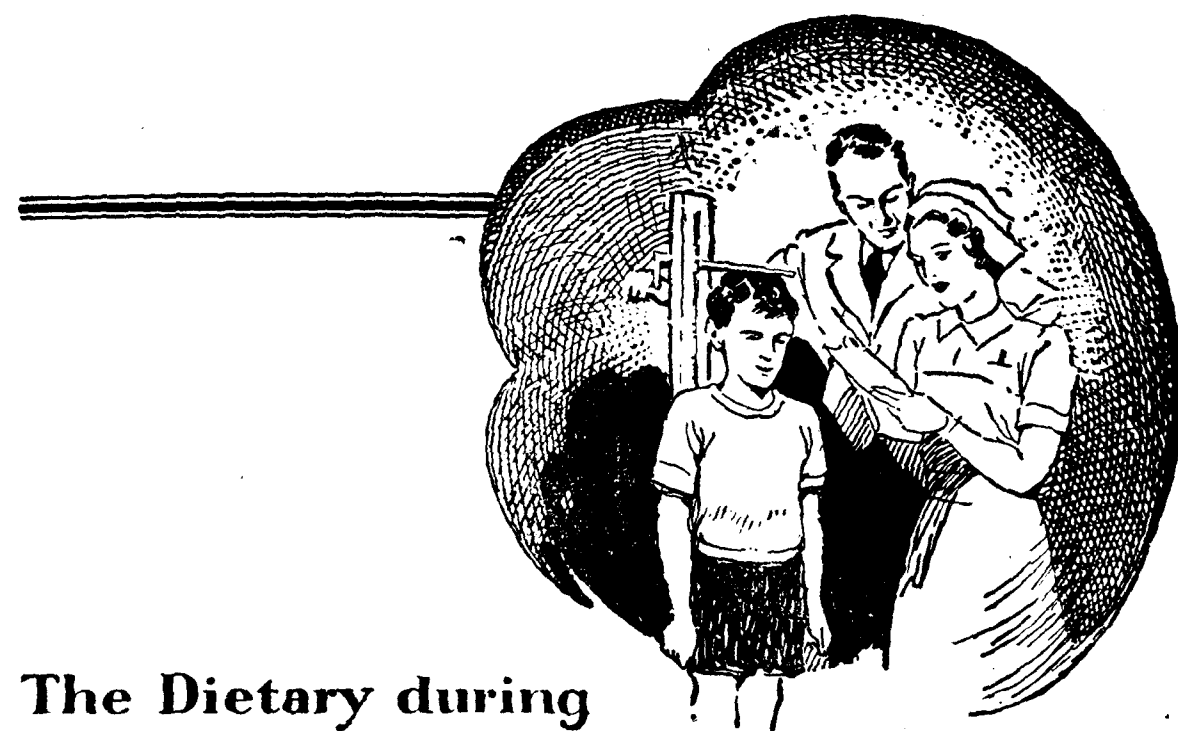


CILAG PHARMACEUTICAL SPECIALITIES
MANUFACTURED IN SWITZERLAND

Sole Agents for India:

THE PLASTIC & INDUSTRIAL CORPORATION LTD.

Pharmaceutical Division
P. B. 1930 Bombay I.



The Dietary during

The Age of Growth

AT no time, throughout the span of life, is the proper and orderly balance of the important food factors more readily disturbed than during the period of active growth and development.

The food supply of every child should, therefore, contain an adequate proportion of essential nutritive elements if normal progress is to be maintained. The construction of an entirely correct dietary to suit the varying requirements of each individual is, however, beyond the

possibility of realisation in ordinary practice.

Many physicians ensure that the ordinary dietary of the young patient is safe and adequate by advocating the daily addition of "Ovaltine", which is a natural food tonic prepared from ripe barley malt and fresh creamy cow's milk, together with valuable natural vitamins and phosphatides. The deliciousness of "Ovaltine" makes it most acceptable to every child, while it is readily assimilable even by digestions impaired with disease.

Distributors:

Grahams Trading Co. (India) Ltd., 16, Bank Street, Bombay
also at Calcutta, Karachi and Madras.

A. WANDER LTD. 5 & 7, Albert Hall Mansions, London, S.W.7. Laboratories, Works and Farms: King's Langley, Herts, England.

"H.11" EXTRACT

FOR CANCER

"WRITE FOR MEDICAL REPORT ON RESULTS IN CARCINOMA OF THE LUNG AND BRONCHUS."

Enquiries are invited and fullest information will be gladly given

STANDARD LABORATORIES
SUNBURY - ON - THAMES
Telephone: Sunbury 2117.

BELVITA BELVITA BELVITA

Leading doctors prescribe Belvita, the new yeast extract, as a sovereign tonic for Anorexia, Loss of Vigour, Lack of Physical and Mental Power.

VITAMIN DEFICIENCY,

BERI BERI, ANAEMIA, POLYNEURITIS, SCABIES, PEPTIC ULCERS, DYSPEPSIA, CONSTIPATION, Etc.,

are some of the complaints for which Belvita may be safely prescribed. It is pure yeast in concentrated form, containing no meat or animal fat-Rich in Vitamins of the B complex.

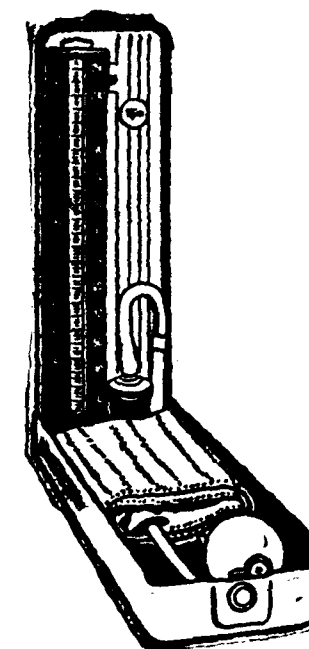
Made by:

The Belsund Sugar Co., Ltd., Bihar.

Managing Agents:

James Finlay & Co., Ltd., Calcutta.

Literature will gladly be sent on request to:
Belvita, Post Box No. 209, Calcutta



Rs. 100/- each



Arm Bag
Rs. 7-8/- each



Rubber Bulb
Rs. 3-8/- each

Tycos

BLOOD PRESSURE
APPARATUS
AND
SPARE PARTS

From

THE NEW SURGICAL TRADING CO
Princess Street :: P. O. Box 2321
BOMBAY - 2

UNI-CALCIN

(FOR INTRAMUSCULAR INJECTION ONLY)

An advanced therapy for Tuberculosis and other conditions where Calcium, Choline, Liver extract and Vitamins are indicated.

Each 5 c.c. ampoule contains the following:

Calcium Gluconate	...	10%
Whole liver extract (with anti-anaemic principles) obtained from fresh young healthy sheep's liver equivalent to	...	30 gm.
Choline Chloride	...	1/12 gr.
Thiamine hydrochloride (Vitamin B ₁)	...	2.5 mg.
Riboflavin (Vitamin B ₂)	...	0.30 mg.
Ascorbic Acid (Vitamin C)	...	2.5 mg.
Nicotinic Acid Amide	...	5 mg.

The preparation has been preserved in a most suitable pH. to ensure maximum potency and stability of all the above ingredients. Available in 5 c.c. and 3 c.c. sterile ampoules

For detailed literature, please write to:

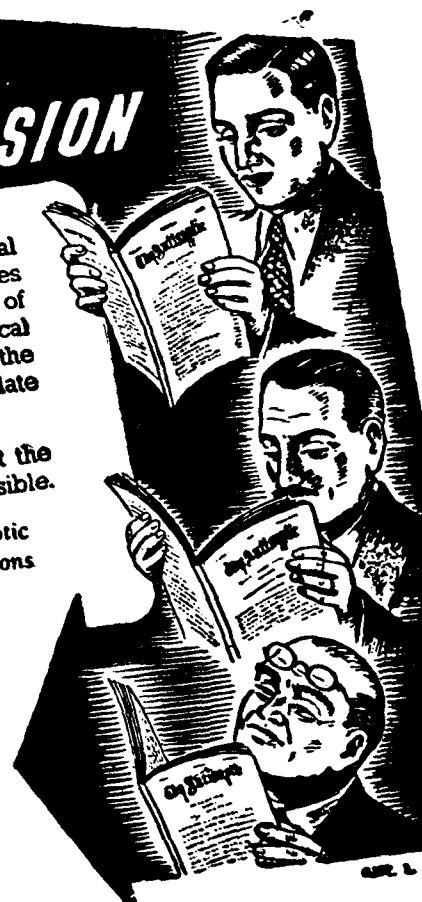
UNIVERSAL PHARMACEUTICAL WORKS Ltd.
11/1, GARCHA 1ST LANE, BALLYGUNGE
CALCUTTA, 19

Read for 40 YEARS BY THE MEDICAL PROFESSION

THE ANTISEPTIC is one of the oldest and foremost medical journals in India. Month by month it publishes important articles on various aspects of medicine and surgery from the pens of leading authorities. The best foreign and Indian medical journals have spoken highly of it. To the practitioner and to the student the ANTISEPTIC furnishes invaluable and up-to-date scientific information.

The rates of subscription are kept deliberately low so that the journal can reach as large a number of readers as possible.
Subscription: Rs. 7-8 a year. The Editors of the Antiseptic gladly welcome contributions from Doctors.
Foreign 15s. a year.
Single Copy Re. 1.

The Antiseptic
323-24, THAMBU CHETTY STREET,
G. T., MADRAS



VENOM THERAPY

Bee Venom	Arthritis, Ascites, Pleurisy
Cobra "	Collapse, Coma, Dyspnoea
Viper v. B.	Rickets, Epilepsy, Climaxis
Red Ant v.	Arthritis, Polypus
Blistering Fly v.	Burns and Scalds, Uremia
Orange Spider v.	Caries, Galloping Phthisis
Cuban " v.	Chorea
Rattlesnake v.	Malignant hematic jaundice
Toad venom	Pains of cancer

Descriptive Booklet free to the Medical Profession.

LEXIN LABORATORY

MIHIJAM, E. I. R. (S.P.) INDIA.

"FOOD & NUTRITION IN INDIA"

By An Indian Dietarian

Price Rs. 6/- only

- A Systematic & comprehensive study on Food & Nutrition based on modern researches with Indian background.
- A really useful guide to Medical Profession and National Health-workers for reference & propaganda.
- A well-written book and an invaluable addition to any library.

Available from leading book-sellers
all over India

Published by

Dr. D. N. CHATTERJEE,
3/2, College Street, CALCUTTA

Dr. W. C. Roy's (L.M.S.)

ROYAPILLA

(Famous since 1869)

Therapeutics: It acts as a sedative to the central nervous system and produces different degrees of hypnosis. It has a mild laxative action on the bowels and sharpens the appetite. On the cardio-vascular system it acts by lowering the increased blood pressure.

Indications: INSANITY, EPILEPSY, HYSTERIA, INSOMNIA, NEURASTHENIA AND OTHER MENTAL DISEASES.

Dose: 2 to 4 pills twice daily
or as directed by the Physician.

Samples & Literature sent on request

S. C. ROY & Co.

Manufacturing Chemists,

167/3 Cornwallis Street, Calcutta 6

ENTRIN

(IODO-CHLOROXYQUINOLINE)

A specific for the treatment of acute and chronic amoebiasis, balantidial infection and other gastro intestinal disorders.

Supply:

In tubes of 20 tablets of 0.25 gm. each

For further particulars please write to:

**STERLING
PHARMACEUTICAL PRODUCTS CO., LTD.**
CALCUTTA-25

OR,

To Agents in South India:

MESSRS. STERLING AGENCY HOUSE
MANGALORE.

"ROSBAY"

A DEPENDABLE PRODUCT FOR FILARIA

"Rosbay is a combination of Rosebay with a radioactive element as per researches of Dr. A. T. Paul and has been before the profession for the last 20 years. It is indicated in Filaria and is given orally or by subcutaneous injections. It contains no antimony, arsenic or any vaccine and in cases where these have failed, Rosbay may be tried with advantage".

—The Antiseptic.

"There is no doubt that Rosbay is worthy of trial especially as a good and reliable remedy for filariasis".

—Editor, Cal. Med. Review.

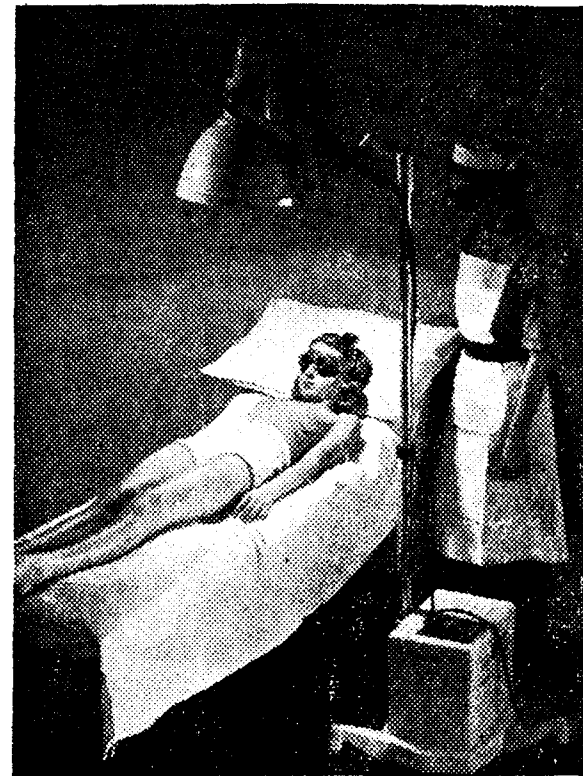
"Many prominent doctors all over India have used Rosbay specific for filariasis and claim very successful results even in the long standing cases.

Editor, Medico-Surg. Suggestions.

Literatures, etc., on request to:—

ROSBAY & Co.

185, Chittaranjan Avenue (N.)
CALCUTTA 7



'Hanovia is prescribed.'

The new
**HANOVIA
ALPINE SUN**
MODEL VIII
clinical ultra-violet ray
LAMP

In this improved post-war model, ultra-violet radiation is generated by the powerful and compact extra high pressure quartz arc tube (S. 250 type). It now operates in an accurate inner reflector which produces irradiation as uniform as sunlight over the whole human trunk. So effective is the combination that as ordinary tonic dose with this lamp averages only one minute. All adjustments are quick, smooth, simple.

Renowned for over thirty years as standard clinical equipment, the Alpine Sun achieves still higher standards of excellence in this new version. Early delivery can be made. We shall be glad to send a full illustrated description. Ask for leaflet 'The Alpine Sun Lamp.'



HANOVIA LTD.
The Specialists in Actinotherapy Equipment
SLOUGH • ENGLAND

Hanovia Agents in India:

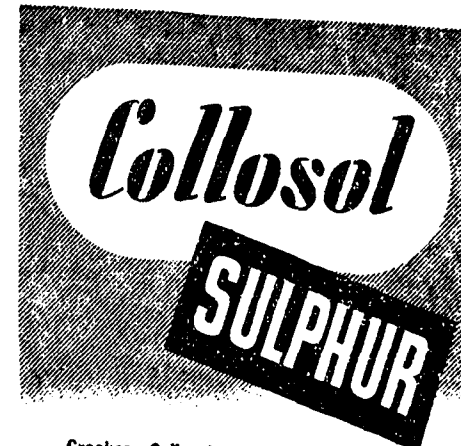
MALGHAM BROS.

26 Custom House Road, FORT BOMBAY

ADAIR, DUTT & CO. LTD.

5 Dalhousie Square East, CALCUTTA

M. 140.



Crookes Collosol Sulphur, orally or by injection is a widely used preparation for the treatment of skin diseases, rheumatism and the many other conditions where sulphur is indicated.



Presented in boxes of 1 cc. and 2 cc. ampoules for intramuscular injection and in 8 oz. bottles for oral administration. Also as a lotion and bath for external application.

Crookes Laboratories Ltd
(INCORPORATED IN ENGLAND)
Park Royal, London, N. W. 10
Bombay: Court House, Carnac Road
Also at Madras

OUTSTANDING Vitamin PREPARATIONS

AVIMIN • NICKETAMIN
(Vitamin "A") (Niketamide)

BVIMIN • VEEBIN
(Vitamin "B") (Vitamin "B₁")

CVIMIN • VIMALT
(Vitamin "C") (Vitamin-Mineral-Malt)

DVIMIN • VITALYN
(Vitamin "D") (Vitamin "B" Complex Injection)

EVIMIN • VITALYN "FORTE"
(Vitamin "E") (High concentration vitamin "B" complex)

IRADIN
(Vitamins "A" & "D" concentrate)

VITALYN SYRUP
(Vitamin-Mineral compound)

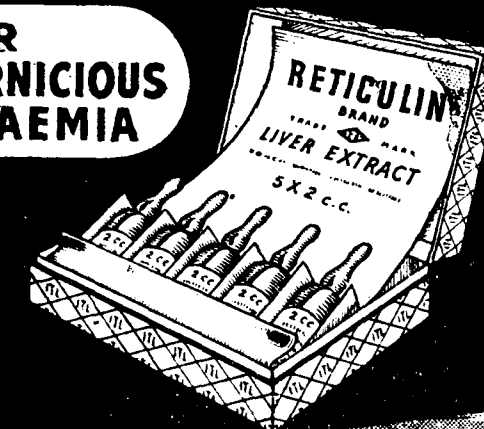
NICTAVIMIN
(Nicotinic Acid)

VITALYN & VITALYN TABLETS
CONTAIN ALL THE FACTORS OF THE VITAMIN "B" COMPLEX INJECTION.

TRADE MARK OF THE VITAMIN "B" COMPLEX INJECTION

Index & Price List from Continental Drug Co., Ltd., Worli, Bombay 18.

**FOR
PERNICIOUS
ANAEMIA**



RETICULIN is a highly concentrated extract of liver for treatment of pernicious anaemia. It is prepared from cod liver oil by a special process and contains the highest concentration of the active principle of the liver (Vitamin B₁₂) in solution in the aqueous solution.

Each box of 5 x 2 c.c. ampoules for intramuscular injection contains 1000 units (1000 I.U.) of Vitamin B₁₂.

RETICULIN

ANALYSTS
SINGAPORE AGENTS

RENT & CO. LTD. 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

RAYCALCIN

RAYCALCIN with GOLD
RAYCALCIN with IRON
(Injections in 5 c.c. and 3 c.c. packings)

SYRUP RAYCALCIN (oral)

Advance Therapy in Tuberculosis

FILARSEN

Specific for Filariasis

POLYTONE

A Unique Restorative & Tonic Preparation

Ask for Descriptive Literature from—

**THE POLYCLINICAL
LABORATORY LTD.**

Head Office:—20/22 A, B, C, Gopal Chatterjee Road,
P.O. GOSSIPUR, CALCUTTA.

SULFODINE

An organic Combination of Sulphur
and Iodine prepared by a process
special to M.S.C. Laboratory.

It is an efficient preparation for
both acute and chronic **RHEUMATIC**
conditions, viz., Acute rheumatic fever,
chronic Arthritis, Fibrositis, Myositis,
SCIATICA, Pleurisy, etc., etc.

Widely recommended by doctors.

For literatures please apply to:—

MEDICAL SUPPLY CONCERN Ltd.
197, Cornwallis Street, CALCUTTA.

Indian Medical Journal
(Journal of the All-India Medical Licentiates' Association)

Vol. 42. Madras : March 15, 1948. No. 3

CONTENTS

	Page
OUR MONTHLY SURVEY	
British Surgical Practice—Causes retarding Medical Research in our Country—Shift System in Medical Colleges...	45
ADDRESSES AND ARTICLES	
Medical Research in India—Past, Present and Future	46
By Rao Bahadur Dr. T. S. Tirumurthi, B.A., M.B. & C.M., D.T.M. & H.	
Amoebiasis of Caecum	49
By Dr. Suroj Kumar Roy, B.M.S., I.A.M.C. (Retd.),	
Headache	50
By Dr. Somesh Chandra Ukil, L.M.F.	
Classification of Anaemia and their Treatment	52
By Dr. L. M. Simlot	
Need for adopting Essential Diagnostic Methods in General Medical Practice	54
By Dr. P. H. Sant	
Castes in the Medical Profession and Services	55
By Rao Bahadur Dr. T. S. Tirumurthi, B.A., M.B. & C.M., D.T.M. & H.	
A Case of Malignant Malnutrition	57
By S. C. Dutta, L.M.P., D.T.M. (Cal.),	
Anti-Histamine Drugs	58
By N. N. Chari, M.B., B.S.	
SELECTED ARTICLES	
The Problem of Venereal Diseases in South India in its Medical and Hygienic Aspects	59
By Dr. R. V. Rajam, M.S., M.R.C.P.	
Pulmonary Embolism—Recent Advances in Diagnosis and Treatment	64
By Samuel Oram, M.D., M.R.C.P.	
Oral Penicillin in Treatment of Pneumonia in the Adult	72
By T. Anderson, M.D. and J. B. Landsman, M.B.	
Oral Penicillin in Young Children	75
By A. J. Suchett-Kaye, M.D. and R. B. Letter, M.B.	
Tonsillectomy and Adenoidectomy—Unsatisfactory Results due to Chronic Maxillary Sinusitis	77
By F. M. Walker, M.B., CH.B., F.R.F.P.S.	
Progress in Tuberculosis	79
NEWS AND NOTES	81
LETTERS TO THE EDITOR	83

AMALGAMATION REFERENDUM**All-India Medical Licentiates' Association**

502, Narayanpeth, Poona City.

General Secretary's Circular No. 4.

DEAR DOCTOR,

In pursuance of the following resolution No. 16 passed in the 35th Annual Conference, you are requested to give your opinion, in writing, on the question of amalgamation of the All-India Medical Licentiates' Association with the Indian Medical Association:—

Resolution No. 16: In view of the fact that the Indian Medical Association has changed its rules as desired by the Amalgamation Sub-Committee of the All-India Medical Licentiates' Association at the meeting held at Amritsar in 1945 and as in the opinion of this Conference the time is ripe that both the Associations be amalgamated, this Conference authorizes the General Secretary to take a referendum forthwith on the question of amalgamation of this Association with the Indian Medical Association under rule No. 4 (m).

You are kindly requested to give your categorical opinion, either in favour of or against amalgamation. You should also give your opinion, if in the affirmative, whether amalgamation should be conditional or unconditional, and if conditional, what should be the conditions. Please fill in the perforated sheet on the right and send the same by book-post to the above address. You are requested to send me your replies so as to reach me on or before 15th May, 1948.

With best wishes,

POONA,
15th March, 1948.

Yours sincerely,

(Sd.) V. D. SATHAYE,
General Secretary.

AMALGAMATION REFERENDUM**VOTING PAPER ***

Place.....

Dated.....194 .

Reference General Secretary's Circular No. 4

I am in favour of conditional amalgamation
not in favour of unconditional

of our Association with the Indian Medical Association. The conditions should be as follows:—

Please give below your Name & Address (in Block Letters)

Membership Roll No.....

Signature of Member.

To

The General Secretary,
All-India Medical Licentiates' Assn.,
502, Narayanpeth, Poona.

* You may send this by book-post duly stamped.

Indian Medical Journal

(Journal of the All-India Medical Licentiates' Association)

Vol. 42. Madras, March 15, 1948 No. 3.

President

Dr. M. D. Pustake, Gwalior.

General Secretary

Dr. V. D. Sathaye, 502, Narayanpeth, Poona City.

Subscribers and members of the Association are requested to remit their subscriptions or membership fees for the year 1948 to the Honorary Treasurer, Dr. P. R. Trivedi, Dalia Buildings, Ellis Bridge, Ahmedabad 6. If the remittance is not received by the end of this month, he will issue V.P.Ps., which may kindly be honoured. No further remittances of subscriptions should be sent to the office of the Journal as notified previously, since the Journal is under arrangements for transfer to Calcutta.

Changes of Address should be communicated to the office of the Journal, P. 27, Princep Street, Calcutta.

OUR MONTHLY SURVEY

British Surgical Practice.—Under this appropriate caption, M/s Butterworth has recently published the first of the eight volumes in this series. It is edited by two well-known surgeons: Sir Ernest Rock Carling of the Westminster Hospital and J. Paterson Ross of Bartholomews Hospital, assisted by a brilliant band of consultant editors one of whom is well known in this country and under whom the writer of this survey learnt his first lessons in surgery, Sir Earnest Bradfield.

The purpose, scope and utility of this book is well brought in the Editor's introduction to this (first) volume:

"There are many surgeons who have no easy access to libraries and it is for them especially that this work is intended ...

"The work is not written for the expert, though we believe it contains contributions which he cannot afford to ignore; nor is it meant for the under-graduate student, though many of the articles, written with the simplicity which none but masters can achieve, will not prove too difficult even for the beginners. The operations described and illustrated are those which our contributors have proved by experience to be sound according to present day standards; we have excluded those, of whatever repute, which are no longer regularly employed."

In our country, the organisation of post-graduate and refresher courses is very poor and the general practitioners, even the specialists,—particularly those who are practising in small urban and rural areas—have no chance to keep themselves abreast of medical surgical advances. To them this series of BRITISH SURGICAL PRACTICE, with its annual supplements to keep them up-to-date will be highly useful and literally help them to follow and adopt sound surgical procedures. The illustrations and plates are as good as one actually witnessing an operation or demonstration of a method.

The volume under review truly depicts the characteristics of British Surgery: adoption of technic of proved value, meticulous care of even minor details, precision in methods, safety of the patients and intense desire and corresponding attempts to improve old methods and discover new ones. The title of the book is therefore appropriately styled as BRITISH SURGICAL PRACTICE.

The subjects are alphabetically arranged and are written by acknowledged masters. The contents of each subject-contribution are tabulated clearly, so that the reader may have immediately an idea as to what the author is going to deal with. Another useful feature is the italicised marginal notes which would help in a quick revision of the subject.

The set-up of the book is excellent. Printed in a good quality art paper, profusely illustrated (228 illustrations) bound strongly and attractively, it is a book which immediately pleases the eye and adorns the shelf.

The cost of each volume is Rs. 52-8-0. Supplementary volumes which would keep the main work up-to-date will be charged for as and when published.*

We have no hesitation to recommend this masterly series on BRITISH SURGICAL PRACTICE to the general practitioners for whom these are mainly intended, though, in our view, the specialists also will gain greatly by going through them. They will be particularly useful to those who practise in small urban and rural areas.

Causes Retarding Medical Research in our Country.—We publish in this issue Dr. Tirumurthi's analysis of the causes that have been retarding the growth of medical research in our country. They are:

(1) Officers for research were selected on the basis of foreign qualification and not on the basis of previous record of research work.

(2) Reservation of research posts mostly to the members of the I.M.S.

(3) The research institutes except those at Calcutta are situated far away from teaching institutions and university centres.

We agree, but we believe this phase is over with the exit of British rule and our assumption of independence. Things are bound to change, and change quickly, particularly when we have Dr. Jivraj Mehta as the Director General of Health and Medical Services, who knows the defects of previous organisation, and who, being in close touch with the profession, is bound to initiate a sound programme of medical research. There is no denying the fact that there is enough talent and enough clinical and scientific material and data in our country for the cultivation and pursuit of research.

We do not however agree with Dr. Tirumurthi when he says that there is no urgency at present for the institution of the All-India Medical Institute. In fact, the Bhoré Committee has given a high priority for this item, and in our view quite rightly. This

* Those who desire to subscribe to these volumes may write to M/s P. Varadachary & Co., Book-sellers and Publishers, Linghi Chetty Street, Madras 1, Sole Distributors of M/s Butterworth's Legal and Medical Publications.

institute is intended to be a model teaching institution organised and conducted by the Central Government, and to supply the much needed band of research workers and medical teachers for the various medical colleges in India. We are therefore glad that the Central Government is making rapid progress in bringing this Institution into shape.

Shift System in Medical Colleges.—We are pleased to read what Dr. Jivaraj Mehta has said in his address at the College of Physicians and Surgeons, Bombay, because we have been saying the same thing without any effect. He is not for more medical colleges at present, as they are money and time consuming affair, but for a larger number of admissions and shift system of teaching the under-graduates. What is more urgently required, he said, is the need for more ancillary personnel, such as nurses, health visitors, pharmacists, etc., in all of which our country is much below par. This is sound advice and we hope that the Provincial Governments will note it for their guidance. The Government of Madras have hurriedly started two medical colleges at Guntur and Madurai to gratify a few friends of the Ministry who agitated for it. They are now finding it difficult to allot sufficient money to organise courses for subsequent years, and we understand these new colleges have been abolished recently. Not that we do not need more medical colleges but that our immediate needs of ancillary medical personnel should be given high priority.

ADDRESSES AND ARTICLES

*Medical Research in India Past, Present and Future

BY

RAO BAHADUR DR. T. S. TIRUMURTHI, B.A.,
M.B. & C.M., D.T.M. & H.

(Retired Principal, Stanley Medical College)

The great part which associations and conferences of medical practitioners play in the progress of the Science and Art of Medicine and Medical Research was recognised many centuries ago by the illustrious masters of Ayurveda in India. The high value of scientific discussions in professional gatherings of Ayurvedic practitioners which afford opportunities for the advancement of knowledge and promotion of research was stressed in no unmistakable manner on the members of the profession by the renowned father of Ayurveda—Charakacharya. The following is a translation of his exhortation:—

"A physician should discuss with a physician. When one discusses with another who is possessed of the knowledge of the same science, such discussion leads to increase of knowledge and happiness resulting therefrom. It makes for greater expertness and promotes the power of lucid exposition. Doubtful points are cleared and certainty gained in respect of certain other points. Certain matters unheard of before become known as a result of such discussion."

* Paper presented for the Bihar Provincial Medical Conference, 1947.

These are eternal truths which should be ever remembered by the medical profession of the whole world. Though this exhortation was made many centuries ago, it is sad to contemplate the decline in the Art and Science of Ayurveda during the past few centuries, owing to causes over which the practitioners of Ayurveda had no control. It is unnecessary for us to narrate in this address the history of the rise and fall of Ayurveda. Suffice it for me to bring to your notice again that the unique feature of Indian culture throughout the ages has been the welcoming of the best ideas from any part of the world and the assimilation of the valuable and significant features of other cultures without losing the soul of her own culture. What a pleasant contrast to the narrow prejudices of the present day practitioners of Ayurvedic medicine to read the advice given for the guidance of his pupils centuries ago by the Great Charaka himself!

"There is no end to the science of Ayurveda; hence constant application in its pursuit should be practised vigilantly; this also should be done to acquire skillfulness in practice from others without feeling any humiliation. Unto men possessed of intelligence, the entire world is a teacher; unto men destitute of intelligence, the entire world acts as enemy. Hence, everything should be examined thoroughly by the wise and counsels of even an enemy should be heard and practised, if they are found to be excellent, praiseworthy, life-preserving and beneficent to the people."

Ayurveda and its medical research received a setback among other causes from alien domination and neglect by a foreign Government, and unfriendly and even hostile attitude of the votaries of Allopathy, paying foreign allegiance, because it did not have its roots in the native soil of Ayurveda. To obtain nourishment out of the valuable treasures of ancient wisdom and to grow in a natural manner from contact with the fresh and invigorating air of imported medical science.

Be that as it may. Let us examine the present state of medical research which has received unstinted and even liberal State support and has been encouraged by the foundation of a large number of medical colleges, hospitals and research institutions in different parts of India at great cost. Lest I be considered a carping critic, I wish to quote the opinion of the expert Body which is known as the Bhore Committee. Their excellent and well authenticated report will remain as a valuable document, fearlessly exposing the deplorable conditions of Public Health, Medical Research, etc., and boldly planning the future policy in Public Health including Medicine, which the Central Government and Provincial Governments would be well advised to follow.

On the subject of research in medical colleges, the committee has said: "Apart from a few noteworthy exceptions, there is almost complete absence of organised research in the medical colleges. The chief cause of this state of affairs is due to absence of facilities for training the young, alert minds of the country in a scientific approach to medical matters."

As regards research in the special Central and Provincial Medical Research Institutes by the officers

of the Medical Research Department, the committee has reported "Even here is visible the throttling effects of routine work on research, even in laboratories in which research was intended to be the primary function." In the opinion of the committee though the opportunities available in India for the investigation of many Medical and Public Health problems are as good as there is in any other countries, the achievements of the past, although good in certain respects, have not yet been commensurate with the unequalled material available for research or with the pressing needs of the country.

Adverting to the research in Medical Colleges, Prof. A. V. Hill, Secretary of the Royal Society, has stated that in the medical colleges which he had visited in India research was almost non-existent. The Bhore Committee has again observed: "The outstanding defect at the present time is almost complete absence of organised medical research in the various departments of the medical colleges. It is true to say that, apart from a few noteworthy exceptions, research in these institutions has been very badly neglected."

Let us analyse the causes for this poverty of research even in institutions specially designed for the purpose. The officers of the Medical Research Department, I.M.S. and non-I.M.S. officers, were selected originally not for their previous record of research work but for fitting posts reserved for the vested interests of a service giving preferment for certain foreign additional qualifications, which had nothing to do with real research.

I have been a member of the Selection Committee of the Government Body of the Indian Research Fund Association appointed by the Government of India for the recruitment of officers to the Medical Research Department and have had occasion to observe with Dr. Khare, M.D., to Sir Fazli Hussain, the then Member of Government for Education, Health and Lands, and Chairman of the Governing Body of the I.R.F.A., that the reservations of posts in this department for the members of the I.M.S. did not conduce to proper selection of personnel. The Chairman agreed with us but stated that the selection committee had no option out to carry out the reservation policy of the Government.

Except in the case of the School of Tropical Medicine and the All-India Institute of Hygiene, Calcutta, the officers employed in the various central and provincial institutes have nothing to do with teaching in the Medical Colleges. There is no contact between the research officers and the professors of medical colleges and the young alert medical students. The research work of the institutes is divorced from the teaching in the medical schools and colleges and in the hospitals attached to them.

Moreover, most of these research institutes were placed in hill tops, having been originally intended to cater to the medical needs of the Army, and the officers carried on their routine of research in blissful isolation and unnatural segregation from centres of medical education and university science colleges where allied sciences were taught and researches conducted. Wholesome and stimulating and frequent contacts with other scientists in allied fields of research was therefore not possible.

The selected officers of the Medical Research Department shaped themselves into or were shaped into research workers after joining the institutes. Frequent changes of officers from one institute to another and from one research subject to another were made owing to exigencies of service. The experiences of most of the officers were lost to the country, because they left it after retirement. They were only birds of passage having no permanent interest in the country in which they were employed. Foreign officers who were entertained in the Research Department on short time contract did not take interest to train younger officers under them to become competent to take their places, when the contract period was over. The contracts were reviewed from time to time. The condition that subordinate officers should be trained for the special research work was more observed in the breach. The contract system cannot be a satisfactory one.

Indian officers of the Research Department were not deputed for special study and research to the reputed foreign institutions because second or third rate institutes in England were preferred.

Examples of Research Institutes which are not closely in touch with Teaching Colleges are—

(1) The Malaria Institute of India located not at Calcutta where medical graduates undergo post-graduate training for the Diploma in Tropical Medicine or the Diploma in Public Health. The Professor of Malariology is at the All-India Institute of Public Health, whereas the Malaria Institute is situated elsewhere!

(2) The King Institute of Preventive Medicine, Guindy, is not a training centre for post-graduate studies and its officers are not associated with the teaching in the Madras Medical College.

(3) The Coonoor Nutrition Research Laboratory cannot function efficiently so long as it is perched on the Nilgiris. Nutrition research is not mere laboratory investigation with experimental animals. Nutrition research should be done more in association with the staff of the medical colleges and hospitals in schools and factories, in slums and cheries, in villages and urban areas, by living contact with human beings in their respective environments.

The above examples may suffice to condemn the present policy of isolation and obscurantism, in which the research institutes are allowed to function. There is an absence of intellectual stimulus owing to isolation of the research departments. Obscurantism has resulted in the love of leisured ease on hill tops. Quantity of output of so-called research papers was measured but no assessment was made of their quality.

Though opportunities are plentiful in India for investigation of many medical and public health problems and there are a fair number of medical research institutes, students continue to go over to British Isles—England, Scotland, and Ireland—to qualify themselves for the diplomas in Tropical Medicine or in Public Health. It is no wonder that the medical profession of India became the laughing stock of the rest of the world. Until lately the obtaining of a foreign qualification made easier the entry into Government service and future preferments and promotions in it.

Mention should be made of the wastage due to non-co-ordination of medical research and employment of high salaried foreign personnel and making the research officers to supervise mere routine works, thereby, in effect, converting research institutes into big laboratories for large scale manufacture of biological products. According to Drs. Viswanath and Butt, members of the Bhoire Committee, the time has come when the large scale manufacture of biological products should be entrusted to commercial firms under strict Government inspection to ensure public safety. So long as the throttling effects of routine work continue as at present and whole-time research officers are employed in such duties progress of medical research and high grade quality in it will not be possible.

Mere post-graduate qualifications are not sufficient for any scientific research. "Intelligence alone is not capable of engendering science. But it is an indispensable factor in its creation. Science in its turn fortifies intelligence... Obviously great discoveries are not the product of intelligence alone. Men of genius, in addition to their powers of observation and comprehension, possess other qualities, such as, intuition and creative imagination. A great scientist instinctively takes the paths leading to a discovery. This phenomenon in former time was called inspiration." The above extract is from the book "Men, the Unknown" by Dr. Alexis Carrel. How many of the officers of the medical research department or the professors of the medical colleges can be counted to come to this standard of a real scientist? How rare to find this combination of intelligence, intuition, creative imagination, and inspiration among the staff of our medical colleges and research institutes!

About research in medical colleges, the Bhoire Committee has recommended that a drastic overhaul is necessary. Among their recommendations we find (1) increase of properly trained personnel, (2) employment of whole-time workers, (3) adequate emoluments to them, (4) grant of study leave, (5) prohibition of private practice, (6) increased accommodation and equipment for research work.

The privilege of private practice to the superior teaching staff of medical colleges has been in my opinion the major factor which has contributed to the poverty in medical research. In some instances general practice not confined to the particular speciality has been permitted. Even consultation practice has been carried to such an extent by the senior members of the teaching staff of the colleges and hospitals attached to them that very little life is left in them even for the routine of hospital duties and for the teaching of medical students in the wards and lecture rooms. They have no time to scrutinise the case-notes taken by the students and they read in the lecture classes out of notes which they had prepared years ago. The lectures fall flat and dull on the students, who attend the classes more for the sake of putting the prescribed percentage of attendance than for deriving any benefit out of the stimulating and thought-provoking address of the teachers.

Most of these teachers do not record the history and examination findings and treatment prescribed even in the cases of their paying private patients. The pressure of private practice leaves no time for

the individualistic approach to proper investigation of each patient. When teachers themselves set bad examples in their private practice and in their teaching work, is there any wonder that the medical students are not inspired to become research-minded?

Other factors which militate against research in general are the conditions of service, absence of incentive, automatic promotion without selection to higher grades solely on merit and on the record of research work to the officers' credit, poorly equipped hospitals, some of which have not been supplied even with a microscope and most of which have no facilities for even ordinary routine clinical laboratory investigations. All the latest scientific knowledge which had been laboriously learnt in the colleges is soon forgotten by the medical men who are not in the staff of teaching institutions, and they drift to the practice of hit-or-miss diagnosis and empirical treatment. The practitioners of other medical systems and the public do not take us at our word when we pride ourselves that we are practitioners of a scientific system, whereas the rival systems of medicine are unscientific.

The importance of clinical research has not been realised. The Bhoire Committee has recorded that very little clinical research of high quality has hitherto been undertaken except at Calcutta by the School of Tropical Medicine and the Pasteur Institute at Shillong and has recommended that it is highly essential to create facilities for clinical research in many other centres throughout India.

In my opinion teaching hospitals are the best institutions where clinical research should be invariably undertaken and insisted upon. Clinical research unless undertaken by the teaching staff will not be taken up by the student after he leaves the institution and settles down in private practice or joins service under Government or other bodies.

There is a wrong notion among general medical practitioners, instilled into them by their old teachers by their example and excuse for not doing any clinical research, that they cannot carry research which can be done only in Research Institutes, by research officers or research professors or specialists trained in the technique of diagnostic laboratory methods. Such examples of teachers and their precepts engender an inferiority complex among the average general medical practitioners. Examples of such eminent medical men as Sir James Mackenzie are not held up for admiration by the students. It is in the power of the general practitioners, if he has the enthusiasm and the will for it, to make the most valuable contribution to medical research especially in the field of clinical research and preventive medicine. Sir James Mackenzie's exhortation for clinical research should be read and re-read by every medical practitioner in India.

Suggestions for speeding up medical research at least in the future have already been indicated in the foregoing remarks. The future of the medical profession, medical science, and medical research in this country is essentially based on the qualities of the young men who will undergo education in the medical colleges. In the reconstruction of Public Health and Medicine in our country, the attention of the

Government should be drawn first to the recommendation of the Bhoire Committee for the admission of students of medical training institutions, though the recommendation is halting and unsatisfactory. It is surprising that a committee composed of eminent medical men and specialists should have countenanced at all any proposal of communal representation for even admission to medical education, which will undoubtedly prejudice the progress of medical science in India. Selection to service, promotion and preferment should be based entirely on merit if the Indian Medical profession is to rise to eminence as in other progressive countries. Napoleon I has said, "Merit however inconsiderable, should be sought for and rewarded."

I do not see any urgency at present for the institution of the All-India Institute recommended by the Bhoire Committee. "First things First" should be our motto. Before the recommendations with respect to improvements of existing medical colleges, research institutes and hospitals in the different provinces are carried out, the question of the All-India Medical Institute should not be taken up, however laudable the objects of the Institute may be.

I may conclude this address by drawing pointed attention of the members of the medical profession in India to the need for the organisation of medical research, medical education and relief as a single integrated unit. In the words of Vaidya Rathna Dr. G. Srinivasamurti, "Each of these thrive far better when organised and worked as parts of a single integrated whole than as independent entities isolated from one another. The most fruitful results in every direction are likely to ensure when workers in each part of the integrated unit carry on their work in close collaboration with one another and also in close and intimate contact with the lives and sufferings of their patients and the needs of the various members of our social structure that come under their purview. It is in the atmosphere created by such an integrated institution that the spirit of scientific enquiry coupled with zest for social service can be best built up, as a matter of unconscious and automatic behaviour into the lives of our students, teachers, doctors, research workers and all others that come within its wide range of work and service."

Amoebiasis of Caecum

BY

DR. SAROJKUMAR ROY, B.M.S., I.A.M.C. (Retd.)
(Medical Officer, I/C Police Hospital, Bankura
and Teacher of Medical Jurisprudence, Bankura
Sammelani Medical School).

The abdomen is a puzzling region for the physician and surgeon alike, firstly, because the ailments are shrouded in variegated complexities and obscurities by their vague appearance, and secondly, it is the seat of many vital organs which are likely to be affected due to various causes.

It is why sometimes even an experienced and adept physician and surgeon misses the real issue

underlying the development of an abdominal discomfort, particularly when it turns into the chronic stage and its sharpness is blunted gradually.

Causes of chronic swellings and pain in the caecal and ileo-caecal regions are not infrequently met with in our general medical practice and they mean lot of pathological conditions either medical, or surgical or gynaecological in female patients. In reality it presents much difficulty to arrive at a straightforward diagnosis in such a condition, where we feel impelled to fall back upon the laboratory and radiological examination as our welcome and sure guide to the desired goal.

In amoebiasis, of all the parts of the intestinal tract, the caecum and sigmoid colon are mostly affected to the extent of formation of small ulcers and cicatrization from their healing. But when it is allowed to run on to the chronic stage due to haphazard and incomplete approach to its cure, the few partially healed ulcers in the caecum bring on a marked thickening of its mucus and submucous coats; as a result the scar-tissue thus formed gives rise to constriction of the part.

Any immoderation or irregularity in diets and habits may flare up this incipient pathological condition of the caecum and manifest vague signs and symptoms referable mostly to the gastro-intestinal region. They may briefly be enunciated as under:

1. *Fever*.—It is not always found present, it assumes a low irregular type with daily rise up to 99° F.—100° F. especially in the evening due to an associated hepatic involvement. This slow evening rise of temperature simulates that of tuberculosis and may give rise to some difficulty and doubt as to the correct diagnosis of the actual ailment.

2. *Gastro-intestinal signs and symptoms*.—These are always predominant:

(a) Irregularity of bowels, usually obstinate constipation alternating occasionally with mild diarrhoea. It is perhaps due to the checking of the normal peristaltic waves at the ulcerated sites and the forcing back of the intestinal contents to the caecum leading to chronic caecal stasis.

(b) Pain and tenderness in the right iliac region, sometimes diffuse abdominal pain is also complained of.

(c) Capricious appetite.—The patients sometimes complain of anorexia for days and at other times feels very hungry.

(d) Nausea, flatulence and heartburn.—these symptoms are usually prevalent.

(e) The caecum seems to be full and tender and is easily palpable with a good deal of gurgling. The caecum and ascending colon feel thickened and there is discomfort on palpation.

In view of the signs and symptoms being very vague and mimicking so many diseases, diagnosis of this condition proves somewhat difficult. Under such circumstances laboratory and X-ray come to our help to a great extent.

An X-ray examination may reveal a constriction of the caecum due to cicatrization from healed ulcers. Microscopical examination of the stool may show cysts of *E. Histolytica* but occasionally the results

are found negative. In that case we may take recourse to the therapeutic test of giving emetine injections or amoebicidal drugs which will bring about appreciable subjective improvement.

It will not be out of place here to cite a concrete case amongst others treated by me as an illustration.

Case 1. One Hindu unmarried girl, aged about 18 years, was brought under my treatment in October last with the following complaints:

(1) Fever characterised by a slow rise of temperature in the evening up to 100° F. associated with slight chill and headache and coryza; she perspired at night and the temperature came down to normal early morning every day.

(2) Pain and tenderness in the right iliac region and sometimes in the left side also.

(3) Obstinate constipation—history of mild diarrhoea for 2 days followed by constipation which was habitual with her.

(4) Associated flatulence and anorexia. Duration of present illness—12 days.

On Examination.—Temperature— 100° F. the evening. Pulse—110 p.m. Resp. rate—26 per minute. Tongue moist and coated. Bowels constipated. Spleen—not palpable. Liver—just palpable but not tender.

Abdomen slightly tympanitic. Rt. iliac region—tender on palpation and caecal gurgling present. Heart and lungs—nil abnormal. All other systems—nothing particular.

Laboratory Examination:—(1) Blood for malaria parasites negative. (2) Sputum for T.B. negative. (3) Examination of stools: (a) microscopically—hard, no blood or mucus. (b) Microscopically—E. H. Cysts found. (4) Examination of urine nil abnormal.

On enquiry it was also elicited that about 6 years back she had an attack of dysentery (amoebic or bacillary, her parents do not know). This case responded marvellously to the line of treatment as delineated hereunder and came round within a fortnight. It is interesting to note that she was also examined by two other medical practitioners previously and was being treated for influenza and later for suspected pulmonary tuberculosis respectively but to no effect.

Treatment.—A. General.—The patient should be put to complete rest in bed. Bowels are to be opened with a dram of castor oil early morning or by a saline purgative containing two drs. each of sodli sulph. and mag-sulph. or preferably by a simple soapwater enema if the abdominal discomfort is excessive. To alleviate pain and tenderness in the caecal region, application of hot water bag is very helpful. Tepid sponging of the body and cold bath to the head are also to be advised.

B. Medicinal treatment.—(1) Injections.—Injections of emetine hydrochlor. gr. $\frac{1}{2}$ for the first dose and gr. 1 for the subsequent doses are to be given intramuscularly on alternate days up to seven injections.

(2) Concurrently with the injections, the following powders and mixtures are also to be administered:

Rx. Tab. sulphadiazine 2 tabs.
Redoxon. 1 tablet (50 mg.).
Entero-vioform. 1 tab.
Cal. Gluconate. gr. V.
Sodi bicarb. gr. X.

F. P. 1 (make 12 such powders).
1 powder T.D.S.

II. Ol. Ricini. dr. i
M. acacia. Q. S.
Ext. kurchi liq. dr. 1
Elixir vit. B-Complex. dr. 1
Trq Hyoscyamus. m. 20
Aqua anisi. ad. oz. 1

F.M. 1 oz. T.D.S. to be taken thrice daily alternating with the powder at intervals of two hours.

These powders and mixtures, if continued for three or four days, are expected to bring down the temperature to normal and after its subsidence it is advisable to repeat administration of the above powder and mixture for one week more—each twice daily now.

After the completion of 10–12 days' treatment, the cysts, when found, usually disappear from stools and profound relief and improvement are ensured. In case the cysts persist in the motions, one course of "Kubismide tablets" (T.C.F.) for ten days is to be given in doses of one tablet twice daily two hours after meals, which is found to make the stools negative and cyst-free.

All other symptoms are to be treated on general lines.

C. Dietetic:—During the period of exacerbation, liquid diet is to be strictly adhered to in the form of barley water, dabbawater, glucose water and fruit juices. When irregularity of bowels and fever subside liquid diet should gradually be changed to unsipped and light solid diet containing carbohydrates and proteins with very low fat.

- References
1. Manson—Bhar-Tropical Diseases.
 2. P. Bhattacharjee—A Hand-book of Tropical Diseases, 2nd Edition.
 3. F. W. Price—A Text-book of Practice of Medicine, 7th Edition.

Headache

BY
DR. SOMESH CHANDRA UKIL, L.M.F.,
Abhay Asram Comilla.

Headache is one of the commonest symptoms met with in medical practice and the conditions with which it is associated are numerous.

Headache may be the first symptom calling attention to the existence of grave organic disease and the correct diagnosis of the cause of this symptom is obviously of the greatest importance.

The explanation of the mode of production of the pain known as headache is not easy seeing that the brain substance itself is insensible to mechanical stimulation. The meninges are supplied with sensory nerves and abnormal stimuli received therefrom reach the cortex and give rise to the impression of pain. Abnormal states of intracranial blood vessels may cause pain.

It seems probable that the headache produced by increased vascular tension is a pressure effect acting on the brain as a whole or on its coverings—the meninges.

The closest attention should be paid to the character, situation, and time of occurrence of the pain and also to accompanying symptoms.

Character.—Whether throbbing or paroxysmal it is affected by movement or position. Headache associated with alimentary disturbance and raised blood pressure are often throbbing in character, are relieved by rest in recumbent position and are increased on movement. Severe paroxysmal attacks would suggest a neuralgia.

Situation.—This may be frontal, vertical, occipital or unilateral. In renal disease, the headache associated with chronic uraemia is usually frontal but may be occipital. It is vertical in constipation. It may be unilateral in migraine, tumour, abscess, middle-ear disease. Occipital headache may also be simulated by myalgia in the muscles and tendons of the nape of the neck.

Time of occurrence.—Headache associated with organic disease of the brain or its meninges, often persists or becomes worse at night and may wake the patient from his sleep. A headache experienced on rising in the morning may be due to a stuffy, ill-ventilated room or to the slighter degrees of combined astigmatism and hypermetropia or to faulty adjustment of the pillows. Pillows piled too high may cause interference with the cerebral circulation and result in headache. Persistent morning headache may be associated with chronic nephritis and careful observation should therefore be made of the patient's urine. Evening headache are most commonly due to mental overwork or eyestrain especially when some visual defects exist.

The causes of Headache—May be divided into three main groups:—

- (a) Organic disease.
- (b) Toxic states.
- (c) Functional conditions.

Causes due to organic disease.—These may be classified anatomically as follows:—

- | | | |
|-----------------------------|-------|------------------------|
| (1) Diseases of the brain:— | | |
| Concussion | Gumma | Hydrocephaly |
| Tumours | Cysts | Disseminated sclerosis |
| Abscess | | G.P.I. |

- | | | |
|--|------------|----------|
| (2) Diseases of the intracranial vessels:— | | |
| Haemorrhage (rupture) | Thrombosis | Aneurysm |
| Syphilitic endarteritis | Embolism | |

- | | | |
|--------------------------------|-----------------|---------|
| (3) Diseases of the meninges:— | | |
| Meningitis (various forms) | Pachymeningitis | Tumours |
| Localised and diffuse. | | |

- | | | |
|----------------------------|-----------|-----------|
| (4) Disease of the skull:— | | |
| | Innocent | Primary |
| | Malignant | Secondary |

- | | |
|---|--|
| Dental diseases. | |
| Suppuration or new growths in frontal, antral or mastoid sinuses. | |

- | | |
|---|--|
| (5) Diseases of the special sense organ:— | |
| EYE:—Errors of refraction, iritis, glaucoma. | |
| EAR:—Middle ear diseases. | |
| NOSE:—Polypi, Adenoids, Nasopharyngeal catarrh. | |

Toxic Causes.—

These may be sub-divided into two groups:—

- (1) Of exogenous origin:—
Foul air—As in close ill-ventilated rooms.
Poisonous gases:—Chloroform, Ether.
Drugs:—Quinine, iron, salicylates, opium.

- (2) Of endogenous origin:—

Uraemia.	
Cholaemia.	Gout.
Gastro-intestinal disturbances.	Diabetes.
Toxaemias.	

Functional Causes.—

Abnormal blood pressure.	
Venous congestion.	
Excessive mental strain.	
Pressure on the head—	Heavy hats, C Carrying weights on the head.

* * *	* * * *
Menstruation.	
Hysteria.	
Migrain.	Eye strain.
Epilepsy.	Sun-stroke.

Treatment.—Success in treatment will depend on the ability to place a particular case of headache in its proper category and apply the appropriate remedy.

It is customary to discuss the treatment under two headings.

- (1) In the attack.
- (2) Between the attacks.

During the Attack.—The patient is advised for retirement to a quiet darkened room as soon as possible and the following drugs should be tried:

- (1) Veramon—4 gr. Repeat in half an hour.
- (2) Phenacetin—gr. 15.
Caffein citrate—gr. 5.
To be repeated, if necessary, at two hourly intervals for three doses.
- (3) Campral—three tablets every six hours.

It is better to avoid the regular use of Bromides, but if the attacks are very frequent Bromide can be given.

- (4) Ergotamine tartrate has recently been introduced with much benefit. It can be given by subcutaneous injection or by mouth in ampoules of 1 mil. and tablets of 1 mg. doses respectively. This occasionally may cause nausea and vomiting which can be relieved by the administration of Atropin Sulph. gr. 1/100.

- (5) If headache is long continued and severe, Morphin hypodermically or Chloroform inhalation is useful.

- (6) Baastrup of Copenhagen reports experiences which seem to justify tentative treatment by Calcium of all cases of headache for which no definite cause can be identified. Baastrup gives Calcium Lactate gr. 15, three times a day for three weeks, and then, after progressively longer intervals, for periods of ten days. His results were excellent.

Between the Attacks:—

- (1) General health is to be improved.
- (2) Fatigue and excessive worry should be avoided.
- (3) Errors, e.g., of refraction and hepatic and menstrual disorders should be corrected.

Between the attacks some of the cases may be suitably treated with glucose, bile acids, thelin, thyroid, special diets or psychotherapy, according to the special type.

The following drugs should be tried :—

- (1) Luminal gr. 1/2- 1, B. D.
- (2) Re/- Ext. Thyroid gr. 1/2 T.D.
- (3) Re/
 - Sod. Bromide gr. 10
 - Liq. trinitrin=gr. m. 1.
 - Liq. Strych. m. 5.
 - Acid Hydrochlor dil. m. 10.
 - Tinct. Gelsem—m. 5.
 - Aq. Chloroform ad 1/2 oz.
 - 1/2 oz. T.D.P.C.

The extremely severe cases which do not respond to any of the above measures should be handed over to a specialist.

References

- (1) The Medical Annual 1924.
- (2) Modern Treatment in General Practice—By Cecil P. A. Wakeley.
- (3) An Index of Differential Diagnosis of Main Symptoms.
- (4) Medicine—G. E. Beaumont.
- (5) Bed—Side Medicine.—Majumder.

Classification of Anaemia and Their Treatment

BY

Dr. L. M. SIMLOT

(Medical Officer, Saipura, Jaipur State (Raj.))

Anaemia is a condition of the circulating blood in which there are quantitative and qualitative changes in the red cells or their haemoglobin content.

So often we find ourselves dealing with slight errors and anomalies of physiology rather than pathological conditions and many of the anaemias fall in this category. Below a diagram showing the normal physiology of blood production and destruction.

Formation	Circulation	Destruction
1. Protein Fat Carbohydrate Vitamins Mineral salts Water	R. B. C. 5000000 H. B. 100 p. c. C I. I. O. Reticulocyte. 0.5 pc. Icterus Index. 4.6 (Leakage—chronic haemorrhoids excessive menstrual blood loss etc.)	Reticulo endothelial system Spleen Liver. Bile salt
2. Iron		
3. Erythrocyte maturing factors		
	85 P.c. returnable.	

These are the three main features in the production of blood and deficiency in any of these will give rise to anaemia—nutritional deficiency, deficiency of iron absorption or utilization of the specific type due to a deficiency or absence of the anti-anaemic or erythrocyte maturing factors. It may be due to aplasia of erythropoietic tissues or an insufficient supply or to inefficient absorption.

The advantage of keeping such a diagram uppermost in one's mind is that we are not then so likely to place all our cases of anaemia into one category.

Broadly speaking anaemia may be divided into three groups according to the size and haemoglobin content of the red cells.

- (1) *Megalocytic*:—in which the red cells are abnormally large and well filled with haemoglobin.
- (2) *The Normocytic*:—in which there is no alteration but the total red cells are reduced.
- (3) *The Microcytic*:—in which red cells are smaller and contain less haemoglobin than normal.

The following full classification is according to the deficiency causing anaemia:

I. Anaemia due to deficiency factors essential to normal blood formation:—

- A. Iron: Microcytic anaemia due to deficiency of iron absorption or utilization.
 - i. Chronic nutritional hypochromic anaemia: chlorosis, and hypochromic anaemia of pregnancy.
 - ii. Nutritional hypochromic anaemia of infancy.
- B. Anti-pernicious anaemic factor:
 - i. Addisonian Pernicious anaemia.
 - ii. Pernicious anaemia of pregnancy.
 - iii. Macrocytic anaemia of sprue, idiopathic steatorrhea, dithioriocephalus infection, etc.
 - iv. Tropical macrocytic anaemia.
 - v. Macrocytic anaemia of liver disease.
- C. Anaemia due to deficiency of Vitamin C.
- D. Anaemia due to deficiency of thyroid secretion—Myxoedema.

II. Anaemia due to excessive blood destruction:—

- A. Primary haemolytic anaemia:
 - Familial and acquired acholuric jaundice.
- B. Secondary haemolytic anaemia:
 - Paroxysmal haemoglobinuria.
 - Acute haemolytic anaemia sickle cell anaemia.
 - Haemolytic anaemia of infancy.

III. Anaemia due to inhibition or aplasia of the bone marrow:—

- A. Idiopathic.
- B. Secondary causes—heavy metals, benzol group, poisonous gases, radio active materials.

IV. Anaemia due to Blood lost:—

- A. Haemorrhages due to haemorrhagic diseases.
 - I. Purpura—
 - (a) Primary.
 - (b) Secondary.
 - II. Haemophilia.
- B. Post haemorrhagic anaemia may be acute or chronic.

V. Miscellaneous:—

- (1) Splenic anaemia. (Bantis disease.)
- (2) Polycythaemia:—
 - A. Polycythaemia Vera.
 - B. Enteroogenous cyanosis.
- (3) Leukaemias.
- (4) Lymphatic diseases—
 - Hodgkin's disease.
 - Lympho sarcoma.
- (5) Aggranulocytic angina.
- (6) Infectious mononucleosis.
- (7) Reticulo endotheliosis.

The diagnosis of the different types of anaemia is usually fairly easy and the important guides are:

1. The history of the patient.
2. The laboratory findings.
3. A complete blood examination.
4. Urine and stool examination.

The two blood examinations that are of special help in arriving at a correct diagnosis. (1) the size of erythrocytes and (2) reticulocyte count.

Prophyaetic Treatment:—

I am only dealing here with the iron deficiency anaemia, which is found to some degree in most of the cases.

Under normal conditions the normal iron need of an individual is approximately 10 m.g. daily, but it varies according to the menstrual loss and with pregnancy. Under normal conditions this is enough for the need of the individual but may become inadequate if there is excessive menstrual loss or during the added strain of pregnancy the supply may not be adequate to the requirements.

The first step therefore in the treatment of anaemia in women (as majority of chronic deficiency anaemia is found among women) is to attempt prophylaxis by seeing that the patient has an adequate diet and correcting any gynaecological faults either of organic or endocrine origin.

During pregnancy an attempt may be made to increase the amount of the iron containing foods and of the general nutrition of the diet. For the general cases education of the public to an appreciation of a more balanced diet is most important.

B. Curative Measures:—Treat the underlying cause first.

C. General Measures:—

- (1) Rest:—During the period of treatment for anaemia the patient must rest in bed. He may be allowed to attend to the calls of nature but otherwise he should be strictly in bed.
- (2) Assurance:—Patient should feel that something is being done to cure his condition.

A. Treatment of Gastro Intestinal symptoms:—The main being Anorexia (1) most of the patients have an achlorhydria and therefore are given.

Rx Acid Hydrochlor. dil. dr. 1
Glycerin Pepsin B. P. C. dr. 2
Sig—3 during meals daily.

Many have an excessive mucus secretion in the stomach which may give rise to achlorhydria, and an alkaline powder given after meals may be beneficial.

Rx. Soda Bicarb. dr. i
Mag. carb. dr. i
Bismuth carb. zi. dr. i
F.P.3.

Constipation may be troublesome and the best treatment is mineral oil with cascara, agarol, petrolagar. Vitamin B may be given as Bemax, Marmite or yeast tablets.

Glossitis sometimes needs treatment as a symptom but in the ordinary anaemias there is seldom need to give any special treatment—

2½ p.c. chromic acid in water or 2 p.c. gentian violet lotion is good local application.

Treatment of Nervous symptoms:—Give vitamin B in the form of marmite or Bemax or yeast tablets. In severe cases injection of vitamin B daily. For anxiety state that is so often present due to family worries give Bromide Mixture at bed time or luminal gr. ½—1 at bed time.

Specific Iron Therapy:—Iron salts are used in many tonics but the amount of iron in these preparations is usually of a negligible quantity and hence most of the commercial compounds are of little value.

There are five main compounds of iron used:

1. Metallic iron. 2. Ferric salts. 3. Ferrous salts. 4. Organic iron combinations.

Insoluble iron salts give rise to unpleasant taste, stain the teeth, irritate the stomach and act as astringents causing constipation and colic.

The ferric salts are most likely to cause these undesirable actions and so on the whole are ineffective in the treatment of anaemia. The last group of organic combination are very good to take but are useless as the amount of iron in them is too low for severe anaemia.

Reduced iron is effective but must be given in large doses. The soluble ferrous salts are the most effective but have the big disadvantage of being very rapidly oxidised to the ferric state. Therefore the insoluble ferrous salts are used in the form of Blaud's pill or the iron carbonate. Ferrous sulphate in tablets form from 9 to 18 grains is effective.

The disadvantage of these preparations is again the tendency for them to pass through the alimentary canal unchanged.

The scale preparations are therefore under all circumstances the most reliable.

Parenterally iron preparations are not of much value as it is difficult to give large doses without giving rise to toxic symptoms.

Main success of treatment is to give any suitable preparation in sufficiently large doses.

60 grs. to 120 grs. of ferri et ammonium citras daily is as good as any. It may be given in a glycerine base.

The standard of cure should be to aim at getting a rise of at least 1 p.c. of haemoglobin for each day of treatment. Perhaps a more recent line is the addition of some copper and manganese to the iron preparation as catalyst and one does get good results from it.

Need for adopting Essential Diagnostic Methods in General Medical Practice

BY

Dr. P. H. SANT,
Bilaspur

Medical practice, to earn one's honest living, is as much a business concern as any other business can be. Correct diagnosis of a patient's complaint after he presents himself for advice and treatment is the first and most important matter to be achieved in this business both in the interest of relief of the patient's suffering and in the economy of his time and money. It enables the physician to establish his reputation as an exact and sincere worker and most certainly repays him with more work or gratefulness or both. Diagnosis of diseases in modern medicine in many cases depends on laboratory findings, certain special examination of some pathological fluids, associated, no doubt, with the clinical picture of the case and case history. All the education in medical colleges and schools will bear ample support to this fact that it is impossible for any conscientious practising physician to do full justice to the patients he treats unless he has such a well equipped laboratory somewhere in the town, to assist him in discharging his duty towards his patients who bring him his daily bread and get themselves treated by him with implicit faith in sincerity of his purpose. Many district and even tahsil towns in India can now boast of being populated by qualified medical practitioners who practise modern medicine and who are making a decent living. But if one really makes a search of a good laboratory in all such places, one will be astonished to know that there is none. In big District headquarters even if there is some show of a laboratory in Civil Hospital it will in many cases be found to be not working or even if it is working its work is rather spasmodic and ill-managed. Its advantage to the general medical practitioner of the town is practically nil due to various reasons—the fault lying more with Government's system of conducting these hospitals than with persons in charge of such institutions. A modern medical practitioner going by the easy plane of gradient has under these circumstances the following alternatives: (1) to evolve some ultra-scientific intuitive sixth sense of correctly diagnosing his cases for get everything about examination of pathological and other body fluids as diagnostic data, (2) to depend entirely on development of symptom and adopt "wait and see" expectant policy, (3) to develop "don't care" temperament to what happens or to what patient says, (4) to get disappointed with private practice and to enter the service of the Government or Local Bodies or some business concern or (5) if his funds provide to shift to such a place where laboratory facilities could be available and where he could gradually build up his practice. Out of these alternatives the first is mentioned to be shown that it is merely an impossibility. He invariably resorts to the next four alternatives. It will not be at all

casting aspersions on majority of private practitioners practising in the interior of India in many district and tahsil places to say that they follow one of these alternatives. I sincerely harbour highest regard and admiration for all my fellow practitioners who are giving a bold fight to the different schools of medicine practising in the interior of India working as they are against all odds and with so many handicaps. But at the same time one who impartially surveys the whole show put up by them will have to admit that majority of our clinics, for want of proper methods of examinations or want of such proper helping centres barring one or two in big towns and none at all in other places, do not do full justice to their patients. The remedy is in our hands and within our easy reach if we realise the importance of it. It is to have a small laboratory consisting of absolutely essential diagnostic methods attached to our own clinic and work it out oneself or through a trained assistant under our supervision. The initial expenses which if invested judiciously will not, realizing its absolute indispensability, appear much and the running expenses of which may be deemed to be negligible. I do not intend to enumerate all the requisites of such an essential laboratory or other diagnostic implements though I may mention a few of them. A microscope, Haemocytometer, Blood sugar apparatus, Kahn test pipettes, Sedimentation test pipettes, Urine examination outfit, Blood pressure apparatus, slides, stains, test tubes, etc., did not cost more than a thousand rupees in pre-war days. I am sure the running expenses are usually met by charging reasonably. Such labour will be helpful for us to understand our case properly which will do good to the patients as well as to us in the long run. Following the psychology of a merchant class this investment will surely be recouped from paying cases in course of time though slowly and at the end one shan't be loser in knowledge, money, reputation as well as gratification of having rendered proper service.

Now to take a few problems in actual medical practice which really cannot be solved unless helped by laboratory findings. I shall attempt to enumerate a few laboratory examinations essential to understand various ailments which are too many and too varied to mention here. Administration of arsenic to patient suffering from venereal is impossible without it. Real significance of albumen in urine and amount of importance if any to be given to it or not cannot be assessed unless supported by presence of granular corpuscular and glomerular tube casts under microscope. Differential diagnosis of anasarca whether of cardiac or kidney origin cannot similarly be arrived at without the same. Cases of anaemias liver, or anthelmintic therapy nor can sulphamylamide be pushed to effectiveness without causing harm unless blood counts are made, and stool examinations are done. Origin of chronic arthritis and rheumatic joints from syphilis or gonorrhoea cannot be detected unless helped by findings of Kahn's test of blood, microscopic examination of urethral and prostatic discharge. It is our common experience that the apparent non-remittent pyrexias labelled as those of paratyphoid, enteric or B. Coli can be cut

Castes in the Medical Profession and Services

BY

RAO BAHADUR DR. T. S. TIRUMURTHI, B.A.,
M.B. & C.M., D.T.M. & H.
(Retd. Principal, Stanley Medical College, Madras)

short by finding M.P. in these blood smears. These and such other items invariably form the bulk of diagnostic problems in general medical practice.

What practising physician will not really appreciate the ease of mind in treating his cases to entire satisfaction of his conscience by taking the help of essential laboratory methods? Even to the practitioners with their clinics in a big town, particularly to those whose bulk of patients are from people of ordinary working class, one's own smalls laboratory outfit will be helpful and paying as such patients are really not in a position to pay the enormous bills from those entirely doing the business of examination of pathological fluids, though their assistance will have to be taken for higher bacteriological works involving bacterial growths, culture, guinea-pig tests, and such other matters.

I do not intend to offend or belittle those of us who are practising, but to whom laboratory help is not available. This little article of mine is meant to place before the vast and well meaning readers of your esteemed Journal the general situation as is actually existing. If I have been able to explain the necessity of a small essential laboratory and other necessary diagnostic methods forming indispensable part of our clinics and their being within easy reach of us all I believe this little article has served its purpose amply.

It is but natural at this period of newly-won political freedom patriotic feeling may get an upper hand by propping up Ayurveda and condemning the modern medicine of Western origin. The present Government in its enthusiasm to support ancient systems of medicine may even go to the length of relaxing its support to the development and advancement of scientific medicine. And practising physicians may lose their equilibrium of mind. At this critical juncture it is the bounden duty of all of us practising modern medicine to see that while we derive full advantage of all the best from these various schools of indigenous medicine for the good of public we must be alert to see that the advance we have achieved in modern medicine is not crushed but is maintained gradually and improved upon.

I am sure our National Government will do the right thing—a scientist like Pandit Nehru and a realist like Sardar Patel can be trusted to support Scientific Medicine and make it advance to the level at which it prevails in the advanced countries of the West and the U.S.A. and U.S.S.R.

I do not propose to write now on the medical castes due to the practice of the various systems of medicine, such as Allopathy, Ayurveda, Siddha, Unani, Homeopathy, etc., but I shall confine my observations on the castes in Allopathy. I cannot avoid commenting on the selection of students for admission into the medical colleges on caste and communal considerations—i.e. reservation of seats to the applicants belonging to the various communities, Brahmin, Non-Brahmin, Christian, Muhammadan and Scheduled castes—the number of seats being calculated on the total population statistics (men and women, old and young, educated and uneducated) of the respective communities. The proportion of seats is not fixed on the number of applicants who wish to take to medical studies, from each of the above communities. The selection of students is further complicated by the newly introduced districtwar proportion, which has been tacked on recently to the original communal basis of selection ordered by Government. What future we have in store if talukwar, unionwar, and villagewar and sub-communitywar considerations in the matter of the selection of entrants for medical education is continued, is a natural query of those, who wish well of the future of the medical profession in this country. I do not like to prophesy into what ludicrous situations the medical education and profession will land if the present policy is pursued to its illogical extent. Any way, by regulating as at present the admission into the medical colleges, entry into the medical profession is also *ipso facto* regulated according to castes and communities. It is not merely appointments to medical services regulated by the communal G.O. by the Public Services Commission, but the independent medical profession is likewise regulated on caste and community basis. I do not believe that the idea of Government can be the supply of only that number of medical practitioners to cater to the needs of the particular caste as is warranted by the respective caste population census figures.

I am afraid the public have not thought of this caste aspect of the Government regulated 'independent' medical profession. It is not only the appointments in the medical services being regulated by the Government on caste or communal basis, but the medical profession as a whole is being regimented on that basis.

The question naturally arises, why should there be such unnatural methods of selections adopted in this country, methods which are unheard of in the progressive countries and methods which are educationally unsound and positively harmful to the profession and the public indirectly. The reply is ready: "There are not enough colleges." The correct remedy is to establish more institutions, if the Government had the required finances for it, but not to administer the quack remedy of splitting up the seats

caste, on caste population basis and on district population considerations. All such extraneous educationally unsound considerations are being applied.

I have been in the medical college selection committee for admission of students for many years. I have had to operate strictly the communal orders of Government and in doing so have had the opportunity to know the opinions of the European I.M.S. officers who were principals of the medical colleges like myself. Most reluctantly they obeyed the Government order. Their unanimous verdict with which I entirely agree is:—"So long as selection to medical colleges is not made entirely on merit, the medical profession as a whole will not grow in stature, dignity and usefulness to the public and the State as in the progressive countries of the world. So long as the present policy is pursued, the Indian medical profession attaining an international status and obtaining recognition, regard and respect from the medical profession of other countries is very remote."

In this connection it should be remembered that when the social reformers have been all along labouring to abolish all caste and communal distinctions and disabilities in this country the foreign Government, in the pursuance of their well-known policy, have done their best in perpetuating such caste distinctions not only in the distribution of the loaves and fishes of office, but also in the natural growth of an independent medical profession in the country, a profession which does not make any caste distinction in offering their professional advice and help to the sick and suffering. Whether the Swarj Government will follow in the future reorganisation of medical education the same unwise policy or not, it is too soon to make a prognosis. But we live in hopes that wise counsels will prevail and that on good foundations a grand edifice of the medical profession will be built in this country, of which we can feel justly proud.

Some hopes for a better future for the profession were entertained, when the last ministry decided to order selection of candidates, reserving 20 per cent of the seats for "merit" the remaining seats being allotted on the usual communal order as before. That in this matter at least the Government followed the recommendation of the Bhoré Committee quickly was considered of happy augury but, no! the new ministry has considered it wise to rescind the previous order of even partial selection only on merit.

Our caste-ridden country does not confine caste only to the society. Castes have also invaded the professions. Innumerable castes have been created in the medical services: Dressers and Hospital Assistants (who have become fortunately extinct), Sub-Assistant Surgeons, Assistant Surgeons (civil and military), Provincial District Medical Officers and Civil Surgeons, Indian Medical Service Officers (in civil or military department). To the list may be added:—subsidised rural medical practitioners, municipal or local board assistant surgeons and sub-assistant surgeons. Also the honorary surgeons and physicians and honorary assistant surgeons and physicians form separate groups. Paid House Surgeons and House Physicians and unpaid House Surgeons and Physicians come under different classes.

Specialists of each branch of medicine form separate castes by themselves. The above classes or castes of the service members of the medical department and the honorary and part-time members working in the Government medical institutions have associations exclusively for their own members. Of late, the separatist tendency of the specialists, physicians, surgeons, obstetricians, ophthalmologists, radiologists, etc., to work in isolated organisations has created an undesirable exclusiveness which does not augur well and does not advance the general interests of the profession. Such fissiparous activities among the members of the profession is most deplorable. It is one thing to have a united association of all members of the profession, in which the groups will have the opportunity to function to their individual benefit and to the welfare of the parent body; but it is a different picture altogether to see so many different associations functioning independently of each other in narrow and restricted fields of activity and often at variance with the interests of other groups and to the detriment of the growth of an effective professional association, which can voice the opinions of the profession in general and of the groups in it and can advise Government on all matters pertaining to the profession with an authority, which it can command only by the unity in the profession.

The Indian Medical Association stands for all the members of the allopathic medical profession and for the abolition of all invidious distinction among them. I hope the day will not be far off when the Indian Medical Association in this country can proudly declare that there is not a single registered practitioner, who is not a member of the Indian Medical Association. I also fervently wish that all castes in the profession, in Government service or outside it, will disappear and that the profession will be consolidated into a single body in the Indian Medical Association.

Castes according to qualifications, such as L.M.P. and L.M.S. have disappeared. The D.M.S. also will soon become extinct in the medical service. The designations of sub-assistant surgeons and assistant surgeons should disappear. Rural medical service should be provincialised. The designation of "medical officer," should be applied to all such Government officers, who are in independent charge of hospitals, and "assistant medical officer" to those who are actually working under medical officers in the same institution. This will be a first step in the removal of caste designations.

Some years ago when I was the D.M. & S.O. of the Kistna district, I issued instructions to my office staff not to address sub-assistant surgeons and assistant surgeons as sub-assistant surgeon (so and so) or assistant surgeon (so and so) but by their names with the honorific title of "Dr."—and designation of "Medical officer" and then name of the station. I was told that I was going against the usual office routine. The idea appeared probably irregular and improper, if not revolutionary, to my head-clerk but I insisted that my instructions regarding addressing of medical officers in the district should be obeyed and they were strictly observed and

carried out during my term of office as D.M. & S.O. there for two years.

I plead for the designations of medical officer and assistant medical officer being introduced in the manner suggested above. These designations are applicable to all the members of the medical department, whether they happen to be physicians, surgeons, obstetricians or any other specialists. I have only indicated the first step in the removal of castes in the allopathic medical profession for such consideration as it deserves.

It is obvious that if medical education and the medical profession have to grow in stature and strength the causes that have been producing stagnation should be removed. They are:—

(1) Caste and community-war selection of admission into the medical colleges.

(2) Diverse designations, such as, S.A.S., A.S. etc., which engender inferiority and superiority complexes.

I would therefore suggest that only on the basis of merits should the admission into the medical colleges be regulated. It is hoped that the present popular Government would not run on the same groove as the previous Governments did, but boldly take the initiative for reformation and reorganisation in the medical education.

A Case of Malignant Malnutrition

BY

S. C. DUTTA, L.M.P., D.T.M. (Cal.),
Itakhooli T.E., Tinsukia (Assam).

The syndrome of malignant malnutrition was first described adequately by Williams (193), from West Africa under the name "Kwashiorkor". It was later reported from East and South Africa, from Central and South America and from the West Indies. It was extensively reviewed on several occasions by Trowell who eventually, in a paper written conjointly with Muwazi (1945), renamed it "Malignant Malnutrition" and considered it to be due to a complex deficiency state plus hypoproteinaemia. Hughes (1946) considers that the prime deficiency is one of riboflavin.

So far as I am aware, no case of this syndrome has been reported from India though my Chief, Dr. K. P. Hare, recently observed three cases which he is reporting elsewhere and he kindly helped me with the investigation of the present case.

The classical signs of the syndrome, as recorded by various authors are, failure of growth, oedema, diarrhoea, angular stomatitis, crazy-pavement dermatosis, deficiency bowel pattern, fatty degeneration of the liver and a very high mortality (often with rather sudden and unexpected death). The dermatosis is of special type and is not to be confounded with the commonly seen "mosaic skin": it is distinguished by its propensity to exfoliate, leaving exposed underlying patches of depigmented skin. One of the

striking facts about the syndrome is that in the areas from which it has been so far reported, vitamin A deficiency is very uncommon while riboflavin deficiency is very common. In the North-Eastern Assam, where the present case arose, exactly the reverse holds true. The writer (1941) reported the result of his observations on vitamin A deficiency in this tea estate and he did not find any skin affections other than fine branny desquamation of the epidermis and phrynodema associated with it.

A female child aged 1½ years, of Kuidomb caste (recruited from Ganjam district of Orissa but resident in North-East Assam for one year) was admitted to hospital on 11-9-46 for the treatment of debility. The child was of a very irritable nature, thinly built with pale and puffy face and oedema of both feet. The abdomen was not protuberant as is often found in heavy helminthic infection cases. Temperature was normal on admission and also in the subsequent course of the disease but debility was so marked that she was even unable to sit on the bed. There was nothing noteworthy in the previous history of the child. On physical examination conjunctivae were found pale but clear; there was angular stomatitis and ulceration of the palate; tongue was glazed and moist; spleen was not palpable but liver was palpable. In the lungs both the bases were slightly congested. The heart rate was increased but otherwise the heart appeared to be normal. Small patches of dark pigmented scaly areas were found on the body particularly on the buttocks and legs. In places there was exfoliation of dark scales leaving pale depigmented areas of about 1 mm. square on different parts of the body. There was no papular skin eruption on any part. Hb. value was 50 per cent (on Tallqvist scale). Stool was greenish frothy with undigested food particles. On microscopic examination only ascaris ova in small numbers were found. Urine was normal.

The patient was put on mild alkali mixture, adexolin and nicotinic acid. Diet given was fresh cow's milk with barley water and could not be improved further due to looseness of bowels, which moved 3 to 4 times daily. On 15-9-46 the colour of the stool was found yellowish but frothy, there was no lung congestion and the oedema of feet was a bit less. On 17-9-46 the number of stools increased though the stool as before did not show any sign of dysentery on microscopic examination. The child was then put on to sulphaguanidine and all the previous medicines were stopped. The number of stools gradually came down to the original level and after 5 days sulphaguanidine was stopped but the stools had still the loose and frothy character. In the meantime, the scaly pigmented dermatosis of the skin extended and assumed the typical crazy pavement form especially on the legs and buttocks. The small patches on other parts of the body, e.g., face, sides of chest, abdomen and back did not extend so much. There were none at all on the scalp, soles and palms. On 23-9-46, the oedema of feet was found to have gone down, the Hb value was on the original level and the ulceration of palate was found worse. The child was put on to riboflavin 1 mg. thrice daily and liver extract injections (2 cc. intramuscularly daily) were started besides sulphonamide cum cod liver oil swabbing of the palate. On 26-9-46, rather suddenly the

quacks, or private medical practitioners. Hence an approximation to the real prevalence rate of the two principal diseases, among the general population may easily be twenty times the hospital rate. This would mean that 5,876,700 people of either sex have had or are suffering from one or other of the two diseases. From the figures worked out in the Venereal Clinic at Madras, it would appear that five out of every eight patients seeking treatment for either syphilis or gonorrhoea are in an infectious state. Applying this ratio to the probable prevalence rate among the population, nearly 3½ million persons of either sex are harbouring the diseases in a communicable state and are a source of danger to the uninfected population. To the physical havoc wrought by these diseases and by the conditions in which they breed must be added the social wreckage of twisted moral and ethical values, of warped and irreparable damaged lives. Syphilis is a great destroyer of child life, both antenatal and neo-natal. During the past half a decade the admissions for congenital syphilis in the Venereal Clinic at Madras alone, have shown a fourfold increase. From the hospital returns for the year 1945, the district-war distribution of these diseases is worked out in the accompanying table, giving the total number of syphilis and gonorrhoea, syphilis alone, gonorrhoea alone and also the estimated population of the districts with the hospital rate per 100,000 of the population. The last column in the table is an estimate of the prevalence of these diseases among the population. From these figures it is apparent that the hospital attendance rate alone of these diseases in the districts and in the city of Madras shows a disturbingly high rate; with Guntur and East Godavari leading in the north, Madras in the centre, Madura and Ramnad in the south. In the decade between 1935 and 1945, there has been an increase in the incidence of syphilis alone among the urban population of the Madras City, Guntur, East Godavari, Madura, Ramnad and Malabar as may be gathered from the accompanying table.

War has been the traditional vanguard of the venereal disease epidemics all over the world and this province could not have escaped its consequences. The increase in the syphilis rate has been particularly marked during and since the war years (1940-45) the indigenous spirochetes having been reinforced with Burmese, West African and European strains. There has been a decrease in the hospital rate of gonorrhoea in the City of Madras as well as in many of the districts and this decline may be due to the widespread use of Sulphonamide drugs by the population not only for gonorrhoea but also for other conditions. As the result of such widespread use, it is possible that the more susceptible strains of gonococci have been weeded out of the population and only the more resistant types persist. The increasing number of Sulphonamide resistant cases of gonorrhoea which one sees in clinical practice lends support to this view.

With the abolition of commercialised prostitution by the enforcement of the Suppression of the Immoral Traffic Act in many of the urban areas of this Presidency, sexual promiscuity and prostitution have become individualised, widely disseminated and have assumed Bizarre, Clandestine, Causal, and

Perverted forms. The old professional prostitute is no longer in the picture, her place having been taken by an increasing army of amateurs. A very disturbing feature in many of the towns and cities is the prevalence of what is known as "Wife Prostitution." It would appear from my investigations that venereal diseases are more frequently disseminated by such casual clandestine sex behaviour. A communicable disease can be controlled in four ways:—

1. Immunization.
2. Isolation.
3. Sterilization of the infected individual.
4. Education of the public with respect to prevention.

In the case of venereal diseases, immunization does not exist. Isolation and quarantine of the infected individuals is a practical impossibility. The education of the public in respect of prevention has only a limited value for civilian populations. For disciplined communities, like the army, the applications of preventive measures has had a measure of success as may be gathered from the reports in the Armies during World War I and II. There remains therefore for the control of venereal diseases the fundamental public health principle of sterilization of the infected individual. In recognition of this important principle most of the European countries have instituted various public health measures for its control. It is recognised that the treatment of the infected persons by modern scientific methods and with the help of potent remedies is the strongest weapon we have at our disposal. And in the case of venereal diseases treatment is prevention, as it will reduce to the lowest possible proportion the number of infection carriers in the community. Let us take a look, for information and guidance what other countries have done with regard to the control of these diseases.

All the progressive nations of the World, which really mean the European nations, have recognised that the health of the men, women and children should be the prime responsibility of the State. The first of the diseases to be socialised is venereal diseases and the credit for tackling the problem of control goes to the Scandinavian countries. It is a fascinating story of a century of ceaseless unremitting effort on the part of these countries. The steady decline of venereal diseases during the inter-war period (1919-39) in these countries is now recognised as one of the classical public health achievements in the field of venereal diseases control and unsurpassed by any other country. The public health measures for the control of these diseases were based on the principle that the diseases are communicable and should be dealt with as such. The measures adopted by them are as follows:—

1. Compulsory notification of cases.
2. Free and compulsory treatment at State expense.
3. Penalising the knowing transmission of the infection.
4. Tracing of contacts and bringing them under treatment.

The decline rate in syphilis alone in these three countries between 1919-1935 was something spectacular. In Denmark, the rate of 527 cases of syphilis

B . D . H .

MALE SEX HORMONES

Testosterone Propionate B.D.H.

Methyl-testosterone B.D.H.

Testosterone Propionate B.D.H. provides the most satisfactory means of androgen therapy. It is indicated for the correction of hypogonadism in the male, retarded development, eunuchoidism, impotence and in the male climacteric, symptoms of which are waning sexual activity, irritability, fatigue and emotional instability. In the female, androgen therapy is indicated for irregular uterine bleeding, chronic mastitis and mastodynia. As treatment is by injection, it is completely under the control of the physician. For minor states of testicular hypofunction, oral administration of tablets of Methyl-testosterone B.D.H. alone may produce satisfactory responses, and in gynaecological practice its use involves less risk of masculinisation than when testosterone propionate is given. Where Testosterone Propionate B.D.H. has been used in the initial stages, this may be supplemented by giving Methyl-testosterone B.D.H. orally.

Details of dosage and other relevant information on request

THE BRITISH DRUG HOUSES LTD.

(Incorporated in England)

Post Box 1341

BOMBAY No. 1

SHC/12/100



Eledon
ACID BUTTERMILK IN POWDER FORM
BASEURRE ACIDE EN Poudre

**ACID BUTTER MILK DIET
OF UNVARYING COMPOSITION**

The difficulty of preparing acid buttermilk is overcome by "Eledon". This dried product of unvarying composition has made it possible to prescribe a buttermilk diet whenever its use is indicated. "Eledon" is ideal for premature infants; in cases of malnutrition or where milk is badly tolerated; for skin disorders and pylorospasm. Invaluable for diarrhoea and dysentery patients of all ages and for older children and adults "Eledon" is the ideal diet for acute gastritis, disorders of the liver and constipation.

Eledon
A NESTLE PRODUCT

For further information write to:
NESTLES, Post Box 180, Madras.

**STANDARDIZED VITAMIN B-COMPLEX
(ORAL)**

"B-VITAMINS ELIXIR"
(ALBERT DAVID)

A scientifically balanced product from synthetic and rich natural sources yielding the maximum therapeutic benefit in all stages of vitamin B deficiencies.

COMPOSITION

Vitamin B ₁ (Thiamin hydrochloride)	...	...	10 mgm
Vitamin B ₂ (Riboflavin)	...	...	5 mgm
Vitamin B ₆ (Pyridoxin hydrochloride)	...	...	2 mgm
Nicotinic acid	...	...	25 mgm
Calcium pantothenate	...	...	4 mgm

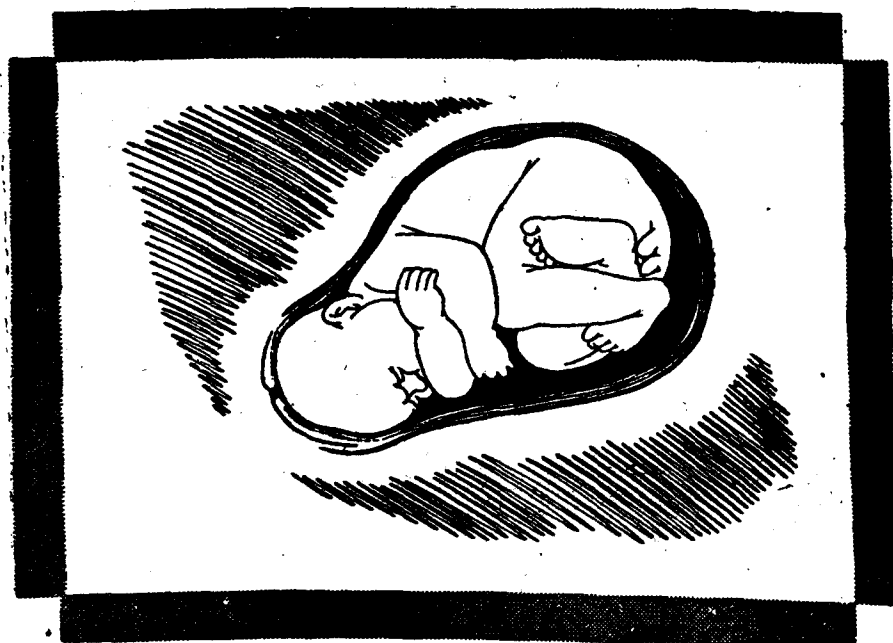
in a base rich in natural Vitamin B-Complex

ALBERT DAVID LIMITED
15, CHITTARANJAN AVENUE, CALCUTTA

BOMBAY
Sind Building,
Near Sassoon Docks,
Colaba, Bombay.

NAGPUR
128, Dakhinamurthy Road,
Mahal

MADRAS
2/27,
Broadway

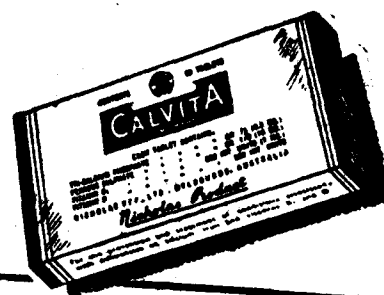


ADDED IRON and VITAMIN B₁
WITH CALCIUM and VITAMIN D
 during PREGNANCY and LACTATION

Calvita

Each tablet contains:

Tri-Calcium Phosphate	gr. 7½ (0.5 gm.)
Ferrous Sulphate	gr. ½ (10 mg.)
Vitamin B ₁	333 Int. Units (1 mg.)
Vitamin D	500 Int. Units.



Nicholas Ethical Division

J. L. MORISON, SON & JONES (INDIA) LTD.

BOMBAY MADRAS CALCUTTA KARACHI COLOMBO RANGOON

per 100,000 of the population in 1919 declined to 21.3 per 100,000 in 1935. In Norway the decline was from 316 to 15 and in Sweden from 119 to 9.4 during the same period. These countries were enabled to achieve such results because they contain a small homogeneous, cohesive, highly literate population with great respect for law, and greater respect for modern medicine and almost completely free from the social inhibitions attached to these diseases in other countries. In Great Britain in 1917, an act called the Venereal Diseases Order was passed by the Parliament implementing the recommendations of the Royal Commission on Venereal Diseases. By this act, the State recognised its statutory obligation to provide facilities for the free and confidential treatment of persons afflicted with venereal diseases, irrespective of their social and economic status. The treatment of venereal diseases by unqualified persons and the advertisement of spurious drugs were prohibited by law. By 1939, 188 free treatment centres and 99 approved laboratories for free examination of venereal diseases specimens had been created in the country and 88% of patients with V.D. took advantage of the facilities afforded. In addition free diagnostic facilities and supply of special drugs were given to the practitioners, to enable them to treat their private patients. A continuous educational propaganda greatly helped to bring the patients under treatment. As a result of these measures, the number of cases of early syphilis dealt with at the centres in 1939 was less than 1/4 of those in 1920. Without the element of compulsion and law enforcement, the success of Great Britain in the control of venereal diseases, particularly syphilis has been remarkable. America started late in the national drive against venereal diseases and have been following the Scandinavian example in the institution of public health and law enforcement measures. There are 3,800 public clinics financed by Federal State and local Governments where facilities for free treatment are provided. Recently they have also opened a number of rapid treatment centres with facilities for the hospitalization of early infectious cases. Russia is a signal example of a country where the concept of socialisation of health has been carried out to its logical end in the space of 25 years. Venereal disease and prostitution received a high priority at the hands of the Soviet Government. Free and compulsory treatment was instituted by the opening of a net work of treatment centres all over the vast country. In Czarist Russia, venereal diseases especially syphilis was pandemic and there were only ten V.D. clinics affording treatment for such a vast country. In 1931, nearly thousand clinics were functioning.

Prophylactoria were established in the immediate vicinity of large cities and in industrial areas where the infected prostitutes were kept in quarantine and treated till they were no longer a danger to the community at large. It is claimed by the Soviet Government and confirmed by other neutral medical observers that prostitution has been almost completely liquidated. Flying squads of doctors and nurses equipped with the W.R. set-up and specific drugs are sent to the distant Arctic Siberian and Central Asian tribes to find syphilis and treat it. It is

reported that in the decade between 1927 and 1937 the incidence of syphilis in Russia decreased by about 45%. In all these countries, during and since World War II, there has been a phenomenal increase of venereal diseases from the lowest 1939 pre-war level. But most of the countries are keenly alive to the danger of the post-war flareup and taking energetic measures of control.

India along with other Asiatic countries is no where in this stirring picture of action and high planned endeavour. The first volume of the Bore Committee report is a sad tale of the appalling health conditions of the people. In our country where physical malnutrition, undernutrition, malaria, tuberculosis, leprosy, and so on, contend for preferential treatment at the hands of the Government, venereal diseases are likely to be relegated to a secondary place in the scheme of things. But I have tried to show from the meagre statistics available, that venereal diseases constitute a major problem in South India.

Madras is the first province in India to tackle the problem of V.D. by establishing V.D. clinics in the presidency town and in many district headquarter hospitals and in some taluk hospitals. There are 29 clinics for the whole presidency, 17 in the district headquarters, 8 in some of the important taluk stations and 4 in the City of Madras. I do not know how many of these are efficiently functioning from the point of view of accommodation, out-patient facilities, staff, equipment and the supply of drugs. In 1930, as one of the items in the campaign against V.D., the Provincial Government had sanctioned for two years at a time a scheme of free post-graduate training in venereal diseases for both service medical officers and private medical practitioners of this province, at the Venereal Department of the Government General Hospital, Madras. The concession is being extended every two years and during the past 17 years 131 post-graduates have been trained in the Venereal Department of which 100 were men and 31 women. Except for the few who are in charge of V.D. clinics in the district headquarters, the majority of the trained graduates are probably private medical practitioners and it is surmised they are giving the benefit of their training to the community in which they are living. I consider the existing facilities for the treatment and control of venereal diseases in this presidency with a population of more than 50 millions and with one of the highest venereal diseases rate in the world is grossly inadequate. The control of venereal diseases in this province is a matter of urgent importance and should receive a high priority at the hands of the Government. In the present diarchical set-up of the medical and public health administration in this province, the immediate short range control measures I would recommend are the following:—

1. Provision of facilities by the State for the free diagnosis, prevention and treatment of patients suffering from venereal diseases.
2. A continuous sustained educational propaganda among the public with regard to the control and spread of these diseases.

3. Mobilization of the services of the private medical practitioners in the fight against these diseases.

Venereal diseases clinics should be established in all district headquarter hospitals, taluk hospitals of more than 50 beds and in all hospitals catering for Women and Children alone. In the larger cities of more than 50,000 population the municipality should be compelled to establish V.D. clinics to enable as many patients as may be possible to avail themselves of the benefit of treatment. Industrial concerns employing a large volume of labour should be compelled by law to make provisions for the free treatment of the employees suffering from venereal diseases. Likewise, the State Railways in the provinces should provide venereal clinics in important railway centres for the free treatment of their employes. Laboratory examination of venereal diseases specimens is essential for accurate and quick diagnosis for early treatment. In the case of venereal diseases, three routine laboratory procedures are necessary for accurate diagnosis and early treatment. They are (1) dark-field examinations (2) microscopic examination of specimens for gonococci and (3) serological examination of the blood for syphilis.

In every venereal diseases clinic to be established, an essential equipment is an oil immersion microscope with a special outfit for dark-ground examination for the immediate performance of the first two diagnostic tests mentioned above. In every district headquarters venereal diseases clinic, provision should be made for the performance of a single, least expensive, easily carried out serological test for syphilis, like the Kahn Test. The present system of sending bloods for examination to distant laboratories like Guindy and Coonoor is time consuming, expensive and unsatisfactory. Laboratory technicians should be trained to staff the district laboratories and they will work under the supervision of the medical officer in charge of the clinic. The basic requirements of a good venereal diseases clinic are:

1. A full time salaried medical officer with enthusiasm and trained in the diagnosis and treatment of venereal diseases.

2. A sufficiency of other personnel including nurses, nursing orderlies, social worker and clerk-typist.

3. Out-patient accommodation ensuring privacy and separation of the sexes in the examination and treatment.

Limited in-patient accommodations for the ill patients in the district headquarters and the large Taluk hospitals.

4. Morning and evening sessions in the V.D. out-patients to enable the working class people to take advantage of the facilities without interference to their means of livelihood.

5. A liberal supply of special drugs used in the treatment of these diseases.

From the point of view of control of infectiousness, within the shortest possible time the introduction of Penicillin in the therapy of syphilis and gonorrhoea is a tremendous advance on the older drugs. But Penicillin at present is unsuitable for the

mass treatment of syphilis as it is costly and requires hospitalization and the third hourly frequency of injections round the clock. The per capita of treating syphilis with Penicillin alone comes to about Rs. 45 without taking into consideration the cost of hospitalization. In the case of the older drugs, arsenic and bismuth, 20 injections of each administered over a period of 3 to 4 months will effectively control the infectiousness in the vast majority cases of syphilis. The per capita cost of these drugs, 20 doses of arsenical and 20 of bismuth comes to only about Rs. 7 which is only 1/5 as costly as an adequate dose of Penicillin. Therefore in the free treatment of syphilis in public clinics, these drugs alone will have to be used in the ambulatory treatment of syphilis. In the treatment of gonorrhoea, Penicillin should be the drug of choice. The recommended dosage of 200,000 to 300,000 units is not more costly than Sulphonamides, it is more potent and the treatment is compressed within few hours.

Prophylaxis

At each of the treatment centres, facilities for personal prophylaxis should also be made available. In addition the larger municipalities and congested industrial areas, in pilgrim centres, there should be a few more such prophylactic ablution centres. In the Army as well as in civilian population of the western countries, there is a strong reason to believe that the condom or rubber sheath has been the most valuable single venereal disease preventive measure, so much so that girls out for a good time as well as the confirmed prostitutes carry these articles in their vanity bags. But chemical prophylaxis is a more certain preventive against infection. The Americans have evolved what is known as a Unitary Chemical Prophylactic, effective against all the venereal diseases. It is an ointment containing 15% Sulphathiazole and 30% Calomel in a vaseline light mineral oil and alcohol base. It was extensively used during World War II, easily self administered and found to be very effective. Such an ointment can easily be made at any hospital or by a Pharmacist and should be freely available at the public clinics as well as for private patients at a cheap price.

For the control of any communicable diseases like venereal diseases, next to affording facilities for treatment educational propaganda among the public is of the utmost importance. Provision of free facilities for treatment is likely to be of little use unless organised and continuous propaganda at the same time helps to educate the people on the nature and danger of venereal disease. So far as I am aware, the propaganda is almost non-existent. Unlike Tuberculosis and Leprosy, individuals and voluntary associations fight shy of interesting themselves in venereal diseases. Hence it devolves on the State to devise measures for the education of the public. The various modern devices such as films, radio, magic lantern slides, lectures, newspapers, posters, pamphlets, handbills, and touring exhibitions should be employed in a continuous and systematic manner to impress upon the adults of both sexes, the nature of venereal diseases, their mode of spread, their prevention, the dangers of neglect when once the disease is acquired. The great success which England and Wales achieved in bringing 80 per cent of patients

suffering from venereal diseases under treatment is largely due to the educational propaganda conducted throughout the country. In our country it is not only the illiterate public that has to be educated but also the medical profession which brings me to the third item in the fight against these diseases, i.e., the role of the private medical practitioners in the control of venereal diseases. In all the cities and municipal town in our province, nearly 95 per cent of the doctors practising the modern scientific system of medicine are concentrated. It is my impression that a fairly large but unknown number of patients with early venereal diseases are treated by the private practitioners in the towns and cities. The standards of diagnosis and treatment in private practice are neither fair to the patient nor a credit to the profession. Faulty diagnosis, misuse of drugs, sub-curative treatment and the absence of the epidemiological approach to these diseases are some of the disconcerting features in the treatment of these diseases under

private auspices. There are several causes for the unsatisfactory state of affairs one being the ignorance of many practitioners of the elementary methods of recognising venereal diseases, particularly syphilis. A lack of understanding of the proper use of and interpretation of serological tests and the absence of appreciation of syphilis and gonorrhoea as infectious diseases requiring certain optimum standards of treatment to render them non-infectious. The ignorance, carelessness of the treated patients and the expense of treatment. I am optimistic enough to hope that the co-operation and the services of the private medical profession can be mobilized in the fight against these diseases, provided certain conditions for their co-operation are brought into being; free diagnostic facilities, and free supply of drugs should be made available to the practitioners at State expense. Such of those practitioners who are willing to come under this scheme may be given short refresher courses in a State clinic in the diagnosis and treatment of these

Table showing the hospital incidence of syphilis and gonorrhoea in the Presidency for the year 1945.

Serial number.	NAME OF THE DISTRICTS	Total number of cases both syphilis and gonorrhoea	Total number of cases of syphilis including acquired and congenital	Total number of gonococcal infections alone	Estimated population of the district	Hospital rate of both diseases per 100,000	Hospital rate of syphilis per 100,000	Hospital rate of gonorrhoea per 100,000
1	Vizag	5467	3638	1829	4000,520	137	91	46
2	East Godavari	21533	12915	8638	2177,476	990	593	397
3	West Godavari	9012	4790	4222	1537,320	585	311	274
4	Kistna	7761	4203	3588	1528,094	507	275	232
5	Guntur	70123	46122	24001	2831,032	2944	1937	1007
6	Nellore	6208	2988	3220	1672,710	370	178	192
7	Kurnool	5892	3685	2207	1198,471	492	307	185
8	Bellary	4517	2552	1965	1085,711	415	235	180
9	Anantapur	7244	3288	3956	1223,819	592	269	323
10	Cuddapah	5428	3279	2149	1102,893	492	197	195
11	North Arcot	4175	4248	9927	2713,137	523	157	366
12	Chittoor	5944	2833	3111	1712,849	347	165	182
13	Madras City	16637	10148	6489	836631	1988	1212	776
14	Chingleput	3495	1362	2133	1896,512	184	73	111
15	South Arcot	8530	4479	4051	2672,991	319	168	151
16	Salem	6550	3820	2730	3064,539	214	125	89
17	Coimbatore	9165	4349	4810	2970,323	309	146	163
18	Trichinopoly	5756	2837	2919	2303,138	250	123	127
19	Tanjore	12751	6311	6440	2638,002	483	239	244
20	Madura	25330	15122	10208	2569,213	986	588	308
21	Ramnad	16767	8005	8762	2038,894	822	393	429
22	Malabar	14244	8685	5659	4100,323	347	212	135
23	Tinnevely	8044	4304	3740	2329,212	345	185	160
24	Nilgiris	772	498	274	228782	337	218	119
25	South Canara	2470	1427	1043	1589,147	155	90	65
Total		293835	165888	127947	5117,1739	605	343	262

Probable Prevalence rate of syphilis and gonorrhoea among the population

... 5876700 3317760 2558940 12100 6860 5240

Hospital for syphilis per 100,000 of the population

S. No.	District	1935	1945
1	Guntur	964	1937
2	East Godavari	482	593
3	Madras City	940	1,212
4	Madura	212	588
5	Ramnad	141	393
6	Malabar	103	212

diseases. Free consultative service should be available to the practitioners at the public or State clinics. The practitioners in their turn will be expected to treat poor patients free and charge a nominal fee for those who can afford to pay. Under such a scheme, the reporting of cases by number if not by name should be obligatory. If and when the financial resources of the State permit I envisage a desirable state of affairs in which the treatment and diagnosis of venereal diseases will be completely socialised as in Western countries. The recommendations of the Bhoré Committee which are merely quoted now like 'Shakespeare and Milton' will be implemented in its entirety. In other progressive countries, the treatment of venereal diseases by unqualified persons is punishable by law. It will be premature to suggest the enactment of any such law in our province, till the State has provided abundant facilities for treatment and has educated the public sufficiently intensely to take advantage of the facilities so provided. In the near future a provincial venereal diseases organization may have to set up as part of the provincial health department under the administrative control of the head of the Public Health services. A full time venereal diseases control officer should be in charge of this organization and he should combine in himself public health experience, and wide clinical knowledge of venereal diseases. It should be the function of this officer to plan the campaign against these diseases in its public health and medical aspects. He should have a number of trained assistants, both medical and non-medical, for dealing with the various aspects of control as the following :-

1. Propaganda.
2. Treatment control.
3. Supply of special drugs.
4. Social work including contact tracing.
5. Maintenance of accurate statistics.

In conclusion let me thank the organisers of this conference for affording me this opportunity to address you of the medical fraternity who have a great part to play in the fight against this social menace.

Pulmonary Embolism—Recent Advances in Diagnosis and Treatment—BY SAMUEL ORAM, M.D., M.R.C.P., Assistant Physician, King's College Hospital (From the Post-graduate Medical Journal, December 1947.)

During recent years clinicians have become increasingly aware that in the past many cases of pulmonary embolism and of pulmonary infarction have been missed. The diagnosis has been overlooked because the early signs were not appreciated.

P. D. White, writing in 1940 on 20 years' experience of 75 cases of pulmonary embolism, stated that during the first 16 years he diagnosed 29, but during the last 4 years he diagnosed 46. He is also of the opinion that medical cases are much more frequent than surgical ones, and in particular does this apply to patients with congestive heart failure. This has been strikingly borne out in a recent paper by Carloti *et al.* who found that medical cases were more than twice as common as surgical over the past 10 years, the incidence of medical cases being 0.6 per

cent, and of surgical only 0.24 per cent. Of the medical cases in the last five years of their series over 70 per cent suffered from heart disease. The early recognition of the condition has recently assumed increasing importance as with the advent of anticoagulants such as heparin and dicoumarin, and the employment of femoral vein ligation, the incidence can be reduced and the prognosis in an established lesion strikingly improved. From a careful analysis of Swedish figures, Bauer has shown that prior to modern therapy the mortality from thrombosis of the deep veins and consequent pulmonary embolism remained stationary for many decades.

The purpose of this article is to present, from a survey of the literature and in particular the study of some of the more recent papers, a concise account of the diagnosis and modern treatment of that condition.

Frequency

White puts the incidence of pulmonary embolism as high as 8 to 12 per cent. of routine autopsies, and states that nearly 50 per cent of congestive heart failure patients will show evidence of pulmonary embolism post-mortem. Bauer analysed 178,252 operations and concluded that thrombosis after operation occurs in about every 60th patient, and of these, 1 in 6 die of pulmonary embolism, that is to say that 1 of every 400 patients operated on dies from pulmonary embolism. From consideration of 382,508 deliveries he was able to state that among all puerperal women every 80th gets thrombosis and of these almost 1 in 25 dies. It is seen that the mortality rate is only one quarter or one-fifth that of post-operation embolism. When we come to medical cases figures are less easily obtained as the literature is deficient. Bauer's figures collected from Swedish clinics since 1939 showed that 56 per cent of 804 examples of pulmonary embolism came from medical wards. Pilcher's authoritative report of 1937, collected from 12 London hospitals, and quoted by Gibbon put the frequency of fatal pulmonary embolism from surgical wards as 0.105 per cent but from medical wards as only 0.064 per cent.

It is important to differentiate clearly cases of pulmonary embolism from those showing pulmonary infarcts. The two may be associated of course, but as will be shown later, it is very much the exception to find evidence of both at post-mortem, and this may have an important bearing on the pathogenesis of those conditions.

Pathogenesis

1. By far the majority, probably 90 per cent at least, of cases of pulmonary embolism arise from detachment of a thrombus in one or both legs. It has long been believed that the clot usually forms in the large pelvic veins or upper part of the femoral veins, but this view is now known to be erroneous. Nearly a quarter of a century ago, although Aschoff thought the majority of emboli lodging in the pulmonary arteries arose from the femoral veins, he described clearly the morphology of the clot. He stated that it was commonly 35—45 cm. long and that three parts could be distinguished—the first part (Kopfteil) chiefly white, the middle part (Halsteil) being mixed, and the distal portion (Schwanzteil) red. He emphasized that in all human autochthonous thrombi the white

part, consisting mainly of platelets, was the essential thing and required flowing blood for its deposition, whereas the much larger red portion was found when the blood flow had ceased. Bauer states that only 3 per cent of cases arise in the femoral vein, and he has shown by clinical and phlebographic studies of 150 cases that the thrombus begins in a muscle vein in the calf, extends into a larger venous trunk and occludes its lumen, and then grows up the femoral vein forming an eel-like clot, dark red, with a slippery surface and anchored only far down in the lower leg and freely waving in the blood stream. It may extend to the pelvic veins or even the renal or hepatic veins. It frequently becomes bilateral, and thrombosis of the second leg begins in the lower part always. He studied 100 normals by injecting 20 c.c. of 35 per cent Perabrodil into the vein just behind the lateral malleolus, and demonstrated that the double tibular vein is by far the most important blood channel from muscles of the lower leg. One of the earliest radiological signs of thrombosis is the disappearance of this double channel. Occasionally the occluded vein can be seen obstructed (Fig. 1). According to Homans the plantar veins themselves may also be the site of formation of the original thrombus.

Once deep veins have thrombosed recanalization hardly ever occurs, and venous blood from the lower leg is drained by an accessory system of subcutaneous veins usually with the great saphenous vein as a direct channel of return. A mild state of venous stasis is then always present, and leads to chronic oedema of the lower leg which may later become indurated and break down to form the common so-called 'varicose ulcer' which should properly be called the 'post-thrombotic' ulcer.

A physiological explanation of the sudden detachment of the massive embolus has been suggested by Chapman and Linton as a result of experiments on themselves. They point out that Valsalva's experiment (holding the breath in inspiration and making an expiratory effort with the glottis closed) raised the venous pressure, and that when physical effort is made, such as the act of defaecation, parturition or straining of any sort, that is exactly what occurs. What is more, they found that the venous pressure in the legs whilst sitting up in the 'bad-pan' position, was more than twice as great as that obtained while recumbent. They suggest the rise of venous pressure distends the peripheral veins and during the next normal breath the dammed venous blood rapidly empties from them and washes with it any loosely attached thrombus. Although the use of the bed-pan, getting up for the first time after prolonged bed rest, and the use of enemata are well recognized precipitating causes of detachment, it must be admitted that in most cases no such factor is evident.

2. The right heart itself may give rise to emboli, especially from thrombus within the auricular appendix. It was pointed out by Bernheim nearly 40 years ago that this can result from left-sided failure, the hypertrophied left ventricle displacing the interventricular septum to the right to encroach on the lower part of the cavity of the right ventricle with resultant right auricular appendix dilatation. Four of Bernheim's original 10 cases had pulmonary infarcts.

3. It has long been realized, and recently emphasized by de Takats and Jesser, that pulmonary embolism can occur without infarction and vice versa. Laennec himself failed to recognize the relationship between embolism and infarction and called the latter 'pulmonary apoplexy,' and it must be admitted that at most autopsies at which infarcts are found in medical cases no embolus is discovered. Unfortunately it may be difficult or impossible at autopsy to tell whether a lung infarct is of embolic or thrombotic origin, or a resultant of both. Belt has emphasized the points that distinguish an embolus from a thrombus in the pulmonary artery, namely, that the former may be loose-lying, coiled, jumbled, twisted, impacted or riding a bifurcation; it may have a branching conformity that does not correspond with that of the vessel in which it lies; it may have freshly broken ends; it is usually a red clot; finally, the source of its origin may be discoverable in the peripheral veins. Microscopy is also disappointing, and may even be misleading as it is now recognized that what in the past were taken as changes in the wall of the pulmonary artery branches leading to thrombosis are now known to be involutional changes in the vessel wall distal to the obstruction. This endarteritis with intimal proliferation in the defunct vessel is analogous to changes which occur in the umbilical artery at birth. Perhaps with the recognition of the calf veins as the likely source of clot more infarcts will be accounted for in future, but it is likely that, in cardiac patients in particular, venous stasis in the lungs may result in infarction *in situ*. It is probable that infarction only results if occlusion is large, or the apex of one of the lobes is involved, or some obstruction to the pulmonary blood flow is present already, for example, mitral stenosis or failure of the left ventricle.

I recently went through 500 King's College Hospital autopsy records, and, although the number is small, the results were so definite that they are worth mentioning. The percentage of autopsies at which pulmonary embolism was present was 2.6, and at which pulmonary infarction was found was 2.8 but that at which both were present was only 0.4. Of the embolism cases surgical conditions were more than twice as common as heart cases (1.8 and 0.8 respectively) but with the infarct cases the position was reversed (0.8 and 2.0 respectively). The predominance of heart disease as a cause of infarction and its rather rare association with embolism is brought out even more strikingly by Hines and Hunt who, in 101 cases of pulmonary infarction, found heart disease responsible for 81. Similarly in de Takat's series of 25 medical cases 18 had heart disease. These figures would seem to indicate either that in heart cases infarction *in situ* is almost the rule or that in most cases the source of embolus is never discovered. Surely if the leg veins in life had been under suspicion they would have been opened post-mortem in at least a proportion of cases.

Predisposing Factors

The clinical conditions giving rise to embolism or infarction fall naturally into four groups—post-operative, due to fractures, following child-birth, and medical. As we have seen, of the medical cases heart disease accounts for the majority. Whatever the group, the thrombus is nearly always bland and is

rarely the result of inflammation or infection. The term 'phlebo-thrombosis' is preferable to the more usual 'thrombophlebitis.' When one side only is affected the left is slightly more common, and Best and Taylor think this due to the fact that the left common iliac vein offers greater resistance to the blood flow because it is longer and more oblique than the right, passes beneath the right common iliac artery, is liable to pressure from a distended rectum or sigmoid flexure, and in some cases an adhesion passes between the anterior and posterior walls of the left vein.

Age is an important predisposing factor, pulmonary embolism being rare under 35. Only 3 of 11 of Homan's cases were under 50, and although White's cases ranged from 15 to 87 the majority was in the fifties and sixties. The most recent paper from Boston states that 83.8 per cent of patients were over 40 years of age. Flabby musculature is commonly present too. Pressure on the legs from either a pillow across the mattress to prevent the patient slipping down or during anaesthesia, prolonged immobilization or a long-sustained Trendelenburg position, and excessive manipulation of abdominal or pelvic viscera at operation or excessive blood loss, all favour thrombosis.

The type of operation is important in the surgical cases, pelvic operations being notoriously prone, but recently Atkins (15) has pointed out that when the age factor is considered the operation is relatively unimportant and the incidence of thrombotic complications is as high after operations upon the stomach, duodenum and gall-bladder as upon the uterus.

Symptomatology

It is instructive, I think, to separate the signs and symptoms into three groups which are in the following order of importance:—those found from inspection of the bed-chart, those from examination of the legs, and those from examination of the chest and the rest of the patient.

The bed-chart. This often gives the first clue that anything untoward is occurring or is about to occur. A slight rise of temperature, especially if associated with a little quickening of the pulse and respiratory rate in a cardiac patient who is apparently well controlled on digitalis, should immediately suggest that pulmonary embolism or infarction is occurring. An unaccountable feeling of uneasiness or restlessness may possess the patient. The commonest cause of a rise of temperature of more than one degree in a patient suffering from congestive heart failure is pulmonary infarction and the majority of cases diagnosed as bronchopneumonia following operation or child-birth are due to pulmonary infarction.

The legs. By the time the usually described picture of swelling up to the thigh, discoloration, and a tender hard vein, presents itself that leg is almost certainly of no further danger as a source of emboli. The thrombus has become adherent to the veins and obstructed them. The innocent-looking leg is the dangerous one. For early signs the calf must be examined with the knee flexed and the sole of the foot resting on the bed to relax the calf muscles. Slight swelling of the lower leg, increased glossiness or tension of the skin, faint cyanotic discoloration compared with the other leg, or the fact that the

superficial veins are a little more easily seen are all significant. The examiner's fingers are gradually moved up from the Achilles tendon to the popliteal fossa and local tenderness is searched for, and if found the muscles should be pressed together from side to side at that level. If no pain results the diagnosis is strengthened. Dorsiflexion of the foot with the leg extended also causes pain at the same spot as the local tenderness—Homan's sign. Tenderness should also be sought for in the sole of the foot and around the external malleolus.

The chest signs. It is important to realize that these may be completely absent or obscured, and this is strikingly so in cardiac cases. As recently as 1941 Hines and Hunt recorded a series of 81 post-mortems on heart failure patients in which gross pulmonary infarction was present and yet only two cases were diagnosed prior to death. This prompted them to make a very careful comparison of the symptoms occurring in patients dying of heart disease with pulmonary infarction with those with heart disease without pulmonary infarction, and at once it was seen that there is no characteristic clinical syndrome of pulmonary infarction if heart disease is present. In addition, to add to the difficulty of eliciting typical lung signs one or more of the following may be present:—passive hyperaemia, brown induration, pulmonary oedema, pleural-effusion, bronchopneumonia and emphysema. Comparing symptoms of those with infarct with those without, their percentages were: Haemoptysis 35, 9; pleural pain 16, 9; precordial pain 46, 42; cough 41, 54; shock or sudden death 12, 19; dyspnoea 96, 95; asthmatic attacks 7, 6. It is seen that with the exception of haemoptysis there were only minor differences in the frequency of symptoms. Although blood spitting in pulmonary infarction occurs in only about a third of cases it is characteristically of a fair quantity and is repeated. They conclude that infarction must be considered if any of the following occur:—persistent or recurrent haemoptysis, persistent deep cyanosis, unexplained jaundice, unexplained fever, or sudden onset of heart failure not explained by over-exertion or infection.

In only about 10 per cent of cases of pulmonary embolism are the physical signs in the heart at all typical as there must be sudden blocking of at least 60 per cent of the pulmonary artery circulation before the normal right ventricle dilates appreciably, and that implies the presence of either a larger rider embolus at the bifurcation of the pulmonary artery or at least two large emboli, one in each lung. In 1935 McGinn and White suggested the term 'acute cor pulmonale' for the symptom-complex which may result from sudden occlusion of a large part of the pulmonary circulation, and pointed out how difficult it may be to distinguish it from coronary occlusion. When present it consists of signs of dilatation and failure of the right ventricle, such as distension of the neck veins and liver and sometimes protodiastolic triple rhythm most distinctly heard near the pulmonary area, and signs of dilatation of the pulmonary artery, such as forceful pulsation, both visible and palpable, accentuation of the pulmonary second sound and sometimes a loud pulmonary systolic murmur or a to and fro friction rub over the pulmonary artery.

Special Investigations

Only two need be considered, namely, electrocardiography and radiology. The electrocardiogram is almost a pathognomic but, unfortunately, only the 10 per cent or so which present the acute cor-pulmonale picture show that change. Radiological evidence is often absent, too, and it must be remembered that infarction shadows take at least 24 hours to appear.

Electrocardiogram. In lead I an S wave develops or is increased; in lead II the T wave is low or inverted; in lead III a Q wave develops or is increased, T is quite deeply inverted, and rarely, the ST segment may be elevated; in lead IV (R or F) T is flat or inverted (Fig. 2). White recommends CF as the precordial lead most likely to register changes, whereas Wood prefers CR, in which T inversion commonly persists for several weeks unlike in other precordial leads. It is seen that the appearances in lead III simulate those of posterior cardiac infarction, although in pulmonary embolism Q is inconstant and the ST segment rarely elevated and never markedly so. Barnes tabulates the points of difference, but at times both clinically and from study of the limb leads alone, a fourth lead is essential. Wood and Selzer state that T is never inverted in any chest lead as a result of posterior cardiac infarction, but Evans states that T is often inverted in posterior cardiac infarction in his CR, lead and, as it is upright in pulmonary embolism in CR, this point may be helpful in differentiating them.

It will be appreciated that chest lead appearances are not quite pathognomic of pulmonary embolism and are only evidence of acute transient distention of the right ventricle. At times the identical appearance can be given by rheumatic carditis, diphtheria and pneumonia. Also, cardiac infarction and pulmonary infarction are commonly present together, as will be seen later.

Radiology. Of recent years shadows typical both of recent infarcts and of old linear scars have been recognized, but it has been pointed out by Homan, that a clear lung field is consistent with serious and

repeated embolism. An early and important sign is elevation of the diaphragm on the affected side. If an infarct causes a shadow it may be hidden behind a large heart, or if situated in the costophrenic angle may be mistaken for fluid. Hampton and Castleman from study of X-rays of the vertical cadaver, and the use of a Kaiserling solution pulmonary injection-inflation technique, concluded that an infarct is always peripheral with one or more pleural surfaces invariably involved. But although in the postero-anterior view the shadow may appear as roughly triangular with its apex towards the heart, if the infarct is dissected out or a plaster of Paris model is made of it, the apex is seen to be directed away from the heart and the cardiac margin is always convex or 'hump-shaped.' The shadow may also appear as a completely rounded one and simulate carcinoma of the lung.

Complications and Prognosis

Shock, recurrence of embolism or infarct, cardiac infarction due to myocardial strain and anoxaemia secondary to pulmonary embolism, and heart failure may be presented singly or in combination. de Takats and Jesser have drawn attention to the fact that pulmonary embolism does not kill instantaneously. Of their 100 fatal cases only 8.5 per cent died in less than 10 minutes, nearly 60 per cent lived for more than an hour, and 34 per cent lived from one to several days. Many of their cases had recurrent embolism—39 per cent had two attacks, 12 per cent had three attacks, 5 per cent had four attacks, 3 per cent had five attacks, and 1 per cent had six attacks. They bring out a point concerning the cause of death, which has an important bearing on treatment, namely, that a very small infarct can sometimes be responsible for death. Although it is the 'last straw' often, it cannot act by causing asphyxia, failure of the right heart or insufficient venous return to the left heart, and the authors are of the opinion that death in those cases is due to widespread radiation of autonomic reflexes via the vagus and sympathetic. This results in constriction of the coronaries and vagal inhibition of the heart and they therefore recommend early intravenous atropine and papaverine.

TABLE 1
Clinical Differentiation between Occlusion of the Pulmonary and Coronary Arteries

	Pulmonary Artery Occlusion	Coronary Artery Occlusion
1. History of recent operation or child birth	Present in about 50 per cent of cases.	No relationship.
2. Type of pain	Often substernal, but may be lateral and plural in type.	Substernal, not pleural.
3. Haemoptysis	Fairly common, and characteristically brisk and repeated.	Rare.
4. Cyanosis and cervical vein enlargement	Common and severe	Less common and less severe.
5. Presence of rales	More apt to be unilateral	Commonly bilateral.
6. Triple rhythm	Commonly protodiastolic. Best heard near pulmonary area (right ventricular failure).	Commonly presystolic. Best heard near apex (left ventricular failure).
7. Size of left ventricle	Commonly normal.	Commonly large.
8. Frequency of attacks	Several may occur at short intervals.	Rarely more than two rapidly.
9. Family history	Rare	Common.
10. Cardiogram	Almost pathognomic, but present only in at most 20 per cent.	Pathognomic and probably always present.

Differential Diagnosis

As pointed out above, pulmonary infarction is commonly mistaken for pneumonia, often of atypical type. Massive pulmonary embolism is easily confused clinically with coronary occlusion and, indeed, the two conditions commonly coexist. Without a cardiogram it may be impossible to be certain which condition one is dealing with. Common to both are chest pain or a sensation of substernal pressure, an increase in the temperature, pulse-rate, respiratory rate and white cell count, collapse, sweating and pallor and a fall in blood pressure. Cyanosis, engorgement of neck veins, accentuation of the pulmonary second sound, triple rhythm, and a pericardial friction rub can be found in either condition. Even so, some findings tend to occur more commonly in one condition than the other (Table 1).

Treatment

The treatment of pulmonary embolism and infarction is still far from satisfactory, and the problem really resolves itself into an attempt to answer three questions, namely:

How can these cases of pulmonary embolism and infarction be best prevented from occurring? This may be considered under the heading of prophylactic treatment.

If there is clinical evidence that pulmonary embolism threatens to occur, how can a major catastrophe be best averted? This may be described as abortive treatment.

If the patient is already seriously ill with massive pulmonary embolism, what is the best method of coping with this urgent case and avoiding a fatal issue? This constitutes emergency treatment.

Prophylactic Treatment

From consideration of the previously mentioned predisposing factors, it follows that measures likely to reduce the frequency of embolism and infarction are mostly applicable to surgical cases. As pointed out by Barnes, the three most important predisposing factors are the age of the patient, the type of operation, and the reduced venous flow, particularly from the legs. That age is of conspicuous importance is seen from the fact that in his series 93 per cent of cases were over the age of 40 and only 1 per cent were under 30. This corresponds closely to the experience of Carlotti *et al.* It suggests that the rise in the platelet count following operation, which coincides with the period of anticipated embolism, cannot be of much importance as a contributory cause because, according to Dawbarn *et al.* it occurs in young and old alike. The operations notoriously prone to complication by pulmonary embolism are hysterectomy, prostatectomy and bladder operations, and resection of the stomach for malignancy. In spite of severe cardiac failure often, embolism, following such an operation as thyroidectomy, is almost unknown. Even so, if due allowances be made for age, the type of operation is relatively unimportant.

The maintenance of an adequate venous flow depends on the *vis a tergo* of the systemic arterial circulation, active contraction of skeletal muscle, and the negative intrathoracic pressure which, in turn, depends on the normal descent of the diaphragm. The plunging-like action of the liver, secondary to

respiratory movements, tends to squeeze blood out of the intra-abdominal veins. From this it is seen that possible preventive measures comprise the following: (1) Deep breathing exercises prior to, and as soon after operation as the wound permits. (2) Carbon dioxide inhalations several times day and night for the first 48 hours. (3) The encouragement of attempts at early coughing. (4) Massage and leg exercises both before and immediately after operation. (5) The avoidance of a bolster across the bed which keeps the hips in a flexed position and thus may hinder the venous return from lower down. (6) The correction of anaemia prior to operation, and the prevention of post-operative dehydration with haemoconcentration. (7) In the theatre excessive tissue trauma should be avoided. It is well worth while using a small pad to raise the heels a few inches from the operation table so that the flaccid calves are not compressed. (8) Straining at defaecation must at all costs be avoided as the patient is then involuntarily performing Valsalva's experiment with its attendant dangers. (9) It has been suggested by Walters that the venous return from the legs can be increased by thyroid gland by mouth, but of this.

Although the employment of the above measures for every case operated on is too burdensome for practical purposes, they can be confined to likely candidates for embolism such as fat elderly patients, perhaps with known circulatory defects, about to undergo one of the operations known to be liable to be complicated by embolism. Bauer suggests that heparin should be used in all such patients as a routine measure, but this practice is, I think, unlikely to become general.

Sodium citrate has been given both as a preventative and as treatment of an established case, but there is no evidence that it influences blood coagulation when given by mouth.

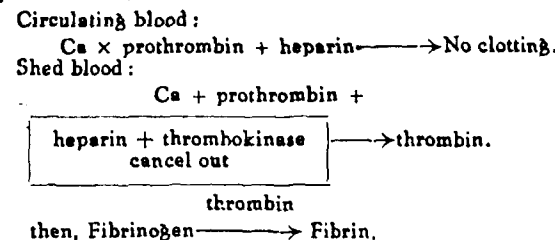
Abortive Treatment

By this is meant the treatment of a case which shows early evidence of thrombosis or infarction but which is not as yet acutely ill. The signs may be limited to the calves or groins, or perhaps a small haemoptysis has occurred with or without scanty physical signs in the lungs. The objects of treatment in this type of case are twofold, namely, to prevent further formation of thrombus and to prevent emboli reaching the lungs. The former can be achieved by the use of anticoagulants such as heparin and dicoumarin, and the latter may be prevented by ligation of the femoral vein or, rarely, of the inferior vena cava itself. Neither method of treatment is altogether ideal. Unfortunately, neither heparin nor dicoumarin can 'dissolve' clot once it has formed, and once the anticoagulant therapy is stopped its effect wears off in a few days and the patient is then once more just as liable to thrombosis as he was before the course was commenced. With vein ligation, cases are already on record of clot being formed proximal to the ligation. Even so, provided their limitations are recognized, both these methods of treatment are at times quite definitely life-saving.

(1) *Anticoagulant therapy.* It is necessary briefly to consider theories concerning the mechanism of blood clotting. Even today the whole story is by no

means fully understood, and according to Best and Taylor there are two main schools of thought.

(a) *Howell's theory.* Insoluble fibrin (clot) is formed from soluble fibrinogen by the action of an enzyme called thrombin. Thrombin is formed in the plasma of shed blood by the action of calcium ions upon prothrombin. To prevent in the body the interaction of calcium with prothrombin to form thrombin, anti-prothrombin or heparin is present. When blood is shed, thromboplastin (thrombokinas) liberated from injured tissue, or from platelets, neutralizes the heparin. Diagrammatically this can be represented as:

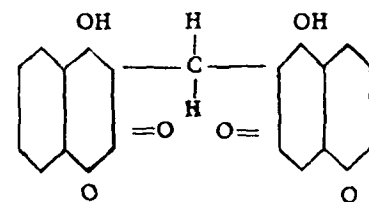


(b) *Mellanby's theory.* This worker maintains that heparin is not normally present in circulating blood, or if it is so only in minute quantities and is not responsible for the maintenance of the fluidity of normal blood. He considers that the action of heparin is to inactivate thrombin after it has been formed, but to prevent it being formed there is an antithrombin substance in circulating blood other than heparin. That substance is believed by Quick to be serum albumen.

Prothrombin is a protein and occurs in the plasma as 40 mgm. per cent. It is synthesized in the liver in the presence of vitamin K. Thrombokinas (thromboplastin) is a lipo-protein and occurs in all tissues, especially platelets. It affects the velocity of conversion of prothrombin to thrombin, but not the quantity. Thrombin converts 2,000 times its weight of fibrinogen to fibrin. Fibrinogen is produced by the liver.

Apart from the production of thrombokinas by platelets, it has been shown by Wright that the latter not only increase in number following operation or childbirth, but their adhesiveness increases too.

Dicoumarin. It was discovered by Allen *et al.* that cattle feeding on spoiled sweet clover (*Melli-lotus albus*) developed haemorrhages, mainly in the skin, and in 1940 Link and his co-workers at Wisconsin isolated the factor in the clover which was responsible, identified it and then synthesized it. It is 3,3'-methylene-bis-(4 hydroxycoumarin); and is generally referred to as dicoumarin or dicoumarol.



It has the specific, reversible effect of inhibiting the formation of prothrombin and hence preventing clot formation. It is very important to bear in mind that when given by mouth dicoumarin has a lag of 24-72 hours before any effect occurs. This effect is

antagonized by vitamin K, if sufficient is given, and a fresh blood transfusion will, of course, elevate the prothrombin temporarily.

When dicoumarin is employed the plasma prothrombin must be estimated daily, as whenever it falls too low serious toxic effects occur. The earliest toxic signs according to Wright and Prandoni are lassitude and general malaise with aching in the costo-vertebral angles. Then generalized bleeding occurs and may be accompanied by pyrexia. Purpura, bleeding from the gums, haematuria, sublingual ecchymoses, subconjunctival haemorrhage, haematemeses, haemarthrosis, visceral and brain haemorrhage, and spontaneous bleeding from wound sites have all been recorded. The capillary fragility is not increased, and the bleeding time is not influenced. There is a definite retardation of clot retraction, but this is inconstant. The treatment of such bleeding is immediate transfusion of fresh blood or, if that is not available, stored blood up to 96 hours old may be used. The transfusion is continued until the bleeding stops. If fresh blood is not available vitamin K may be used. First reports suggested that substance was ineffective but Cromer and Barker have shown that the original dose recommended was too small. Using 64 mgm. of menadione bisulphite (synthetic vitamin K) intravenously they stopped bleeding in 35 of 37 cases.

Estimation of prothrombin time. The prothrombin is not measured quantitatively but indirectly by measuring the prothrombin time. At King's College Hospital Dr. S. Newstead uses a modification of Quick's method in which venom replaces brain extract. 'Stypven' is Russell viper venom and this is a thromboplastin-like substance capable of converting prothrombin to thrombin in the presence of calcium. It is issued as a dried powder and when the ampoule of sterile distilled water provided is added to it this makes a 1:10,000 solution. The technique is mix 4.5 c.c. of blood with 10 mgm. of potassium oxalate and centrifuge. 0.2 c.c. of the separated plasma is pipetted off and added to a small test tube held in a water-bath at 37°C. 0.2 c.c. of 'Stypven' solution is next added. Then with stop-watch ready 0.2 c.c. of M/40 calcium chloride is added and at the same time stop-watch is started. The tube is agitated in the bath gently and the end-point (prothrombin time) is the sudden appearance of white fibrin particles. As a check a duplicate is run. Though, as pointed out by Wintrobe there are several variables which this method does not control, such as variations in the prothrombin conversion rate, differences in the time required for the reaction of thrombin with fibrinogen and delayed coagulation due to deficiency of fibrinogen or excess antithrombin, the method is quite adequate for clinical purposes. Witts and Hobson claim a sharper end-point by using a mixture of Russell viper venom and crude lecithin as thromboplastins.

The normal plasma prothrombin time is 10-25 seconds. Bleeding does not occur until the values are as high as 60 seconds or longer. Recently Allen has made an important plea for the discontinuation of reporting the prothrombin time since thromboplastins vary in potency. He suggests the prothrombin should be recorded as a percentage of normal. In his experience intravascular thrombosis rarely occurs when the percentage of prothrombin time in the blood is

less than 30, and bleeding rarely occurs when the percentage prothrombin is 10% more.

Contraindications to dicoumarin. So far the following are considered by Lehmann to be contraindications—kidney disease, heart disease, especially of the coronary arteries, hypertension, liver disease, and bleeding in pregnancy and in the puerperium and due to other causes. Butch and Stewart concluded that although the haemoptysis of pulmonary embolism was not aggravated, in cases with ulcerating or granulating lesions great caution should be exercised or the drug should not be given. In addition Allen, Linton and Donaldson list as contraindications thyrotoxicosis, diabetes, arthritic patients taking acetylsalicylic acid, and disease requiring chest surgery. Allen also includes as contraindications blood dyscrasias with impairment of normal mechanisms for the prevention of bleeding, and recent operations on the brain and spinal cord because here small bleeding may be disastrous. It is seen that if these contraindications were rigidly observed dicoumarin would not be used in cases of coronary occlusion, in which already good results are being claimed, and it would have to be eschewed in most post-operative cases. Other contraindications are conditions where the prothrombin time is already prolonged, for example obstructive jaundice. High fever is also a contraindication as it increases the susceptibility to dicoumarin. As Christie³⁷ has shown, subacute bacterial endocarditis, because of the already strong tendency to bleed and to renal damage, should not be treated with it. According to Barnes and Ervin³⁸ the vaginal blood loss of patients receiving dicoumarin or heparin in the early puerperium is the same as those of controls. No correlation between the blood loss and prothrombin time was noted. Allen has used dicoumarin in 1,686 post-operative cases. He found the frequency of minor haemorrhages (epistaxis, haematuria, petechiae and ecchymoses) was 3.1 per cent., and major bleeding (mainly from operation wounds) occurred in 1.9 per cent. Two patients of the series died as a result of haemorrhage, but one was obviously not caused by the anti-coagulant. On the credit side, he estimated that from consideration of 'expected' deaths 73 lives were saved.

Dosage. The method of Allen *et al.* is usually employed. On the first day 300 mgm. is given by mouth, and on the second day 200 mgm. is given. On the morning of the third day the prothrombin time is estimated, and if it is more than 35 seconds the dicoumarin is omitted for that day, and if it is less than 35 seconds, 200 mgm. is given. From then on the prothrombin time is estimated each morning and a decision whether to give 200 mgm. or none that day is made. The object is to keep the prothrombin time somewhere between 35 and 60 seconds. The drug is continued for as long as the effect is desired, or for about 10 days in cases of pulmonary embolism. If the prothrombin time has not risen very much by the end of 72 hours the temptation to increase the dose must be resisted. Also, this latent period is followed by a prolonged action after the drug is withdrawn, the effect continuing often for two to ten days, generally three to seven. Thus a close watch must be kept on the prothrombin time for at least a week after administration has ceased. Crawford

and Nassim give details of a case where the prothrombin time increased disappointingly slowly, reaching only 30 seconds after 30 days. The dose was therefore increased but the patient rapidly developed pain in the abdomen and back, with vomiting, heavy albuminuria with casts, a rise in blood pressure, and later gross haematuria which continued for 11 days. Five pints of blood were needed to control the haemorrhage, and the prothrombin time increased again after the drug had been withdrawn and in spite of transfusion. Wright and Prandoni noted that bleeding from a venipuncture site was an ominous sign and should be a signal for transfusion. *Either the appearance of spontaneous haemorrhage from any site, and however small, or the occurrence of backache, is, in the author's opinion, an indication for immediate cessation of dicoumarin therapy, notwithstanding a normal prothrombin time.* Atkins reported two post-operative cases who, although treated with comparatively small doses of dicoumarin and adequately controlled by daily prothrombin time estimations, both bled severely and almost died. Although I have never seen such serious haemorrhages in the presence of a normal prothrombin time I have seen two cases in which, both with a normal prothrombin time, haemorrhage occurred—one was following partial gastrectomy and the other was a post-partum case which developed backache, then bleeding from the gums, followed by a small epistaxis, slight bleeding from one ear and, finally, gross haematuria.

Heparin.—This was originally obtained from dog liver by McLean in 1916. It is now obtained from the liver, lung and skeletal muscle of the ox. It is formed, and stored in, the mast cells throughout the body, and the liver capsule and lungs are rich in it. It is now obtainable as a pure powder which is closely related to chondroitin-sulphuric acid. Benzidine due to its slow absorption. Heparin does not influence the prothrombin time. It increases the coagulation time.

The use of heparin has not been very popular for several reasons, among which are that, until recently, it could only be given either by continuous intravenous drip or at least six-hourly intravenous injection, it is expensive, samples vary in activity and several disasters have occurred. Its great advantage is that it acts immediately, unlike dicoumarin. Recently, Loewe and Hirsch have described an improved method of heparinization and adduce histological evidence to show that heparin causes to not yet organized (sludge stage) and this maintains patent collaterals which without heparin would become thrombosed. They give the heparin, either deeply, subcutaneously or intramuscularly, in Pitkin menstruum. This consists of gelatine, dextrose and glacial acetic acid, and adrenaline or ephedrine can be added to prolong the effect. An injection is needed only every two or three days. They also use papaverine concomitantly in liberal dosage—one to one and a half grains, 4-hourly, intramuscularly or intravenously at first, then later orally.

Dosage.—The method of Crafoord and Jorpes is usually employed. The heparin is given together

with dicoumarin. Both heparin and dicoumarin are given from the beginning, and as soon as the dicoumarin effect on the prothrombin time is noted the heparin is stopped and the dicoumarin alone is given.

The amount of heparin, if obtainable pure, is 50-100 mgm. intravenously six-hourly, and it is generally needed for some 36-72 hours. The heparin preparation used at King's at present is Roche's 'Liquemin.' One c.c. of this corresponds to 1,000 Toronto units and the dosage recommended by the manufacturers is 4,000 Toronto units (4 c.c.) intravenously 6-12 hours for several days. If necessary the dose may be increased and the interval between the injections shortened. It is issued in 5 c.c. phials.

Bauer claims that heparin is surprisingly effective in acute massive pulmonary embolism and recommends beginning with rather heavier dosage, namely, 150 mgm. intravenously four-hourly for the first 24 hours. Probably the embolus does not at start entirely

obstruct the lumen of the pulmonary artery, and complete blockage is caused by deposition of fresh thrombus which is prevented by heparin. Dicoumarin alone is valueless here owing to its long latent period. Bauer also makes the point that it is of the utmost importance to get the patient up before the heparinization is terminated, provided the main disease permits it. He also emphasizes the importance in heparin treatment of early mobilization—leg movements are carried out from the beginning of heparin therapy and the patient moveabout freely during the entire treatment. He is got out of bed the moment the acute thrombotic symptoms disappear, and he is able to leave bed in less than a week as a rule. The patient is provided with an elastic bandage or Unna's paste stocking, and after wearing this for two or three weeks he resumes work.

Table 2 lists the main differences between the two anticoagulants.

TABLE 2
Heparin and Dicoumarin compared and Contrasted Clinically.

	HEPARIN	DICOUMARIN	
Advantages.	Immediate action. Action lasts for a few hours only. Constant response. Laboratory facilities not needed. Haemorrhages during treatment extremely rare	Latent period of some 48 hours. Effect persists for several days. Response may be variable, even same dose on same patient. Daily prothrombin-time estimations essential. Minor haemorrhages not uncommon.	Disadvantages.
Disadvantages.	Cannot be given by mouth. Expensive. Purity and potency vary.	Oral administration. Inexpensive. Synthetic product.	Advantages.

(2) **Vein ligation.** The indications for interrupting the femoral vein are still not decided. (1) Allen, Linton and Donaldson state that they do not believe femoral vein interruption has any place in the treatment of true thrombo-phlebitis after the seventh day of the disease unless infarcts have occurred, as massive pulmonary embolism is comparatively rare, unlike in the bland clot formation of phlebothrombosis. (2) In the cardiac group they are asked to do femoral vein interruption if infarction occurs or if there are any signs of thrombosis in the leg veins. As they have had no fatalities yet in 464 cases, cardiologists feel that operation is indicated on slight provocation. (3) Paul White in a recent address in London stated that it was the practice at Boston to do prophylactic bilateral femoral vein ligation on cardiac patients prior to such operations as pericardial resection for constrictive pericarditis. (4) de Takats and Jesser are of the opinion that ligation should be performed in cases with recurrent embolism—two clear-cut infarcts from a well localizable source, and in slowly fatal cases. (5) White states bilateral deep femoral vein ligation should be carried out if pulmonary embolism occurs or recurs during anti-coagulant therapy.

The choice of which vein to tie, and on which side, is not always easy. A transverse incision

must be avoided. Homans is of the opinion that in the usual case it is sufficient to divide the superficial femoral vein. This disturbs the venous return very little, whereas if the common femoral vein is divided, proximal to the profunda, serious congestion and swelling often follow. Lymphorrhoea is an occasional complication. If embolism is still taking place when the first leg is already considerably swollen, this really exonerates the swoller leg as embolism seldom occurs from an obstructive thrombosis. In recent paper by Carlotti *et al.* comparison is made between conservative treatment over a five-year period and bilateral interruption of the femoral veins over a similar period, and although the mortality rate was somewhat higher in the group ligated (48 per cent. as compared with 42.6 per cent.) the mortality in the first month was considerably less (28.3 per cent. as compared with 50.7 per cent.). They are of the opinion that vein interruption must always be distal to the sapheno-femoral junction, and should be proximal to the profunda femoris. Bilateral block of the first four lumbar sympathetic ganglia using procaine hydrochloride and monobromosaligenin has been used in conjunction with femoral vein ligation by Aycock and Hendrik. They claim that it gives a better circulation to the legs for the first few days after ligation, and usually one block is necessary.

The inferior vena cava has been ligated in 10 cases by Linton for iliac thrombosis.

Emergency Treatment

In acute massive pulmonary embolism it is important to have a clear plan of action as sometimes death can occur in a matter of minutes. As first pointed out by Belt some warning of such an emergency may be obtained as pulmonary embolism is not a single event but a recurrent one as a rule, with milder attacks first. Before treatment it may be difficult to decide whether the case is one of acute pulmonary embolism or acute coronary thrombosis. Some points of importance in the clinical differentiation of these two conditions are given in Table 1.

To detect the pleurisy overlying a pulmonary infarct, Sir Charlton Briscoe has drawn attention to the great value of running the fingers along the intercostal spaces, when tonic intercostals will be found and often pain on pressure over the contracted muscle. The patients prefer this method to the reiterated 'take another deep breath.'

The actual cause of death is not clear, and, as Barnes has pointed out, there are many objections to explaining it on a basis of arterial obliteration. Such objections are that the patients have died after Trendelenburg's pulmonary embolectomy, in pulmonary surgery it is possible to ligate one pulmonary artery, and there is no correlation between the size of embolus and its fatal issue. Patients may die from a small embolus obstructing an insignificant area of lung, and death here is probably due to widespread radiation of autonomic reflexes, perhaps causing coronary artery constriction and vagal inhibition. Villaret in experimentally produced pulmonary embolism in rabbits, showed that section of the vagi increased by seven-fold the quantity of embolic particles necessary to produce sudden death. Gosset submitted evidence that the embolus is fixed in the pulmonary artery by its spasm, and de Takats showed how papaverine might release this spasm in acute arterial occlusion elsewhere. Available lines of treatment are therefore as follows: (1) Anticoagulant therapy immediately, giving both heparin intravenously and dicoumarin orally as described above. (2) Papaverine hydrochloride in solution, giving one grain (0.064 gm.) immediately intravenously. (3) Atropine sulphate gr. 1/60 should also be given intravenously as soon as the patient is seen in order to paralyse the vagi. (4) If much pain or restlessness is present morphia must be given. (5) Venous congestion as judged by distension of the cervical veins, and cyanosis, is generally considered an indication for venesection and if this is performed a pint should be removed rapidly. At the same time oxygen should be given. But Gibbon is of the opinion that there is little justification for venesection as failure of the right heart is not due to high venous pressure but to obstruction to the flow of blood from the right ventricle. For similar reasons digitalization is probably of little or no value. (6) Pulmonary embolectomy has not proved feasible. If the evidence is clearly in favour of a massive pulmonary embolus, and all other methods have failed, it might be attempted *faute de mieux*. Gibbon quotes Kiser in 1935 as being able to collect reports of 142 Trendelenburg operations and only nine survived. Such an operation may tip the

balance the wrong way, and in any case offending emboli may be out of reach in both lungs.

To sum up, it is suggested that all acute cases should be given three drugs intravenously immediately—heparin, papaverine and atropine. The remaining treatment will then be decided on the patient's progress.

I wish to thank Dr. Terence East for many helpful suggestions regarding the subject matter of this paper. I am indebted to Mr. A. W. Kendall and Mr. W. Waugh for the phlebogram.

Oral Penicillin in Treatment of Pneumonia in the Adult—By T. ANDERSON, M.D. and J. B. LANDSMAN, M.B. (From the University of Glasgow and Knightswood Hospital) (From the B.M.J. December 13, 1947.)

A comparative study (Anderson and Ferguson, 1945) of the efficacy of the sulphonamides and penicillin in the treatment of pneumonia showed that there was little to choose between the two methods. Although certain advantages could be claimed for penicillin on account of its lack of toxicity, its use had one great drawback, especially for the general practitioner—the need for repeated intramuscular injections. Early studies with regard to the route of administration of penicillin had suggested that the material was likely to have little effect when given by mouth because of its inactivation by the acid of the gastric juice (Abraham *et al.*, 1941) or because of penicillinase production by coliform organisms (Chain and Florey, 1944). This led different workers to try to combine penicillin with suitable antacids and buffers designed to counteract the stomach acids (e.g., Little and Lumb, 1945) Bunn and his co-workers (1945) used penicillin orally in the treatment of 45 cases of pneumonia and had only one fatality. The material was given in a gelatin capsule; in about half of the cases the capsule contained an oily suspension and in the remainder the ordinary powdered sodium salt was enclosed. However, Finland, Meads, and Ory (1945) came to the conclusion that elaborate buffering devices were unnecessary and that administration with saline or even water was equally valuable in procuring effective therapeutic blood levels. These authors obtained satisfactory results with oral penicillin in the treatment of seven cases of adult pneumonia. Bushby and Harkness (1946), who reviewed the conflicting reports on different methods of administration, used penicillin orally for the treatment of gonorrhoea and were satisfied with the results, which indeed were as good as those obtained with intramuscular penicillin. (It is important to realize that these results were obtained in adults, for Buchanan (1946) has since shown that oral penicillin can be used with excellent effect in infants whose normal achlorhydria was assumed to prevent inactivation of the antibiotic.)

In view of the great variations in the sensitivity of different organisms to the action of penicillin and because of the differences in severity between cases of the same infection, it was felt that there was a need to investigate the efficacy of penicillin administered orally to an unselected series of patients with pneumonia. In this infection, unlike gonorrhoea, the

treatment must be capable of dealing with the bacteria not only in the tissues but also in the blood stream; it seemed possible that penicillin given by mouth might be unable to attain concentrations in the blood high enough to quell a bacteraemia.

Material and Methods

The patients comprised in the study were all adult males admitted to the wards of Knightswood Hospital during the winter of 1946-47 in whom the diagnosis of pneumonia was confirmed. They were divided into two groups, one group being given penicillin orally and the other penicillin intramuscularly as a control. There was no conscious selection of patients for either method; on admission they were allocated alternately to the two groups.

Intramuscular Penicillin.—The patients in this group were given an initial dose of 50,000 units, after which successive doses of 20,000 units were administered at four-hourly intervals for a period of five days. Occasional severe cases received higher dosage in early stages of treatment. The mean total dose of penicillin was 800,000 units.

Oral Penicillin.—Tablets of calcium penicillin with 0.5 g. of sodium citrate were used. They were made up to contain 20,000 and 25,000 units of penicillin, so that it was possible to vary the scheme of dosage. At first 40,000 units were given three-hourly, but it was soon apparent that this dose was too low, and thereafter for a considerable part of the trial the standard dose was 60,000 units three hourly, at least during the early stage of treatment. Administration was continued for a period of five days. Towards the end of the trial further variations were made in the dosage, the principal one being that the three-hourly dose was reduced to 25,000 units after treatment had continued for 48 hours. The mean total dose given orally was 1,650,000 units. In order to avoid too much disturbance of the patient a double dose was given at midnight and the next dose at 6 a.m. Two measures were adopted in an endeavour to enhance absorption and to maintain effective blood levels: in the first place, the tablets were always administered along with a small amount (1-2 oz.: 28-56 ml.) of milk; and, secondly, the daily fluid intake was reduced to 2 pints (1.136 litres). Rather to our surprise this latter restriction was tolerated by the patients, and with adequate nursing supervision no difficulty was experienced in keeping the tongue moist and clean.

The bacteriological and clinical control was similar to that used in previous trials (Anderson and Ferguson, 1945). Pneumococcus typing from sputum was, however, somewhat restricted by the lack of adequate supplies of typing serum; the available supplies were kept for the examination of special cultures.

Results

The two groups of cases showed a fairly similar composition. The age distribution, duration of illness, and the presence of bacteraemia are shown in Table I. It will be seen that in respect of the factors considered to have the greatest effect upon the prognosis there was little difference between the two groups. In so far as previous sulphonamide treatment was concerned routine estimations of the blood level on admission were not made during this trial. Of those

who were given intramuscular penicillin 23 had received some sulphonamide before admission, but only seven had received more than 4 g. In the oral group the equivalent figures were 24 and 10, of whom two had received a single injection of penicillin intramuscularly.

TABLE I.—Composition of the two Treatment Groups

	Intramuscular Penicillin	Oral Penicillin
Age distribution:		
0-20 years ...	0	3
21-40 " ...	14	13
41-60 " ...	22	18
61+ " ...	9	11
All ages ...	45	45
Bacteraemia:		
Pneumococcus Type I ...	2	2
" " II ...	5	7
" " V ...	0	2
Others ...	2	2
Staphylococcus ...	0	1
Total ...	9	14
Duration of illness on admission:		
0-2 days ...	18	23
2-4 " ...	13	13
5+ " ...	14	9
Mean duration (days) ...	3.5	3.2

The effect of treatment in the two groups has been compared in respect of the duration of fever, the occurrence of complications, and the number and causes of deaths. The average duration of fever in uncomplicated cases was: "intramuscular" group, 1.9 days; "oral" group, 1.4 days. A composite temperature chart (Fig. 1) shows little difference between the effect of the two methods of treatment. Complications developed in 12 of the patients given intramuscular penicillin and in 16 of those given oral treatment. The individual complications are listed in Table II. It shows that there is no appreciable difference between the two groups.

TABLE II.—Complications in the Two Treatment Groups

Complication	Intramuscular Penicillin	Oral Penicillin
Lung abscess ...	2	0
Empyema ...	1	1
Sterile effusion ...	2	1
Delayed resolution ...	7	13
Lobar collapse ...	0	1

The patients who died are recorded in Table III, which includes relevant details regarding the clinical condition. Study of the table throws light on the present status of pneumonia therapy, for it is apparent that in many of the patients the presence of some accompanying disease or degeneration was a contributory factor which weighed too heavily against effective treatment. Thus in four of the patients

other conditions were present which were of themselves sufficient to have produced a fatal issue. The mortality rate for the series is 7.8%, and when it is recalled that 20 of the patients were over the age of 60 years such a low rate may be regarded with satisfaction.

TABLE III—Deaths

Case	Age	Method of Treatment	Duration of Illness before admission	Extent of Consolidation	Blood Culture	Complicating Factors	Cause of Death
D.B.	41	Oral	5 days	L1 + 2	Positive (I); pour-plate, 624 col./ml.	Chronic bronchitis; pulmonary tuberculosis.	Pneumonia.
J.C.	55	"	6 "	R2 + 3	Positive (II); pour-plate, neg.	Severe anaemia; pulmonary tuberculosis (calcified).	"
J.G.	38	"	2 "	L2 R3	Positive (II); pour-plate, uncountable.	Chronic bronchitis. Died within 11 hours of admission.	Early abscess formation at necropsy.
M.W.	64	"	2 "	RM + 2 + 3	Positive (V); pour-plate, neg.	Auricular fibrillation...	No necropsy. Cardiac failure.
D.M.	61	Intramuscular	5 "	L1 + 2	Positive (XVI); pour-plate, 20 col./ml.	Cirrhosis of liver	Pneumonia, resolved at necropsy.
J.M.*	68	"	4 "	L1 + 2	Sterile	"	Lung abscess at necropsy.
J.S.	58	"	3 "	R1 + 2L1	Positive (II); pour-plate, 11 col./ml.	Gross spinal deformity.	Pneumococcal meningitis.

L1 and L2 = Left upper and left lower lobe. The figure in parentheses under "Blood Culture" refers to the type of pneumococcus.

*Received sulphonamide treatment before admission.

Clinical details are given of two typical cases, one in the younger age group and the other, a particularly severe case, in the older age group.

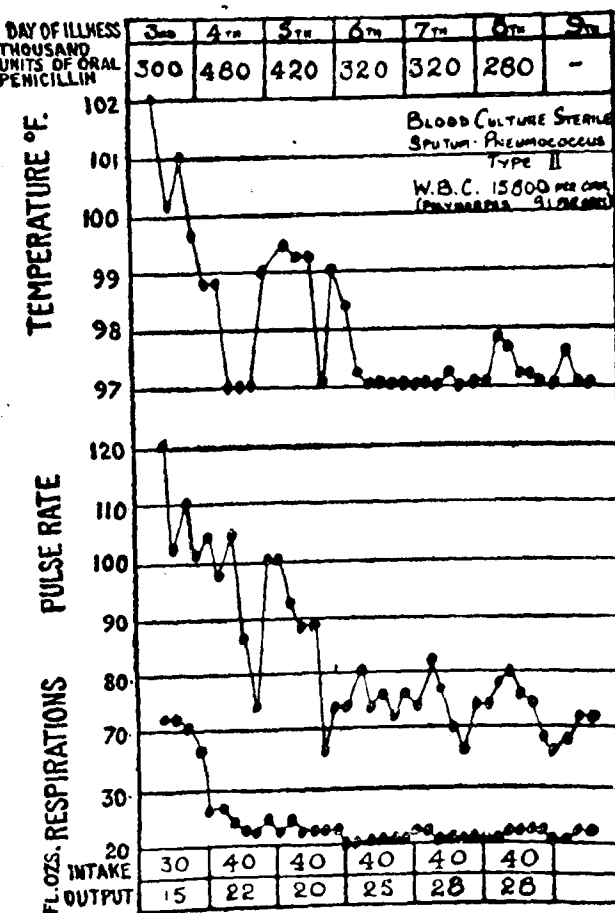


FIG. 2.—Chart of Case 1. Total penicillin, 2,120,000 units.

Case 1

Treatment: penicillin orally—60,000 units three-hourly for 54 hours, then 40,000 units for 75 hours: total 2,120,000 units (Fig. 2).

A man aged 27 was admitted on December 11, 1946; temperature 102° F. (38.9° C.), pulse 120, and respirations 40. On December 8 he had had a sudden attack of shivering, following by severe pain in the right chest anteriorly. Headache, troublesome cough, and rusty sputum were also noted. He had had several previous attacks of bronchitis. Sulphonamide had not been given before admission.

On admission the patient was acutely ill; his tongue was very dirty. Examination of the chest revealed a pneumonia involving the greater part of the right lung; this was later confirmed radiographically. Rales were numerous in both lungs, and there was a suggestion of spread of consolidation into the left lower lobe. The blood culture was sterile; sputum, pneumococcus Type II; W.B.C., 15,800 per c.mm. (polymorphs, 91%). Next day the temperature, pulse, and respirations fell and the patient's appearance improved, although there was no improvement in the chest signs. On the 15th, signs of consolidation were most pronounced in the middle third of the right lung. The general condition was much better. On the 23rd the chest was clear clinically and radiographically. The patient was discharged on December 26.

Case 2

Treatment: penicillin orally—60,000 units three-hourly for 54 hours, then 40,000 units three-hourly for 57 hours: total, 1,840,000 units (Fig. 3).

The patient, a man aged 54, was admitted on February 11, 1947, his sixth day of illness, having collapsed while at work. He complained of shivering, pain in the chest, cough, and sputum. He had had no previous illnesses, and no treatment had been given

before admission. His temperature, 100° F. (37.8° C.), pulse 96, and respirations 28.

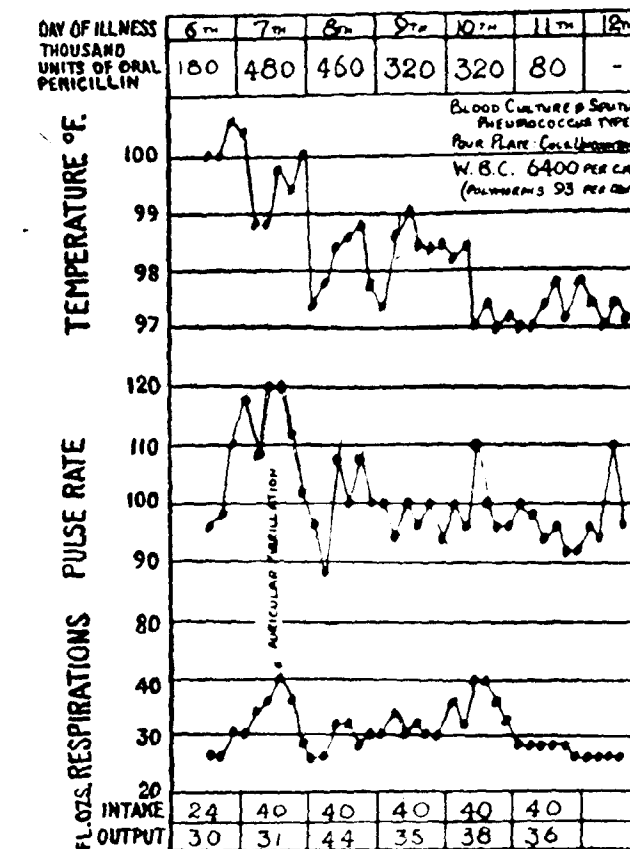


FIG. 3.—Chart of Case 2. Total penicillin, 1,840,000 units.

Physical examination showed a poorly nourished man who was acutely ill, cyanosed, and dyspnoeic. The tongue was dry and coated. There were signs of consolidation on both lower lobes. A blood culture performed on admission proved to be positive, and Type V pneumococci were so numerous on the pour-plate as to be uncountable. The W.B.C. numbered 6,400 per c.mm. (polymorphs, 93%). Next day the physical signs in both lungs were unchanged, and the cyanosis and dyspnoea were not improved. Auricular fibrillation was now present. Recovery was slow and uneventful, except for an elevation of temperature to 100.8° F. (38.2° C.) on March 1. At this time there was excessive prominence of old varicosities on the right leg, with surrounding redness. This subsided after 48 hours' rest in bed. When discharged after 36 days in hospital the chest had cleared except for a little basal rale.

Discussion

From the results recorded it is clear that the oral administration of penicillin is a satisfactory method of treatment for pneumonia. Our experience would suggest that treatment should start with a daily oral dosage equal to four times that required by the intramuscular route. After obvious clinical improvement (usually within 48–72 hours) this dose may be reduced by half. It is interesting that such a schedule is much smaller than that used by Bunn *et al.* (1945) and by Finland *et al.* (1945). When attention is directed solely to those patients who had bacteraemia at the

beginning of treatment it may be noted that in nine of them the colony counts were between 4 and 624 organisms per ml. and that in two others the organisms were too numerous to count. The satisfactory recovery of seven of these cases (including one of the latter) is good evidence of the efficacy of the oral method of presentation. With regard to the technique of administration it would seem desirable at present to give the antibiotic as we gave it—namely, in milk and with a maximum fluid intake of 2 pints a day.

The necessity for a larger dose of penicillin makes it apparent that destruction of the antibiotic must take place at some part of its course through the body. Even with this increased dosage high inhibition levels in the blood serum were not obtained and indeed inhibition was rarely found in dilutions of serum above 1 in 2. Whether the state of the stomach juices during an acute infection such as pneumonia is an important factor in diminishing the amount of destruction may be worth further examination. One of us (J. B. L., unpublished) has shown that there is a decided diminution in the hydrochloric acid content of the gastric juice in pneumonia, and that this hypochlorhydric or achlorhydric state does not disappear immediately upon clinical recovery. The significance of such a finding is not at once apparent, but it may be a contributory factor in preventing an excessive destruction of penicillin. It would seem of some importance to make test-meal studies in other acute infections to see if this loss of hydrochloric acid is a common feature.

It should perhaps be emphasized that the indications for penicillin therapy are not changed by the present report. The sulphonamides constitute an adequate method of treatment for the majority of cases, more especially in the younger age groups; but for those patients who require penicillin there may be some advantage in the use of the oral route. In the first place, the difficulties associated with continued injections are overcome and treatment of pneumonia with penicillin in the home becomes practicable. Secondly, it seems possible that therapy might be cheapened by the use of substandard penicillin, which would not require the careful sterilization and packing necessary when used by injection.

The tablets were supplied by Burroughs Wellcome, to whom we are indebted for the opportunity of conducting the trial. We wish to thank Dr. F. Prescott and Dr. G. Brownlee for their advice and help.

Oral Penicillin in Young Children—BY A. I. SUCHETT-KAYE, M.D. Paris AND R. B. LATTER, M.B., Ch.B. (N.Z.), M.R.C.P. (Lond.) (From St. Charles's Hospital, L. C. C.) (From the B. M. J. December 13, 1947.)

We report here a clinical trial in which we treated 25 children, originally diagnosed as suffering from pneumonia, with oral penicillin. It is hoped that our modest contribution will induce others to try out on a bigger scale the oral administration of penicillin in sick children. No references to systematic experiments in the treatment of pneumonia in young children with oral penicillin could be found in the literature, and therefore the instructions given, especially those regarding the dosage, had to be modified after experience had been gained from the first few cases.

The original instructions given were as follows; (a) Pharyngeal swabs to be taken before treatment, and the isolated organisms to be tested for penicillin sensitivity. (b) The chest to be X-rayed as soon as possible after admission and again at the completion of treatment. (c) A record of the fluid intake to be kept; no extra fluids to be given unless specially ordered. (d) Oral penicillin to be given 4-hourly (later modified to 3-hourly) except for the last night dose, which may be doubled if a prolonged uninterrupted sleep is desirable. Dosage: Infants up to 6 months, 10,000 units (later increased to 20,000 units); between 6 months and 1 year, 20,000 units (later increased to 30,000 units); over 1 year and under 2, 30,000 units (later increased to 40,000 units). The treatment was continued for five days or less according to progress made by the child. Each tablet contained calcium penicillin 20,000 i.u. and sodium citrate 0.5 g. One or more tablets were crushed in water or milk and given preferably before feeds.

The dosage was originally calculated according to body weight in the proportion of 50,000 units per 24 hours for a 14-lb. (6.3 kg.) baby—say 8,000 units 4-hourly day and night. This dosage was based on that of 500,000 units per 24 hours for a 10-stone (63 kg.) adult, an amount of oral penicillin apparently effective against pneumonia in the adult (Prescott, 1947, personal communication). Buchanan (1946) considered 4,000 units per lb. (0.45 kg.) of expected body weight per 24 hours effective in young children. In the more severe cases, especially the later ones, and in view of the results of serum-penicillin estimations, these doses and sometimes larger ones were given at 3-hourly instead of 4-hourly intervals. At most oral penicillin was given for five days, and in several cases where clinical improvement was rapid the treatment was discontinued earlier than the fifth day.

Clinical Results

Of the 25 children treated 2 were under 6 months old, 9 between 6 months and 1 year, and 14 between 1 and 2 years old. The revised clinical diagnosis in 18 cases was bronchopneumonia, in 5 lobar pneumonia, and in 1 bronchitis. The remaining child developed measles the day after admission; treatment was stopped and she was removed to a fever hospital. The five cases of lobar pneumonia and 11 cases of bronchopneumonia were considered seriously ill on admission. In 15 cases the diagnosis was confirmed by radiography. Most of the children had a history of one to three days' illness before admission, but 2 had been ill for as long as seven days. In most of the cases pneumococci and streptococci (principally *Str. viridans*) were isolated from the upper respiratory tract; all these organisms proved to be penicillin-sensitive.

Four children failed to complete the course of treatment because they were sent on the third or fourth day to fever hospitals: one with acute meningitis and three with gastroenteritis. All showed marked improvement of general and chest condition. They comprised the two children under 6 months and two in the group of those aged 1-2 years.

Four other children, who were gravely ill and failed to show any clinical improvement on oral penicillin after three or four days, were given sulphamezathine and recovered (see Table I). In two of

these cases there is no record of what organisms were grown from the pharyngeal swabs; in one the predominant organisms were reported to be penicillin-sensitive, in the other penicillin-resistant.

TABLE I.—*Diagnosis and Treatment.*

No. of cases	Diagnosis	Oral Penicillin	Sulphonamides	Penicillin course not completed
18	Bronchopneumonia	11	4	3
5	Lobar pneumonia...	4	...	1
1	Bronchitis	1	...	...

The 25th child developed measles the day after admission and is not included in the table.

The other children all had normal temperatures within 2-4 days and recovered uneventfully except for one infant, who has bronchiectasis and is still in hospital after three months. The average stay in hospital, apart from that spent by this child, those transferred to fever hospitals, and one taken home against advice on the tenth day, was 19 days, the shortest being seven days and the longest 35.

Serum-penicillin Levels

Estimations of serum-penicillin levels after oral administration of single doses of penicillin were made by the method described by Fleming and Smith (1947), who used a mixture of glucose, phenol red, and serum water as the culture medium and a streptococcus as test organism.

TABLE II.—*Serum-penicillin Level.*

Case No.	Age in months	Dose in units	Serum-penicillin level (i.u./c.mm.) at hours after administration.				
			½ hr.	1 hr.	2 hrs.	2½ hrs.	3 hrs.
1	7 months	20,000	0.25	—	0.06	—	—
2	3 "	10,000	0.03	0.25	0.03	—	—
3	23 "	30,000	—	0.25	0.03	—	—
4	14 weeks	10,000	—	—	0.03	—	—
5	12 months	20,000	—	—	—	—	—
6	12 "	20,000	0.125	—	—	—	—
7	22 "	20,000	0.06	0.03	—	—	—
8	16 "	30,000	0.06	0.03	—	—	—
9	15 "	30,000	0.03	0.06	—	—	—
10	24 "	30,000	0.06	0.06	0.03	—	—
11	11 "	20,000	—	—	0.125	—	—
12	22 "	30,000	0.125	0.03	0.125	—	—
13	20 "	30,000	0.06	0.03	—	—	—
14	18 "	30,000	0.06	0.03	—	0.03	—
15	7 "	30,000	—	0.125	—	0.03	—
16	14 "	30,000	1.0	0.5	—	—	—
17	23 "	30,000	1.5	0.125	—	0.25	—
18	18 "	40,000	1.0	0.125	—	0.125	—
19	9 "	40,000	0.5	0.25	—	0.125	—
20	11 "	20,000	—	—	0.03	—	—
21	8 "	20,000	0.125	0.03	0.06	0.125	—

The mark — indicates no inhibition with standard streptococci. The blood samples from Case 4 were stored for three days before testing and no penicillin could be detected. The blood samples from Case 5 were kept by mistake in the incubator for 24 hours and no penicillin could be detected.

Toxic Manifestations

Ellinger and Shattock (1946) reported a case of nicotinamide deficiency following administration of oral penicillin. They inferred that the nicotinamide deficiency was due to the effect of penicillin on the

intestinal flora. Bushby and Harkness (1946) in a series of 85 adults, reported one case only of urticaria with oedema of hands, feet and neck after oral penicillin.

Only one of our children developed, 10 days after completion of the treatment, a blotchy urticarial rash. The temperature was slightly raised and diarrhoea was present. In another child, three days after treatment, a transient simple diarrhoea was noted. No pathogenic organisms were isolated from the stools of either case. Three other infants, transferred to fever hospitals, were diagnosed as having "gastro-enteritis"; their condition was excellent and the intestinal symptoms appeared on the third or fourth day during the course of oral penicillin. We think it possible that the diarrhoea in these cases was due to a direct toxic action of calcium penicillin on the digestive tract.

Comment

Oral penicillin appears to be effective against most varieties of acute pneumonia in childhood. Serum-penicillin estimations suggest that it should be. Some types of severe bronchopneumonia do not respond favourably, and for these parenteral penicillin and/or sulphonamides are the most efficacious. As Gyorgy *et al.* (1945) rightly insist, for very sick children intramuscular penicillin is advisable, at least during the early acute phase of the disease. However, where circumstances are such that special nursing and frequent injections are impracticable, oral penicillin given in adequate doses at least 3-hourly will be of great benefit. If only for that alone the administration of oral penicillin is an important advance in chemotherapy.

Summary

Twenty-five young children were treated with oral penicillin. Of these 18 had bronchopneumonia, 5 lobar pneumonia, and 1 bronchitis; the remaining child was removed to a fever hospital with measles.

Of these with bronchopneumonia 11 made a satisfactory recovery on oral penicillin alone, 3 greatly improved but did not complete the course, and 4 failed to respond and were treated successfully with sulphonamides. Of those with lobar pneumonia 4 recovered on oral penicillin and 1, much improved, did not complete the treatment. One child with acute bronchitis recovered quickly in three days on oral penicillin.

In 21 children, all under the age of 2, serum-penicillin levels were estimated after single oral dose varying from 10,000 to 40,000 i.u.; no penicillin was detected after three hours. The preparation used was calcium penicillin with sodium citrate.

Our thanks are due to D. E. A. Starker for performing the serum-penicillin estimations. We are indebted to Messrs. Burroughs Wellcome and Co. for supplying the tablets of oral penicillin.

Tonsillectomy and Adenoidectomy—Unsatisfactory Results due to Chronic Maxillary Sinusitis.—BY F. M. WALKER, M.B., Ch.B., F.R.F.P.S., Ear, Nose, and Throat Surgeon, Ayr County Hospital and Ayr C.C. (from the B.M.J. Dec. 6, 1947).

Ayrshire, 1,132 square miles in extent, partly industrial and partly rural in character, has a pre-school population of approximately 23,000 and a school population of approximately 47,000. In this county since 1936 the local authority has reserved a minimum number of 25 beds for such children as have required operative treatment for affections of the ear, nose and throat. The number of beds at present so reserved is 34.

In the case of the children who have been dealt with under the treatment scheme in question—children who have been referred by the school medical officers or by private practitioners—the notes about the operations and the follow-up notes were made by the operator himself. The case histories were taken under the supervision of one person—the matron in charge of the hospital.

It became more and more apparent during recent years that a considerable proportion of the cases which were referred for operative treatment of tonsils and adenoids had failed to benefit thereby, even though the operations were technically perfect. With increasing frequency children who had been operated upon months or years previously were referred fresh by school medical officer or family doctor, disgruntled parents declaring that the child's signs and symptoms were much as they had been before operation or that they had become more pronounced. The position was studied, therefore, and it became evident that the unsatisfactory results were due to infection of the maxillary antra.

The following data were derived from the cases of chronic maxillary sinusitis found among the total number of cases referred for tonsillectomy and adenoidectomy in 1946. Of the 1,779 cases operated upon that year—boys and girls in equal proportion—for the removal of tonsils and adenoids, 442 (or 25 per cent of the total) were considered to have sufficient signs or symptoms, or both, to warrant the proof-puncturing of both antra immediately before operation. (The method used was to continue lavage through the antral cannula with normal saline until all traces of pus had disappeared. Swabs were taken at once from the gross pus and sent for culture. In 106 cases no pus was collected, because in some it passed into the nasopharynx and was swallowed or contaminated, and in others no actual infection was present. Incompleteness of reports in 24 of these 106 cases brings the number to be considered down to 82. In the remaining 336 cases—i.e., in 19 per cent of the 1,779 cases—the material was grossly purulent, mucopurulent, or mucoid. A number of the results of swab examination were lost, however, and some of the case histories were incomplete, so that for these and related reasons 46 cases have to be deducted. The number of cases on which this paper is based is therefore 290, or 16 per cent of the total.

Signs and Symptoms

In recording the signs or symptoms noticed by parents attention was paid to such matters as headaches, pyrexia of short duration and unknown origin

and repeated "bronchial attacks"—not true attacks of bronchitis—characterized by pyrexia and a hacking spasmodic cough. The following code was used: (1) Interference with breathing, day or night; mouth breathing; snoring. (2) Alteration of voice. (3) Pain in, or discharge from, ears. (4) Cervical gland enlargement. (5) Sore throat. (6) Mucopurulent nasal discharge. (7) Night terrors and restless sleep. (8) Spasmodic cough. (9) Frequent colds.

In Table I is given the total percentage incidence of each of the nine items which are covered by the code in (a) a random sample, 2,000 in number, of the cases of tonsillectomy and adenoidectomy dealt with over the past seven years; (b) 290 cases in which pus was present in the antra and was washed out at the time of tonsillectomy and adenoidectomy; and (c) 82 cases in which no pus was found, although expected on clinical grounds. In each of the three groups the total percentage incidence of certain infectious diseases is also given.

		Code Number									Infectious Diseases				
		1	2	3	4	5	6	7	8	9	Scarlet fever	Diphtheria	Measles	Whooping-cough	Pneumonia
Percentage in group (a) ...	69	60	15	30	64	46	6	7	64	12	8	50	20	1	
" (b) ...	57	44	19	17	36	48	27	36	59	5	3	60	33	9	
" (c) ...	73	46	31	21	46	57	29	39	74	6	2	64	32	6	

It is of interest to note that glandular swelling was twice as common in uncomplicated cases as in cases with sinusitis, and that night terrors and spasmodic cough were five times more common in the latter group than in the uncomplicated cases. Certain signs and symptoms—viz., those indicative of sinusitis—noticed by the nurse, the surgeon, and the anaesthetist were also recorded. Thus the nurse, on the morning of the operation, made each child blow his nose into a swab; each case in which there was considerable purulent discharge was recorded as "dirty nose". The surgeon recorded the presence of such signs as nasopharyngeal discharge of purulent or mucopurulent material; pus under, around or above the inferior turbinates; dermatitis of the nasal vestibule and of the upper lip; and a pinkish tinge of all the structures of the middle ear. The anaesthetist kept in mind the fact that there is a greater tendency for a patient with maxillary sinusitis to cough in the initial stages of anaesthesia with ethyl chloride or gas, oxygen, and trilene, and that when a direct laryngoscope is used for endotracheal intubation the anaesthetist commonly notices a marked general congestion of the larynx and the presence of copious pus.

Operation Findings.—These are given in Table II. The condition of the tonsils is classified as follows: (1) Tonsils "normal" no macroscopic evidence of sepsis on closing the guillotine. (2) Tonsils "septic" some pus extracted on closing the guillotine. (3) Tonsils "very septic": large quantities of pus extracted on closing the guillotine. Of the adenoids, one +

sign indicates a normal quantity of tissue, two + signs a mass causing considerable obstruction, and three + signs a very large mass.

TABLE II							
Operation Findings	Tonsils Normal	Tonsils Septic	Tonsils Very Septic	No Adenoids	Adenoids +	Adenoids ++	Adenoids +++
Percentage in group (a) ...	23	50	27	27	18	46	9
" (b) ...	11	66	23	24	61	14	—
" (c) ...	3	55	42	8	60	32	—

It will be noted that in group (b)—cases complicated by the presence of sinusitis—the incidence of abnormal tonsils was high (89 per cent) whereas that of abnormal adenoids was low (15 per cent).

Post-operative Findings.—The throats, which were examined night and morning during the 48 hours after operation, showed much more purulent material in the complicated cases than in the uncomplicated. There were long streams of purulent discharge flowing down the posterior pharyngeal wall, and the nasal discharge was often profuse also.

Seasonal Incidence.—There was no appreciable difference, month by month, in the proportion of the complicated cases in relation to the total number.

Sex Incidence.—Boys constituted 54 per cent of the 290 cases, girls 46 per cent.

Locality.—The 290 cases with sinusitis came from 56 different towns or villages. The county medical officer of health, whose comment was invited, replied that he could find no ruling factor.

Social Position.—This appears to have no bearing on the incidence of the condition, for the percentage of complicated cases was 22 per cent of a smaller series of tonsil and adenoid operations done in nursing-homes during the same year.

Age Incidence.—This is shown in Table III. So few cases fell in the last two age groups that the percentage figures shown are of little value.

TABLE III																
Age in years	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Per cent of total (1,779)	12	19	28	16	22	25	17	13	16	18	25	11	14	14	25	

Bacteriological Findings.—One single type of organism was present in 35 per cent of the cultures, while 2, 3, or 4 different organisms were present in the others. The most common single type of organism was *Streptococcus viridans*, which was found in 11 per cent of the total. *Micrococcus catarrhalis viridans* in 38 per cent of all the cultures, *Str. Staphylococcus albus* in 23 per cent, *Staph. aureus* in 17 per cent, haemolytic streptococci in 8 per cent, pneumococci in 6 per cent, *Bacterium coli* in 1 per cent, *Pseudomonas pyocyanica* in 0.7 per cent.

Progress in Tuberculosis.—(From the International Medical Abstracts and Reviews, Dec. 1947).

Childhood Type

A clearer concept is developing concerning the so-called "childhood type" of tuberculosis and its relation to tuberculin sensitivity and pulmonary calcifications. Not all calcifications are due to tuberculosis, and the question remains unanswered whether there is a loss in tuberculin sensitivity following the healing of known primary tuberculous lesions. If the primary complex is truly healed, does the child become tuberculin negative? If not, how long does tuberculin sensitivity persist?

Hardy (1946) selected 312 subjects (born between 1912 and 1930) who had had a primary tuberculous infection in childhood and who had been followed for at least seven years. There were 193 Negroes and 129 Whites. All had had at least one positive tuberculin test, and 87 per cent had known contacts. Follow-up examinations revealed that tuberculin sensitivity was remarkably persistent during the period of study but varied considerably with the degree of infection received in childhood. The greater the severity of the initial infection, the more persistent tuberculin sensitivity appeared to be. It is likely that if calcifications are present and the tuberculin test is negative, tuberculosis is not responsible.

Edwards and Hardy (1946), reveals that the degree of tuberculin sensitivity bears some relation to the prognosis. The less sensitive the response, except, of course, in moribund patients, the prognosis.

The age of the patient at the time of infection also seems to bear a significant relation to the prognosis. The opinion of Kendig and Hardy (1946) is as follows: "The infected infant may be able to overcome tuberculous infection if the adult contact can be promptly removed. If, however, the contact remains and the baby is subjected to a constant opportunity for more infection, there is much greater likelihood of a serious, or even fatal, outcome." All subjects who show a positive tuberculin test before the age of three years have active infection. In such children, indeed, the infection has hardly had time to become inactive.

Arrest of disease in childhood, as indicated by a calcified primary complex, may denote a truly healed lesion in the sense that the calcified lesions are no longer infective. Feldman and Helmholtz (1945) state as follows: "The failure to demonstrate the presence of living tubercle bacilli in 14 of 29 patients having childhood tuberculosis provides reasons for support of the belief that sensitivity to tuberculin in children may be transitory and that, in children whose tuberculosis is limited to the lesions of the primary complex, the continuation of the sensitivity to tuberculin is probably related to the infectivity of the tuberculous foci."

The age at which infection occurs appears to have a direct relation to the development of calcifications. Highand Zwerling (1946) noted that deposits of calcium were noted one to four years after the appearance of the lesion usually during the second and third years. More than three-fourths of the youngest patients developed calcifications, whereas calcium deposits were detected in only 2.4 per cent

of the cases in which the onset of the disease was between the ages of fifteen and nineteen years. The presence of demonstrable pulmonary lesions appeared to influence the subsequent development of calcifications. One-fourth of the patients who had pulmonary lesions subsequently showed calcium deposits.

Although tuberculosis is extremely serious in infancy, the disease is relatively mild later in childhood. The treatment of children with a primary complex, such as that afforded by a sanatorium has no effect on the development of progressive tuberculosis in later life.

Control

Diagnosis is a function of logic, and the diagnosis of chest diseases, especially tuberculosis, depends on the correlation of clinical, roentgenologic and bacteriologic studies. No X-ray machine can do this. The diagnosis of tuberculosis or its degree of activity should never be based wholly on the X-ray report of the chest findings. Hilleboe (1946) remarks that many persons have been labelled as tuberculous wholly on the basis of the X-ray findings. "This is scientifically unsound", "and . . . damage is done to people and to control programmes". A patient with suspicious X-ray findings should, at least, have a complete history, a physical examination and sputum studies before the X-ray findings are tagged with a specific label.

All the roentgenologist can and should do is to describe the type of shadows cast on the film; since shadows identical with those of tuberculosis may be cast by many diseases. Diagnosis should rest with the clinician, not the roentgenologist. In this connection, Rest (1945) has cited many cases in which non-tuberculous pulmonary conditions have been diagnosed as tuberculosis on the basis of the X-ray and the clinical findings. In every case, however, examination of the sputum was negative.

Bacteriologic Considerations

Dubos and Davis (1946) describe a modification of Kirchner's medium that is easy to prepare, as well as stable, and favours the growth of small inoculums. The mycobacteria grow diffusely throughout the liquid medium rather than as a surface pellicle. Positive human sputums (after treatment with sodium hydroxide) inoculated into such mediums yield typical diffuse growth. High agglutination titers for these new types of culture have been observed in some human serums. Foley "suggests that with reasonable care in their use, these new synthetic media can be invaluable in the laboratory diagnosis of tuberculosis."

Youmans (1946) used depth-growth techniques to study the culture cycle and growth rate of the tubercle bacillus. The growth curves so obtained showed either a lag phase, such as that obtained with other bacteria, or curves of direct growth not preceded by any lag. Such curves are especially valuable in that they afford the investigator a method for determining the degree of inhibition of various bacteriostatic substances.

Therapy

Antibiotics: Streptomycin continues to be a drug of promise in the treatment of tuberculosis. Corper and Cohn (1946) believe that this antibiotic

does retard the growth of actively multiplying tubercle bacilli. Hinshaw and his colleagues (1946) report that the drug as a "suppressive action" in man, but add that long study will be required to determine its optimal dosage and the duration of treatment in various clinical situations. Pfuetze and co-workers (1946) concluded that the action of streptomycin was merely suppressive, not tuberculocidal. In a case of tuberculous meningitis (Krafchick, 1946) complete clinical recovery was obtained with absolutely no residual neurologic abnormalities.

It should be kept in mind, writes Hilleboe (1947), that any antibiotic, even though effective against the tubercle bacillus, may be of little benefit to far-advanced cases, because irreversible processes have set in and, in most instances, the blood supply to areas of cavitation and other areas with extensive involvement has been cut off. Too much help should not be expected from an antibiotic in such advanced cases, even though its action is most favourable in minimal disease.

Some other antibiotic, or a combination of an antibiotic and chemotherapy, may prove ultimately to be the actual solution of tuberculosis management. Marshak (1947) found that California Spanish moss (*Ramalina reticulata*) can be treated chemically to yield a crystalline substance that is non-toxic for guinea pigs and appears to retard the progress of the disease in experimental infections. The possibilities of this compound in human tuberculosis remain to be explored. Smith and his colleagues (1946) found that Promin and streptomycin have a synergism that enhances the antituberculous action of each. The possible value of such a combination of drugs in human tuberculosis is also unknown at present.

Chemotherapy.—A relatively new bacteriostatic agent, glycerite of hydrogen peroxide, has been described by Brown and Slanetz (1947) as having tuberculostatic action in a weak dilution (0.1 per cent) and tuberculocidal action in a greater concentration (from 0.5 to 4.0 per cent). Since glycerol, itself, may inhibit the growth of tubercle bacilli however, and since cold abscesses occasionally heal spontaneously, controlled trials with this new bacteriostatic agent must be carried out before its role in the therapy of clinical tuberculosis can be ascertained.

The relation between chemical structure and tuberculostatic activity is of fundamental importance for the future development of more effective tuberculocides; but this relation is still not clearly understood. Youmans and Doub (1946) working on fifty-nine different sulfone compounds indicate that two para-oriented free amino groups are essential for maximum activity in the diaminodiphenylsulfone grouping. A new class of tuberculostatic substances, unrelated to the sulfones, has recently been described by Feinstone (1946). The parent compound is 5-amino-2-butoxypyridine, but the sodium formaldehyde bisulfite derivative is least toxic. They appear to be specific for the acid-fast group of organisms and have little inhibitory action on other bacteria.

Immunization

Ferguson (1946) considered the use of BCG vaccination in the hospital environment to have reduced manifest tuberculosis among negative reactors

by three-fourths. Vaccination with BCG was regarded as a safe, practical, convenient and reasonably effective method of controlling tuberculosis among young women in a tuberculous environment. In Denmark all children who are Mantoux negative and all newborn infants in a tuberculous environment are vaccinated intracutaneously. On converting to a positive tuberculin reaction, these children and infants have been permitted to associate with the source of infection at home. In Denmark, therefore, BCG vaccination has been subjected to a severe test, and its general acceptance in that country has been based on truly critical appraisal. The greatest incidence of infection was among the tuberculin-negative persons placed in a tuberculous environment. The vaccinated persons appear to be the best protected against tuberculosis. Holm's (1946) conclusion is as follows: "The vaccination gives considerable, but not absolute protection. It protects completely against the morbid phenomena accompanying the tuberculous primary infection and it also affords a considerable protection against genuine tuberculosis of the various organs, in particular, against phthisis.

Miscellaneous Topics

Psychosomatics.—The patients with tuberculosis, wrote Friedman and co-workers (1946), had many personality traits in common. These patients showed independence and efficiency which made them normally or better than normally adjusted in their economic, sexual and social spheres. They showed some resentment toward authority. They showed obsessive and compulsive characteristics and were optimistic individuals." Hartz (1946) points out that psychic reassurance after a thoracoplasty, and perhaps after any major operation, may be as valuable as sedatives and narcotics. Even in tuberculosis one should always remember that the patient, not merely his lungs, needs treatment.

Pulmonary Lavage.—Pulmonary lavage as a means of recovering tubercle bacilli warrants further investigation. Collection of the sputum is carried out in much the same way as the pharynx is anaesthetized for bronchography, and a cough reflex is then promoted. "Pulmonary lavage," says de Abreu, "is yet at the beginning of its application. It is a new method which needs long observation to determine definitely its harmlessness and efficiency."

Immobilization of both Lungs.—The provision of local lung rest by residence in the immobilizing pressure chamber devised by Barach (1940-46) promotes the process of healing and closure of cavity in some cases of advanced and moderately advanced pulmonary tuberculosis. This favourable response has been observed in cases for whom no other form of treatment was possible or who had been exposed to other types of tuberculosis therapy without benefit.

Ambulatory Pneumothorax.—Ambulatory pneumothorax may be used as a valuable adjunct to other measures for the control of pulmonary tuberculosis. If for some reason, a patient cannot or will not be admitted to a sanatorium, ambulatory pneumothorax may be indicated. "Delay in administering therapy while the patient is still in the treatable stage may alter the prognosis to an unfavourable one and result

in years of prolonged sanatorium care for the patient" (Rest, 1946). Wright (1946) commented that although ambulatory pneumothorax was not an ideal form of treatment, there was obviously a great need for the method under such conditions.

Bronchography.—Boyer (1946) points out that whereas bronchography should not be used to a routine procedure in tuberculous patients, it is often of value in revealing the source of positive sputum. This is particularly true in cases in which thickened pleura, empyema and thoracoplasty obscure the pulmonary pattern.

NEWS AND NOTES

Copy of a letter sent to the Director-General, Health Services, India, New Delhi, dated Calcutta, 17th December 1947, by Capt. Tara Singh, President of the I.A.M.C. Officers' Association.

On behalf of the ex-I.A.M.C. Officers' Association I have the honours to place before you the grievances of East Punjab ex-I.A.M.C. officers.

1. Status and Pay :—

Ex-I.A.M.C. officers of the P.S.M.S. were recalled from military duty at the end of war before their age and service groups were due and placed in the old humiliating subordinate position with the same rank and pay. According to standing orders approved military service is to be counted double for pay and promotion, East Punjab Government has not given effect to this in case of ex-I.A.M.C. officers. No pay has so far been fixed for them, they have been asked to accept Rs. 80 p.m. provisionally which they have not seen their way to draw so far. In view of their army services in the I.A.M.C., the knowledge and experience gained as army medical officers it is requested that the East Punjab Government take immediate steps to increase their pay to a grade of Rs. 250 p.m. to Rs. 550 p.m. with a gazetted status at par with the graduates (as in the I.A.M.C.). The East Punjab Government may also please be approached to declare their policy regarding the status and position to be accorded to the P.S.M.S. ex-I.A.M.C. officers undergoing the condensed graduate course on rejoining service after obtaining their degree. From Punjab about five hundred Licentiates joined the I.A.M.C. while the number of graduates was only two hundred. Most of the graduates ex-I.A.M.C. have been absorbed in the regular army medical services and in the P.C.M.S. It is requested that all seats in the P.C.M.S. East Punjab and a proportionate number of seats in the army medical services may be reserved for ex-I.A.M.C. officers after graduation for the next few years till they are all absorbed.

2. Departmental Duty :—

According to the standing regulations army service should be taken as departmental duty hence ex-I.A.M.C. officers of the P.S.M.S. may not be posted to Canal and Jail dispensaries in East Punjab.

3. Release benefits :—

Many ex I.A.M.C. East Punjab officers although released about two years ago have not been paid war gratuity and release leave pay F.C.M.A. Poona and Accountant, General—East Punjab, may be asked to expedite payments.

4. Temporary P.S.M.S. :—

Ex-I.A.M.C. officers of the temporary P.S.M.S. should be confirmed forthwith including those detailed for the condensed graduate course.

5. Ex-I.A.M.C. Officers displaced from West Punjab :—

East Punjab Government may be asked to make arrangements about the resettlement of all ex-I.A.M.C. officers displaced from West Punjab. Some ex-I.A.M.C. officers of the P.S.M.S. from West Punjab have not been given any posting orders in East Punjab so far. Steps may be taken to post these officers in East Punjab or else where in India and or arrangements may be made by the Government of India for their resettlement.

6. Honorary Military rank :—

The East Punjab Government may be asked to pass immediate orders to the effect that the honorary military rank of ex-I.A.M.C. officers be mentioned in Government official correspondence, orders and communiques.

7. Condensed Graduate Course Ex-I.A.M.C. :—

(A) *Number of seats for East Punjab.*—Only forty ex-I.A.M.C. officers from East Punjab are undergoing the condensed graduate course under the Government of India resettlement scheme for ex-army medical personnel. No officers have been admitted at the Glancy Medical College, Amritsar this session while twenty-seven officers are being admitted at the Lake Medical College, Calcutta Session December, 1947. On account of disturbances a large number of ex-I.A.M.C. officers displaced from West Punjab are in need of resettlement. It is requested that the Government of India arrange for the allotment of increased quota of seats for this course at the Lake Medical College, Calcutta, or other colleges in India this year and these displaced ex-I.A.M.C. officers may be given additional financial assistance over and above that proposed for others.

(B) *Duration of the course.*—It is regretted that the recommendations of the Indian Medical Council about the condensed graduate course for I.A.M.C. were never revised in the light of the work shown by the licentiate officers in the I.A.M.C. in the latter years of war. As seen in practice there does not seem any necessity for a preclinical course of six months. Applied aspects of the preclinical subjects can be easily accommodated in a twelve months course. A long course is a practical difficulty and is not necessary. The majority of ex-I.A.M.C. officers cannot afford even such a shorter course because of family circumstances. There is no reason why an ex-army medical licentiate should not be allowed to sit for the degree examination without having to undertake a regular course in an institution. Many ex-I.A.M.C. officers will come out with flying colours in such a test.

(C) *Hygiene and Medical Jurisprudence.*—Ex-I.A.M.C. officers have undergone extensive training in Hygiene in the army. Moreover the Syllabus prescribed, the teaching and the standard of examination for the graduate and the licentiate course is the same for Hygiene and Medical Jurisprudence. There does not seem any utility in training or examination in these two subjects. It is requested that the Indian

Medical Council may be approached to delete these two subjects from the post-graduate curriculum.

(D) *University Examination*.—Public in East Punjab is accustomed to the M.B.B.S. degree of the Punjab University. It is requested therefore that after finishing the prescribed course it be left to the choice of the students to take the examination either at Calcutta University or the East Punjab University. This is in keeping with the recommendations of the I.M.C. Moreover the difficult problem of the Punjab students dealing with Bengalee-speaking patients in the qualifying examination cannot be ignored. Government of India may be requested to take that matter up with the East Punjab Government and the East Punjab University as early as possible so as to enable the batch of students finishing the course in May 1948 to avail of this facility. If necessary this college may be affiliated to the East Punjab University.

8. Financial Concessions Condensed Graduate course ex-I.A.M.C. :—

No order regarding study financial assistance have been passed by the East Punjab Government for ex-I.A.M.C. officers detailed by them for the Condensed Graduate Course. Most of the students have been adversely affected by the Punjab disturbances and require immediate financial assistance. It is all the more essential that the East Punjab Government may be requested to give enhanced priority to the matter. The ex-I.A.M.C. licentiate officers of the P.S.M.S. are entitled to the following pay and allowances in addition to the other proposed study financial concessions. As sanctioned by the Governments of other provinces.

- (1) Half average pay for the last 36 months or for the last 12 months whichever is greater.
- (2) Cost of living allowance.
- (3) Study allowance of Rs. 3 and Rs. 5 per day for ordinary and presidency towns respectively. The above pay and allowances may be made available to East Punjab officers concerned at an early date.

Owing to the high cost of living and the adverse effect of Communal disturbances in the Punjab the proposed boarding and lodging allowance for non-service officers may be at least Rs. 1,800 per annum.

I trust our case will receive due and sympathetic consideration at your hands.

I have the honour to be,
Sir,

Your most obedient servant,
TARA SINGH, Captain,
President.

Ex.-I.A.M.C. Officer Association Pb.
Dated Calcutta, the 17th Dec. 1947.

1. Copy to Minister of Health,
Government of India, New Delhi.
2. Copy to Minister of Health,
East Punjab, Simla.
3. Copy to I.G., Civil Hospitals,
East Punjab, Simla.
4. Copy to the Editor, "Indian Medical Journal," for publication please.

Note regarding the adoption of international forms of certificates for vaccination against smallpox and inoculation against cholera and yellow fever.

According to international requirements, certificates of inoculation and vaccination against cholera, smallpox, typhus and yellow fever must be in the internationally prescribed form. Copies of prescribed forms can be obtained from the nearest Administrative Medical Officer. These forms should be filled in by the passenger's doctor very carefully to see that all items have been accurately completed as any defective or incomplete answers to the various items may result in the certificates not being recognized by the countries of transit and destination, and the passenger may, in consequence, be placed in quarantine. It is very important, for instance, to put in the 'origin and batch number' of vaccine used and in the cases of smallpox vaccination to record the date and the result of inspection of vaccination in one of the terms prescribed at the bottom of the certificate. The prescribed forms also show the minimum and maximum validity periods of such certificates and passengers should ensure that their certificates are within the prescribed time limits.

2. Considerable difficulty has been experienced recently by Indian passengers going abroad on account of their inoculation and vaccination certificates being found defective by the countries of destination. It is therefore essential in the interest of the passengers themselves to see that they carry with them certificates on the prescribed forms which have been carefully completed by their doctors.

3. As regards certificates of inoculation against yellow fever, the medical profession and the public are hereby warned that no account of certain technical difficulties in the storage and administration of yellow fever vaccine, this vaccine is not available to the doctors or the public and certificates cannot be issued in India by anyone except by the following 5 (five) Government Centres of inoculation:

1. Haffkine Institute, Bombay.
2. All-India Institute of Hygiene and Public Health, Calcutta.
3. King Institute of Preventive Medicine, Guindy, Madras.
4. Central Research Institute, Kasauli.
5. The Provincial Public Health Laboratory, New Delhi.

Vaccinations should be arranged, by appointment, with the nearest of these centres where internationally recognized certificates on the prescribed form will also be issued. The Government of India propose to take legal action against any unauthorised issue of yellow fever certificates. The medical profession are therefore warned not to issue yellow fever vaccination certificates under any circumstances whatsoever and to direct passengers requiring such certificates to one of the above-mentioned centres.

LETTERS TO THE EDITOR

War against the Licentiates

I shall be much obliged if you would kindly publish the following in your much esteemed paper.

The Asansol Mines Board of Health and the Chief Sanitary Officers, Asansol, have taken up a sinister drive to eliminate the Licentiate Doctors of the Colliery service from the Coalfield and as such have submitted a suggestion of that effect to the Labour Welfare Board, Dhanbad, which is directly responsible for the welfare and progress of the labour in coalfield.

We fail to understand, why responsible body like Asansol Mines Board of Health and persons like the Chief Sanitary Officer could jump into enthusiasm to declare a war against the Licentiate doctors of the coalfield when their own house, I mean the Board itself is packed with bulk of licentiates and we also fail to understand why the said body and persons could so easily arrive at a clear cut destructive policy which might involve an All-India issue, when the Central and Provincial National Governments have still been puzzled to tackle this problem and also when the West Bengal Government have directed the Medical Schools to work double shift to produce more doctors to meet the country's demand.

Naturally, we are inclined to believe on facts and reasons that such a move has not received or will not receive the approval of the Provincial and Central Governments. Hence, it stands to reasons and logic if the Asansol Mines Board have failed to secure the approval of the Central and Provincial Governments, may we ask on whose authority they have made such an attempt which is likely to affect All-India issue. On the other hand, if the Central or Provincial Governments have extended their approval to this, may we ask the National Central and Provincial Governments the correct Government policy with special reference to West Bengal Governments directive to working of double shifts of the Medical Schools?

The part of the country affected in general and the Licentiates of colliery services, in particular, will be grateful to receive a proper reply through your paper, from the quarters concerned.

The Secretary,
Colliery Medical Officers' Union (Sitarampur).

Days of Resolutions are gone

I shall be highly obliged if you kindly publish the following letter in the Indian Medical Journal and allow me to get necessary instruction from the proper authority :—

We are really very fortunate to see the dawn of our liberty. We are grateful to the leaders who suffered a lot and brought this independence for us.

But how many of us really feel our liberty? We got our Association but in fact who is there who think about us?

Since 1938 I am working in a Tea Garden. I joined the Army in 1940 and was released as Captain, I.A.M.C. in 1945. I had compression fracture of my 12th Dorsal vertebra while in Iraq in 1941. Since

my release I applied a number of times to the Bengal Government for provincial service and so many times to the Army authorities for compensation for the fracture which I had while in active service. But up till now, I could not get any favourable reply from any of them. Could that possibly happen to any British Officer? The State would undoubtedly provide for them. But what our national Government is doing—do they ever think about our troubles?

In a tea garden any white fellow who was only a 2nd Lt. in the army, and had no tea garden experience can come as an Assistant Manager drawing high pay with all sorts of comforts. But we, though were captain in the army and had previous tea garden experience, could not get more than Rs. 120 as starting pay fixed by the I.T.A. I have not even got proper quarters to live in.

35th Conference of the A.I.M.L.A. is nearing by—I am waiting to see how our leaders want to lead us. The days for passing resolutions after resolutions are gone. I hope the leaders will honestly work to improve our lot.

Unfortunate Member,
Capt. I.A.M.C. (Retd.)

Medical Service in Kathiawar States

Recently, I came across the news that Jodhpur Government has revised the grades for Licentiates—Rs. 75 to Rs. 250 p.m. Let me congratulate the authorities concerned, for it is of interest to all concerned with Indian States. I recently toured Kathiawar States and I was wonderstruck by the poor pay of Medical Officers in these places. First there is no difference between qualified and unqualified at some places. Dirty politics mar the responsibility. At one place pay was Rs. 50-5/2-75. It was raised with great difficulty to Rs. 50-5-100 and after a great scarcity of doctors it came to Rs. 75-5-100. At other places it is Rs. 60-5-100 and so on. May I suggest a strong movement and deputation by high and influential officials of the Association? Railway Medical Officers are not out of this trouble at many places. Over and above the pay, other difficulties are uncountable. At present an ordinary carpenter gets Rs. 3 to 3½ per day. Is it not too degrading for a doctor to get less than him? Practice in private is an argument. Is it a guarantee for all?

—“A Friend of the Afflicted”

Just out! Just out!

AIDS TO HUMAN PHYSIOLOGY

By Dr. S. N. CHAKRABARTI.

Third Edition—Revised, rewritten and enlarged with 22 Coloured plates, Diagrams and Charts.

An invaluable guide-book for Medical Students appearing for their examinations. All possible questions—written, oral or practical—on Physiology with full and lucid answers. It is a students' VADE MECUM.

Price Rs. 8. Postage extra

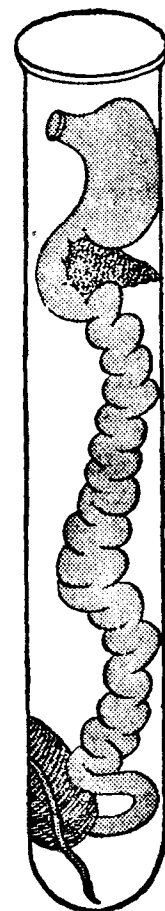
PIONEER BOOK Co.,

18, Shama Charan De Street, CALCUTTA 12

Whenever predigested food is required, prescribe

CASEINONE

The predigested Milk-Protein For oral use in protein-deficiency.



CASEINONE is the enzymic digest of casein, the milk-protein, containing various aminoacids suitable for immediate absorption, thus sparing the digestive system.

A NUTRIENT tonic and dietary supplement of great biological value in conditions of protein deficiency, hypoproteinemia, and proteinuria resulting from numerous causes.

HIGHLY
PALATABLE

Each fl. ounce of CASEINONE contains
(ALCOHOL 15%)



BOTTLES OF
4 FL. OZS. & 1 LB.

Protein Hydrolysate (enzymic digest of milk-casein)	7.5 gms.
Proteolysed liver	1.5 "
Calcium Gluconate	0.3 gm.
Ferri Peptonas	75.0 mgms.
Thiamine Hydrochloride (B ₁)	3.0 "
Riboflavine (B ₂)	1.5 "
Pyridoxine Hydrochloride (B ₆)	1.5 "
Calcium Pantothenate	1.5 "
Niacinamide	15.0 "
Ascorbic Acid	30.0 "
Vitamin-A	5000 I. U.
Vitamin-D	500 I. U.
Elixir (Palatable Base)	Q.S.

ALEMBIC CHEMICAL WORKS CO. LTD., BARODA

AL 876

MEDICO-POLITICAL SUPPLEMENT

TO

THE INDIAN MEDICAL JOURNAL

Vol. 6, No. 3]

MADRAS

[March 15, 1948.

CONTENTS

	Page		Page
LEADING ARTICLES:		Presidential Address	34
I Render Account	27	By Dr. M. D. Pustake	
Amalgamation	30	Annual Report	37
PROCEEDINGS OF THE 35TH CONFERENCE OF THE ALL-INDIA MEDICAL LICENTIATES' ASSOCIATION (Held at Bombay during 26th and 27th December, 1947):		By the General Secretary	
Welcome Address	31	Resolutions passed	40
By Dr. A. D. Mastakar		A Short Account of the Conference	44
Inaugural Address	32	By the General Secretary, A.I.M.L.A.	
By Dr. Jamiat Ram B. Desai		Note worthy Statements made at Medical Conferences, 1947, with Comments	45
		By Dr. T. S. Tirumurti	

LEADING ARTICLES

I Render Account

With this issue my responsibility as Managing Editor of the Journal ceases, as I would be handing over charge to my colleague Dr. A. N. Roy of Calcutta. I wish him good luck in this work which has been entrusted to him by the last Bombay Conference of our Association.

Some Obstacles overcome

When I took over charge in May 1935, I naturally required some advance of money from the Association to start the *Journal* work. I applied for a small advance but the then President said that since I promised to make the *Journal* self-supporting no such advance could be granted! Wonderful logic! But as I was more concerned about the discharge of my obligations than to fight for my rights, I spent my own money for the first three months for the purchase of paper and payment of printers and then recovered the same from the *Journal*. From May 1935 to March 1948, thanks to the abundant Grace

of God, the *Journal* has been self-supporting—not only self-supporting but also was making an increasing net profit annually.

Then I had to overcome the local opposition by a few jealous patriots of the Association who, taking advantage of my preliminary mistakes of omission and commission due to my inexperience at that time, wrote and told a lot of things against my capacity to write well and to manage the work of the *Journal*. This was a blessing in disguise. I was determined to give no quarters to these impatient fault-finders, not by fighting them verbally or personally but by applying myself to work diligently and assiduously. The opposition dwindled down as the *Journal* began slowly to make its head-way financially and professionally. But the opposition did not wholly die out for the simple reason that it was not impersonal, went underground and was peeping its ugly head off and on. I refrained from being personally annoyed or deflected from my duties, because, I believed in the ultimate triumph of silent and honest

work which, as the adage goes, is its own reward. I never cared for praise. Likewise I never worried about unfriendly abuse and unbecoming criticism.

The Triple Objectives

Despite such inauspicious beginnings, I determined and defined my goal and set myself to reach it—slowly if necessary, quickly if possible—with one-pointed attention and single minded devotion. And this goal was made up of three objectives: firstly, the development of the business side of the *Journal* so as to make it self-supporting without depending on its subscription income and, if possible, yield some profit besides; secondly, punctual publication on the 15th of every month; thirdly, professional improvement so as to yield some useful information and instruction to its readers. Thank God, the first two has been attained—more than my expectation—and the last one to a very large, though not to the desired, extent.

Business Output of the Journal

When I took charge of the *Journal*, its annual advertisement income was not more than about Rs. 8,000 insufficient to meet the cost of establishment and of *Journal* production.

Most of the prominent and paying advertisers withdrew their advertisements owing to irregular publication and other causes. My persuasion and promise that under new management, publication would be regular and their requirements will be carefully attended to fell flat on them. So, I allowed them to withdraw their advertisements. In the course of a few months, I was able to secure new advertisers, and the old ones began to approach me with their desire for renewal. This was entirely due to the strict regularity in publication and my meticulous care to satisfy the needs of the few advertisers. Thus it was possible for me, even at the end of the first year of my charge, to support the *Journal* by its own income, and, what is more, to make a small profit of Rs. 659 in 1935-36, Rs. 2,000 in 1936-37, Rs. 3,000 in 1937-38, and so on. Thus every year showed increasing income and profit and during 1946-47 the gross income reached the peak of Rs. 72,000 and net profit amounted to nearly Rs. 20,000. The total net profit, most of which was remitted to the Treasurer, during the whole period of my charge was approximately Rs. 65,000. This, I believe, is a phenomenal achievement for a medical

journal, particularly in our country where medical journalism is still in its infancy.

Total balance of Association funds at the end of 1935-36 was Rs. 47,037, in 1939-40 Rs. 71,000 and 1946-47 about rupees one lakh and over. This increase from Rs. 47,000 in 1936 to more than Rs. 1,00,000 in 1946 in the annual balance of the Association money is wholly due to the profits accrued from the business of the *Journal*, inasmuch as the subscription income, though increasing every year, was wholly spent in the administration of the Association. In fact, it is not unusual that every year's deficit budget would become a surplus actually, and this is due to the *Journal* earning more than actually budgeted thus covering the deficit and resulting in a surplus.

Paper Control order of April 1943, threatened to throttle the income of the *Journal*. By virtue of this order the Government of India prohibited it from publishing not more than 12 pages, out of which not more than 6 could be occupied by advertisements. I protested against this order and the *Journal* was allowed after months of negotiation to print 20 pages, out of which only 10 pages could be legally given to advertisers. This meant virtually giving up of 90 per cent. of advertisement revenue. It was impossible at the then current advertisement tariff of the *Journal* to meet even a fourth of the cost of production and establishment charges with only 6 or 10 pages of advertisement running. I adroitly raised the tariff from Rs. 50 to Rs. 300 per page per insertion and appealed to some of our advertisers to stand by the *Journal* in its hour of crisis. I must take advantage of this occasion of my handing over charge to publicly express my thanks to those who stood by me and helped me to tide over the crisis. They are: M/s May & Baker (India) Ltd., Ciba (India) Ltd., M/s Burroughs Wellcome & Co. Ltd., M/s W. T. Suren & Co., and a few others. When the Paper Order relaxed I reduced, according to the promise made, this high rate of Rs. 300 per page per insertion to Rs. 150 which is now the current rate.

Regularity of Publication

Not once have I failed to publish the *Journal* on the 15th of every month, unless that day happened to be a postal holiday, during the last 13 years of my charge. The secret of success in this work lies in the

advance editing of manuscripts and in co-operating with the press by returning the proofs within 24 hours. My press always appreciated this co-operation and made it a point to see that the *Journal* was published on the scheduled date. My thanks are due to the Teachers' Publishing House and the Madras Publishing House, who printed our *Journal* from 1935 to 1937 and 1938 to 1948 respectively.

Professional Status of the Journal

Although there will always be room for improvement, yet I may say with justifiable pride that till 1942 the *Journal* maintained a good standard of medical publications. I arranged for paid foreign correspondents in London, New York, Toronto, Istanbul and Berlin, and they gave the *Journal* very good and reliable medical news. When the war broke out in 1939, this part of my activity fell through for obvious reasons, and I have not revived it after the termination of the war, mainly due to paper scarcity. I also published a large number of special numbers taking a single disease or a subject for each Number: they are: Cerebo-spinal Meningitis, Leprosy, Whooping Cough, Dysenteries of India, Nutrition, Ante-natal care, Medical emergencies, Surgical emergencies, Obstetric emergencies, Blood pressure, Blood transfusion, I.A.M.C., History of the Licentiate's Association, and National Health Planning. Each special number was an exhaustive and reliable contribution on the subject under discussion. It was so acclaimed by the leading Medical Journals such as *The British Medical Journal*, *The Lancet*, *The Medical Officer*, London, and *the Prescriber*, Edinburgh. Some of the *Journal*'s editorials and articles were reviewed, commented upon and extracted by its Indian and foreign contemporaries. But after 1942 there was a noticeable fall in the standard and number of contributors. I think this was mainly due to recruitment of medical men to the war and the aftermath of the war, such as unemployment and economic distress, which gave them little leisure to write articles. During the last few months there has been again an improvement and I hope it will show further progress and, what is more, maintain it in future.

Between the years of 1938 and 1942, I issued medico-political supplements to the *Journal* with a view to appraise its readers of the progress and developments in medical

organisation in all its social, political and administrative aspects that are taking place in our own country and outside. This is the only medical journal in our country which has dared to enter this field and I have received numerous letters from medical men, here and abroad, appreciating these supplements. But unfortunately owing to paper scarcity during and after the war, these supplements have to be discontinued. I have however the satisfaction that I have been able to revive it last year and I hope my successor will continue it with redoubled vigour.

Other Services

It may be of some interest to the readers if I tell them that, even before I took up the *Journal*, I had the good fortune of having served the Association in other spheres of its work. As its finance secretary, I was instrumental in collecting all the assets of the Association, which were till then mostly in the personal names of the office-bearers, and transferring them to the Imperial Bank, Delhi, to be operated only by the members of the Property Committee on the strength of specific resolutions of the conference or the Standing Committee. All the office-bearers were instructed to hold accounts in the name of the office they hold and not in their own names. Then I introduced various forms and financial regulations, so that the bills may be presented properly and checked effectively. Even before I was entrusted with this work, I was asked to frame suitable and exhaustive rules and regulations for the Association. This I did, and today these form the bed-rock of the Association.

My Thanks

I am highly thankful to the Association and to its workers for having entrusted me with such a variety of useful and responsible work during the last 16 or 18 years. I hope I have discharged my duties with some effect and satisfaction. Particularly fortunate I was in having been elected continuously for the last 12 years as the Editor of the *Journal*—longest in record in the history of our Association. I have always steadfastly stood for the ideals maintained and transmitted to us by the late Drs. Ramchandrier and Sarju Prasad. My failings have been many and I ask for the indulgence of the Licentiate of India and its leaders in different provinces. But I have served them and their Association with spontaneous sincerity and unremitting devotion.

be permanent must get the University degree. I am not at all against a medical man obtaining higher diplomas and degrees to improve his knowledge and lot, but to insist on conditions like this, conditions which were never before mentioned, much less imposed, seems to me to be a violation, a breach of promise, which the then Government gave us and for which the Association worked and gave its best. This grave injustice should be immediately remedied now that we have a Government of our own. The principles of equality and promotions by merit alone should count; if during war, this principle could be followed, I do not see any reason why in peace time it cannot be maintained.

Coming next to the services we were again definitely given an assurance by two successive D.G., I.M.S. officers that our men returning from war service will be better placed in life. But what do we see! The same old pay, same old status in service; all their high hopes have been shattered; the promises of better treatment have all remained as scraps of paper. They are asked either to go back to their old jobs or enjoy the supreme bliss of independence that is ever obtainable from unemployment. It is even now not too late to mend matters and I earnestly appeal to the Government with all the emphasis at my command to restore confidence in us.

Regarding the unification of services, the Madras Government has as usual with its other medical problems taken the initiative and the Minister of Health convened a conference of representatives of the Government, the Provincial Licentiate Association and Indian Medical Association and has recently decided (1) that Civil Assistant Surgeons should be designated as Civil Assistant Surgeons, Class I;

2. That Sub-Assistant Surgeons should be designated as Civil Assistant Surgeons, Class II and remain non-gazetted;

3. That promotion from Civil Assistant Surgeon, Class II to Civil Assistant Surgeon, Class I, shall be treated as a promotion to a selection grade and be on the following conditions:—

(i) 15 years satisfactory service as Civil Assistant Surgeon, Class II under Government service for licentiates, and (ii) not less than five years of service under Government for medical graduates.

4. That the posts of Civil Assistant Surgeons, Class I in the King Institute, Guindy and the Senior Assistant to Chemical Examiner to Government, be brought under the scheme of appointment of Supernumerary Civil Surgeons.

(This order simply changes the designation. The compartmental system still remains, and not one Licentiate in service has been, or could be, benefited by the order.—Ed. I.M.J.)

I would therefore earnestly urge on the Bombay Government and other Provincial Governments to follow suit in this much needed reform, after consulting the independent medical profession.

Speaking of the Indian Medical Council Act I should say that the amendment of the Act should be taken up straightaway, now that the question of reciprocity with British and other foreign Governments could be more effectively tackled. We should have one composite register in which all medical men

registered in the provinces should be enrolled with equal rights and privileges. Now that Dr. Jivraj Mehta is the Secretary to the Minister of Health of the Central Government, I hope our desire will be fulfilled much earlier as he has been strongly supporting this move.

Lastly, medical education in the country should be uniform and all post-graduate qualifications should be granted by the University only. All other institutes issuing similar diplomas should be scrapped.

In conclusion, friends, I am sure, you will all join me in conveying our gratitude to our revered Dada, the oldest and the only living founder member of our Association who has very kindly consented, at our request, to inaugurate this Conference and give his blessings for its success.

I am sure it would extremely gladden his heart to see the growth of the Association from its humble beginnings to its present status and on the verge of fulfilling its mission. May he live long to see his life's dreams that the licentiates get their respectable dues from their colleagues, the Government and the public.

I would now request you, Dada Jamiatramji, to inaugurate our Conference.

INAUGURAL ADDRESS

BY

Dr. JAMIATRAM B. DESAI.

Ladies and Gentlemen,—

It is with feelings of profound satisfaction and pride that I hasten to perform the pleasant function of inaugurating this Conference, the 35th Session of the All-India Medical Licentiates' Association. I am, indeed, thankful and grateful to the Reception Committee for having thought of me as the one suitable to perform this function. I consider it a greatest compliment given to me by my Bombay friends, I believe, for my past humble services, rendered to our mother Association, and thereby giving me one more opportunity to serve the Association, so dear to me even at this age of mine. It is a happy augury of times, and it is auspicious, indeed, that this celebration of our annual function follows the wake of freedom of our country. Let us all, Ladies and Gentlemen, send forth our humble prayers to the All-Merciful Providence for this liberation from bondage and slavery and pay homage to the Apostle of Non-Violence for having wrought this miracle by his selfless suffering and sacrifice. But our jubiliations and rejoicings are certain parts of the country, in the shape of riots, arson, murder, internecine feuds and destruction of property resulting in thousands of our countrymen perishing and being rendered homeless and destitute. Let me assure you that this ill-will and fratricide are born out of gross ignorance and superstition which must perish by themselves as evil consumeth evil resulting in an era of tranquillity and peace. Our sympathies go towards the suffering and the bereaved and we extend our hand of help and co-operation to them.

Brief History

I do not find sufficient words to express my joy when I see the baby born on the evening of the 6th of July 1906, in my own quarters in the compound of the Parel Government House, has so far grown and attained the age of 41 years. It is strong in body by upwards of 200 branches and more than 6,000 members on its role.

At the outset, let me state again that my joy is unbounded on this occasion inasmuch as the Almighty has vouchsafed unto me the span of life and willed that one of its oldest workers and founders should stand before you to recapitulate his experiences and memories of the past, which bristle before him, about the birth of the Association. More than four decades ago, it was destined that small group of enthusiasts in this great city of ours—the Gateway of India—should have started this organisation by the impetus given by the relentless and untiring labours of my late lamented revered colleague and Guru Dr. P. S. Ramchandrier, who with his able lieutenants sowed the seed of this biggest and oldest medical organisation in the country. Those few colleagues number a handful, Dr. Jaitaram Pandya, Abdul Razak and my humble self, who gathered together fifteen other comrades, to form the first batch of members of whom I am the only surviving link. Since then, I have been in close touch with its activities and I am now in the position to catalogue its achievements ever since its origin up to the present moment. My head is full of the salient features and developments of this Association that it is well-nigh impossible to dilate on them except taking a bird's eye view of the same, touching the main issues. I shall be failing in my duty if I should not place on record the invaluable and distinguished services rendered by the giants of old, in their various capacities for the uplift and progress of this organisation. I may, in passing, mention a few names worthy of note and unforgettable apart from a great many others, who have done equal and signal service. They are Dr. R. V. Bapat of Kolhapur who as the Editor of the Hospital Assistant, continued the fight independently while the Hospital Assistants of Agra formed a separate organisation styled the "Agra Medical Club". In the province of Madras there was the Madras Presidency Hospital Assistant Association, one of the chief founders of which is with us to-day and present here Dr. D. V. Venkappa. The genius of Dr. Iyer merged these organisations into an All-India body. The names of others whom I could not forget and who had rendered significant services in their sphere of activities are Drs. Anant Shantaram Malve, N. R. Karandikar, Ramrao Golvelkar of Bombay, Rai Bahadur Dr. Sarju Prasad, Drs. Saranbhani, Vyas and Khandekar of Indore, Rai Sahib Dr. Ram Narainlal and Dr. Sharma of U.P., Dr. Kunj Beharilal Verma of Meerut, Drs. Satkari Ganguli, P. C. Roy, A. D. Mukerji of Bengal, Rai Bahadur Dr. Hariram of Delhi, Rai Bahadur Dr. Mathurdas, Rai Sahib Khazanchand, M. L. Kapur and Gyanchand of Punjab, Drs. K. G. Lohakere and Dr. Sathaye of Poona, Dr. U. Narayanrao of Bombay, Drs. U. Ramarao, and Rai Bahadur Keshav Pai of Madras, Dr. Joseph Benjamin of Ahmedabad, Dr. Brahaspati of Ranpoor, Dr. Rochiram Amesur and Babu Balvantsingh of

Karachi and our present Editor Dr. A. Viswanathan. There are others unknown, silent, and unostentatious workers chief of whom can be mentioned, the late Dr. T. R. Damodaran of Mysore who was always found in company with the late Dr. Iyer and whose memoirs written in such striking, humorous and forceful style, still find a place in the records of the Association, which have not, unfortunately, seen the light of day. Along with Dr. Damodaram, I was the accredited Joint General Secretary for a number of years to the late Dr. Iyer, so much so, we were the twin workers alongside of the latter as General Secretary. I may be pardoned if there should have been any omissions, as each province has a galaxy of workers to its credit as office bearers. Let me bring before you the last words of our revered founder late Dr. Iyer "Take care of our Association." He died a martyr, a penniless man, and sacrificed his all for the cause of the Association.

Course of Study and Uniform Standard of Medical Education

The increase of the course of study in the medical schools from three to four years, then from four to five years in some provinces, and finally the closure of medical schools in the majority of the provinces brought the licentiates on a par with their graduate brethren. In fact, the solution of the varied medical problems confronting the profession lay with this premier medical organisation. Another great feature of this organisation has been the significant part played by the officers of the Indian Medical Service in shaping the destiny and future of this Association which was made use of during the periods of the two great World Wars—I and II, apart from other distinguished services rendered during epidemic, famine and earthquakes, coupled with their onerous duties discharged for the relief of the suffering and the sick. The climax was reached during the last World War II, when the Licentiates showed their prowess and skill in the several sectors of the War and particularly in the Middle East and Egypt, which gained for them the Indian Army Medical Corps, wherein they were awarded the King's Commission, and treated on the same basis in regard to their rank and status with the rest of the profession. I am proud to state, Ladies and Gentlemen, that some of our comrades have distinguished themselves in getting the Military Cross, whilst others names were mentioned in Despatches.

Indian Army Medical Corps

But friends after the termination of the last War the demobilized officers of our class are neglected. All the sweet promises and assurances given by the Government to our Association, and the recruiting officers, have not been fulfilled. Our men had served the country at the risk of their lives and they deserve due justice.

They have been denied the grant of permanent commissions inasmuch as that they have been asked to obtain a degree, Licentiates have still no place as officers either in the Reserve of officers or the I.T.F.M.C. (Indian Territorial Force Medical Corps).

[March, 1948]

Civil Medical Service

These are no longer what they had been previously, but not quite adequate and justifiable in the matter of emolument and salaries offered, and the still existing water-tight compartments give rise to a lot of discontent and differences. There should be one Provincial Medical Service and admissions to this service should be by competitive examinations only. All qualified medical men should be given the chance of candidature for all Government medical appointments. I hope and trust this Conference will devote its attention on measures needed for the unification of the services.

Indian Medical Council

It is a well-known fact that this Council was ushered in the face of great opposition from the entire profession represented by the two premier Medical Organisations—the Indian Medical Association and ours. Year in and year out on the 20th of September the protest is going on against the existence of this Council, which excludes from its purview the majority of the profession, the Indian Medical Licentiate, who are statutorily registered medical practitioners in the Provincial Medical Councils. You cannot think of a greater injustice done to the profession. It is up to the leaders of the Medical profession of our country to effect a suitable amendment of this Act. This Council, as at present, cannot be claimed to be Indian in outlook, Indian in its aspirations and Indian in the real sense of the term, when it has not recognized the Indian Medical Licentiate who form the majority of the Indian Medical profession. Now that our country is in the hands of the Popular Government and our worthy leader and proved administrator Dr. Jivraj Mehta is the Director-General of Medical and Health Services, I am sure that it will not take much time to have the Act amended, as desired by us.

The Living Present and the Future

Ladies and Gentlemen, I have almost come to the very end of my address and before I close, may I seriously put the question to you "Is there any use of continuing this sectional organisation any further which has almost served its purpose"? It is now high time that the Indian Medical Association, and Licentiate Association be amalgamated. There remains no need of having two separate Associations any further. The three objects for which our Association was started are almost achieved, and what remains to be done further, will be carried by the amalgamated single medical organisation of our country, which will be the mouth-piece of the organised profession. Let us not have any more divisions amongst us, but only keep in view our country's good for the relief of human suffering, and the promotion of the scientific knowledge abreast of the times. I would, therefore, advise you to close up your ranks and merge with the Indian Medical Association, which is making rapid strides and which would uphold the dignity and integrity of every medical man who happens to be its member. Please ponder over the situation and pass a suitable resolution making the necessary safeguards for this happy consummation. In this unity lies our salvation: segregation and isolation any further will only tend to stagnation and gradual deterioration. I beseech you all, therefore, to do your best.

Our Funds

If this burning problem of amalgamation is solved, the funds of our Association then requires a careful consideration for disposal, in a manner worthy of the cherished ambitions of its Founders, and in the light of the Resolutions passed by the Ahmedabad Branch of the Association for the benefit of the deserving children of the Licentiate to prosecute their medical studies.

Conclusion

I thank you all, Ladies and Gentlemen, for having listened to me so patiently. I have now very great pleasure in inaugurating this Conference, which I hope will be the greatest success in chalking out the future of our Association. May God bless you all. May He inspire you to conduct your deliberations with all the success you deserve, is my humble and fervent prayer—Jai Hind.

PRESIDENTIAL ADDRESS

BY

Dr. M. D. PUSTAKE

Brothers, Delegates, Ladies and Gentlemen,

Permit me, at the outset, to thank you all for having elected me to this exalted office of the President of our Association. I cannot properly make out what could have led you to elect me as your President. My services to the Association, though sincere and long, have been too humble to qualify me for this high office. The only thing that I can count upon is your genuine love for me, which, I presume, must have blinded you all against my shortcomings, although I, on my part, am fully aware of them. I am, therefore, not so happy at the thought of the honour you have done to me, as I am overwhelmed with the magnitude of responsibilities you have imposed on me. It is simply because of your love that I have yielded to your choice and that too in the hope of finding greater opportunities to serve the Association which is to me, as it is to you all, the greatest concern in life.

Our Country's Freedom

The year that has passed since we met last in Poona has seen changes of greatest magnitude, the most important and epoch-making event being the attainment of freedom by our country from the British Rule. This great Imperial power voluntarily liquidating its vast Empire in India and elsewhere has no parallel in the History of the World. We, present Labour Government for Great Britain and the they have taken. But this freedom has been won at the cost of the division of our country which, naturally enough, has brought in its wake a series of deeds perpetrated on an overwhelmingly large scale. This again in its turn has led to the mass exodus of people from one division to the other. Fortunately our Government has tackled this problem with considerable wisdom and has been devoting all its energy and resources to the successful execution of this stupendous task. Our brethren too have been

March, 1948]

alive to the need of the country and have with appreciable quickness responded to the call of the Nation. A fairly large number of medical men and women are doing all that is humanly possible to minimise the sufferings of the so-called refugees. It is a matter of great satisfaction to note that our class has taken its due share in this humanitarian work.

Among the victims of the communal frenzy there are many medical men who have suffered greatly. It is therefore the duty of the medical profession in general and our Association in particular to see that all possible facilities are afforded to these of our brethren to re-establish themselves in life. I hope you will deliberate over this vital question and draw out a plan for helping these medical men.

Note of Warning

Having won the freedom, our leaders are naturally enough, now diverting their energies towards an all-round progress of the country. The blessings of freedom have undoubtedly provided us ample opportunities for effecting a speedy development in all fields of life—social, cultural and economic. The Government too, both at the Centre and in Provinces, is busy in drawing out ambitious programmes for the elimination of poverty, illiteracy and ill-health from amongst the masses. But a note of warning needs be sounded here. We have before us examples of several nations who even after having effected a revolution and coming out successfully from a grim struggle for freedom had through self-centred, power-seeking tendencies, indulged more in ostentatious and seemingly ambitious plans than in really constructive work—a legacy of inherent human weakness, which they took a number of years to recover from. Our leaders—frail mortal beings as they are,—will do good to take lessons from these examples and protect themselves vigilantly from falling an easy prey to these weaknesses.

Plans for Medical Relief

We have already a blue print in medical and public health planning prepared by the Bhoré Committee, which is accepted as a whole by all the Provincial Health Ministers and also by the Central Government. But difficulties, although temporary, have cropped up against its immediate implementation. The Central Government is too fully engaged in attending to questions arising out of the present emergencies. The Provincial and State Governments on the other hand want some time for having sufficient funds to take this work in hand. We, therefore, have to wait till the new constitution is ushered in. The time so available can with advantage be utilised in popularising and wherever necessary improving upon the recommendations of the Committee. Our Association has already moved the authorities to treat the medical Licentiate as 'Basic Doctors' under the Scheme. We have, therefore, to be very alert in this matter and nip the mischief if and when it buds.

Health Insurance

You are aware that the Bhoré Committee has not considered the question of Health Insurance. So far as factory and mill-workers are concerned. Adarkar's report has adumbrated a fairly comprehensive plan of Health Insurance. This also we

should support till the plan materialises. As for others, who are capable and willing to pay for medical aid, some sort of Health Insurance should be established preferably by the Government. Our Association should take up the responsibility of evolving a sound scheme of Health Insurance and lay it before the Government for their consideration and adoption.

Medical Education

The next item that demands our attention is reorganization of the medical education on the lines that would best suit our country. There are several systems at present current in India and each of them has gained more or less popularity. Allopathy amongst these has undoubtedly acquired a unique position. But there are many things in other systems which can and should be taken up and adopted with advantage. We should not be conservative in this respect. Knowledge has no national frontiers. We should not therefore hesitate to co-ordinate the wisdom of East and West if it enables us to serve the ailing humanity more efficiently. Anything that is not inconsistent with the fundamental principles of medical science and which can increase our efficiency to serve the mankind should be gladly welcomed by us. Of course I do not envisage any wholesale blind borrowing from other systems, but I do, certainly, advise the adoption of diagnostic and other facilities and even specific medicines offered by other systems. A co-ordination of all the systems—Ayurvedic, Unani, Homeopathic etc. based on careful research can be usefully introduced as a course of study in our medical colleges. I would request the Association to consider this suggestion and adopt the same if it be found to be of some use. Here a question arises as to what should be the medium of education for study of the system thus evolved. I do not at all favour sticking to the foreign medium when Hindi has been already universally accepted as our *lingua franca*. I, therefore, have no hesitation in suggesting that Hindi should be the medium of education. Of course we will have to undertake the difficult task of writing books in Hindi on the different branches of medical science. Some of the premier Universities have already decided to take up this work in respect of Art, Science, Agriculture, Commerce, etc. Why should we alone lag behind?

Provincialization of Medical Services

With the liquidation of the Indian Medical Service, the question of establishment of one unified medical service in each province and state has become more urgent, and fortunately simpler because there are now no medical schools in any of the provinces in the Indian Union. What, after all, we insist upon is that the existing subordinate medical service should be abolished and its personnel absorbed in the provincial civil medical service, and that future recruitment to the latter should be open to all the eligible registered medical practitioners by means of competitive examination. In this policy of unification of medical services, Local bodies, Railways and Indian States should be included under its purview. The justification for this policy to be adopted by the regional and State Government of our country has often been elaborated by the Association and also by

its provincial branches through their accredited representatives. I need not therefore cover the same ground again. I would only state that unless a unified medical service is established there will continue to be acute discontent among the licentiates who form the largest section of the profession and that medical relief as planned by the Bhore Committee and accepted by both the Central and the Provincial Governments, could not be worked out effectively and successfully.

In this connection, I appeal to my brother licentiates not to join the subordinate medical service with the menial pay and status it offers. They would do well to engage themselves in private practice which has unlimited scope for learning as well as earning. They should take to service only when there comes to be established one medical service open to all registered medical practitioners.

Another aspect of the question is the suggested 'Direct Action' by the personnel of the subordinate medical service in all the Provinces and States. Many letters have been received by me and have also appeared in our Journal exhorting the Association to organise an all-India strike of Sub-Assistant Surgeons as a first step towards the contemplated 'Direct Action'. Although the term 'Direct Action' has very unpleasant associations and I do not appreciate its use in this connection, yet there is no doubt that the present position of medical subordinates is beyond forbearance. Their initial average pay is not more than Rs. 75 a month—a pay which even a menial servant can easily manage to get nowadays, and their maximum average is about Rs. 175 a month which is not even equal to the average initial salary of Assistant Surgeons. Besides what I consider to be the height of injustice is that there is little or no opportunity for the licentiates to rise by merit, inasmuch as all the doors of higher medical education and Provincial Medical Service—not to say of administrative ranks—are closed against them.

One fails to understand why this step-motherly treatment is being meted out to us. There is, in fact, no difference whatsoever between we licentiates and our brethren the so called graduates. Both are equally competent to follow the profession, both are qualified to treat all sorts of diseases and both have the same duties and responsibilities. Are the jurisdictions of Licentiates and Graduates like that of the legal Courts distinct and separate? Can there be a rule that a case with temperature below 100° should alone be treated by a Licentiate and that a little rise in temperature will make the same eligible for treatment by a graduate? We had had enough of this nonsense so far. We cannot tolerate this sort of humiliation any longer. The path of settlement by negotiations that we followed so far has proved a failure. We should now realise that mere words cannot remedy our lot. The time is now ripe for a consolidated action. We should, therefore, draw out a bold and well-planned programme to end this absurdity once for all.

Medical Councils

This is a subject on which our Association has been expressing its view every year. The Provincial Medical Councils, except that of Madras, are too antediluvian and wooden that they should be urgently

reformed after the model of the Madras Medical Council which has got rid of its compartmental system of medical registration and which has a general electorate made up of all the registered medical practitioners. In regard also to the Indian Medical Council, our views are well known. The two great medical Associations, namely, the Indian Medical Association and that of ours, have been demanding the unification of the profession by means of a common medical registration by the Indian Medical Council and a general medical electorate based on such registration. Whatever might have been the difficulties in the past, none exist at present. The country is free from British rule and the British Medical Council dare not interfere with our affairs, as it did before and brought about the present form of the Medical Council of India. I do hope that the reforms relating to the provincial medical councils as well as the Medical Council of India would be inaugurated soon.

One Medical Organisation

The principle of having one medical organisation for the whole country has already been accepted by both the Associations. The Indian Medical Association, I am told, has also, in agreement with the decisions of our last conference, made necessary changes in their constitution. It is for you now to decide as to how and when to effect the amalgamation.

Our Association

Arising from the division of our Country we have to consider the question of Pakistan Branch of our Association in order to safeguard the interest of medical licentiates. It is for you to decide and I do hope that the Pakistan Medical Licentiates will help us in bringing about an organisation, manned and administered by themselves, for their own benefit.

A review of the Association work during last year would show that under the able guidance of our retiring President, Dr. Manoharlal Kapur, much work has been done by the District and Provincial Branches. He himself has addressed all the Provincial Ministries of Health and lead a deputation to the then Health Minister of the Government of India on 12th May, 1947. The Provincial Secretaries, including those of Indian States, have also led deputations to their respective medical authorities. The burden of these deputations were that:

- (1) No licentiate should be started on an initial pay of less than Rs. 200 a month with a time-scale of increment leading to a maximum of Rs. 500 a month.
- (2) The subordinate medical service should be abolished and that one composite provincial medical service should be instituted in which should absorb the existing sub-Assistant Surgeons and to which the future recruitment should be open to all registered medical practitioners on the basis of competitive examination.
- (3) The Provincial Medical Acts should be amended so as to usher in a general medical electorate and a non-compartmental common register.
- (4) The licentiates' qualification should be recognised by the Indian Medical Council.

The Madras Ministry of Health has only recently introduced some improvement in the status of licentiates in service. Some premier states of Rajputana and that of Indore have, as a result of the work of the Prov. Secretary Dr. R. A. Bhagwat and his colleagues greatly improved the status of our class. The Governments may be thanked for the improvements thus sanctioned. But I am obliged to say that the changes introduced fall much short of our demands. The decision taken by the Madras Government does not fully improve the lot of licentiates as the invidious distinction is still maintained. We want fair play and no favour. Let the doors of higher promotion be open to all. Those who deserve will get it. There seems, however, to be very little response from other Provincial Governments and States. But our work in this direction was greatly handicapped after August 15th. Even before, Bengal was in a state of disorder and consequently much work could not be done by our able workers there. As for the Punjab, it was in a state of disruption and no work was possible.

The annual report on the working of the office of the Indian Medical Journal published in its November issue, along with the audited statement and report, shows that our talented editor, Dr. A. Vishwanathan has been slowly but successfully overcoming the paper difficulties, and issuing a more sumptuous volume since July last. He has, since August, resumed publication of the medico political supplement with a variety of interesting features in its columns. The audited statement of the Accounts of the Journal shows a net income of Rs. 50,604 by advertisement alone and a net profit of Rs. 21,402. This is indeed creditable and very few medical journals in our country can boast of such a record of earning and achievement.

Conclusion

We are now passing through a critical period in our country's history. I have therefore purposely and I think rightly, refrained from a strong condemnation of the existing Provincial, Central and State Governments in not having so far redressed the just and legitimate grievances of the medical licentiates in service and in not having taken steps to amend the Provincial Medical Acts and the Indian Medical Council Act according to the unanimous demand of the whole profession. This was simply due to my desire not to add to their present difficulties. Let us all hope that our demands will be fully met in the near future and that the Bhore Committee's recommendations would be implemented at an early date. Let us hope that in a free India the anomalies in medical service and medical statutes would cease and that the Government and the profession would work in close co-operation to the benefit of our people, their health and happiness. Ours is a noble profession and we do not want to come in conflict with our Government unless it is forced on us by their unjust attitude. After all our demands are simple and elementary, and they are, to state them once again:

1. Equal opportunities in service for all registered medical practitioners.
2. Amendments of the existing medical acts to establish the legal equality of all registered medical practitioners.

3. The establishment of a comprehensive medical service for the benefit of our people.

To my colleagues and co-workers in our Association I appeal for mutual understanding and co-operation; I appeal for sustained work by our Branch Secretaries and main Office bearers; I appeal to them to undertake constructive work in their respective areas, to increase the membership and branches and to do all that is possible to safeguard the interest of the medical licentiates whom they represent. You can always command my services and I shall do my best for the furtherance of our cause. Jai Hind : Vande Mataram.

ANNUAL REPORT FOR THE YEAR 1946—47

BY

Dr. V. D. SATHAYE,
General Secretary

I take great pleasure in presenting this brief report of the Association for the period beginning from 15th October 1946 and ending on 30th September 1947.

The year under report was unique in the life of our nation and eventually in the life of the Association. In the wake of her freedom from foreign domination which had eaten into the vitals of the nation, the country had to face the full orgy of a communal frenzy and along with others, the members of our Association had to put up with great hardships and the mental and psychological anguish consequent upon it. I am not oblivious to the sentiments of my friends who have been affected by the communal fury raging in this country. Before proceeding to report the activities of the Association, I express my heartfelt and sincere sympathies to those of my fellow members who have suffered and I think you all will join with me in the expression of sympathy.

Because of the change over in the administration of the country the normal routine of our life was greatly handicapped. In such unsettled conditions the Association was required to work. Everything was in flux and hence it has greatly affected the working of the Association.

In May 1947 a deputation consisting of Dr. Kapur Dr. Wohra, Dr. Hari Ram, Dr. Kulkarni, Dr. Bokhari, and myself waited upon the then Hon'ble Minister for Health, Hon. Gazanaffar Ali Khan. The deputation stressed the following points: (1) Inclusion of the licentiates in the Indian Medical Council by suitably amending the 1933 Act. (2) Abolition of the Subordinate Medical Service Cadre. (3) Treating the L.C.P.S. personnel as "Basic Doctors." The Hon'ble Minister was pleased to give us a patient hearing and assured us that he would give his thoughtful consideration to the points raised by us.

During the period under report, the report of the Central Pay Commission was published and the report evinced protest from a large section of our members. It will not be out of place here if I bring to your notice one or two salient facts from the report. So far as the licentiates in services are concerned, the report has not given them a fair deal,

Assistant Surgeons grade I—Rs. 260-15-44C-22-500.
" " grade II—Rs. 100-8-140-10-170-E, B., 10-230,
Matrons, grade I ... Rs. 320-20-400.
Matrons, grade II ... Rs. 200-10-300.
Sister-in-charge ... Rs. 200-10-300.

Pay Commission Report (page 179)

Drainage and Sanitary Inspectors Rs. 200-10-300.
Assistant Sanitary Inspectors —Rs. 150-7-185-8-225,
(ibid page 187).

World Medical Association

When the news about the holding of this meeting in Paris appeared in press, I immediately wrote to the Secretary of the Conference, stating the claims of our Association for representation in the conference. The reply I received stated that they had invited the Indian Medical Association as the only body representing the medical profession in India. To quote from the reply "As from the information available to us, the Indian Medical Association appeared to be most representative of the medical practitioners in India, whose qualifications were recognised by the Indian

New Membership

New members enrolled—Province-wise from 1-10-46 to 1-10-47—

Assam	60	C.I.	80
Bihar	160 (includes about 50 student members)	C.P.	75
Bengal	130	Madras	25
Bombay	190	Punjab	30
		U.P.	15

Request Cards

U.F. 15

Request Cards

The strength of any organization depends, in the ultimate analysis, upon the numerical strength, and efforts to that effect have to be directed both ways—are already members and inducing those who are already members to continue their membership. Efforts in connection with the latter were undertaken by me. It is the usual practice that the Treasurer intimates every member of the termination of his subscription and also issues V.P.s. to them. To substantiate his work I have begun sending appeals to those who have refused V.P.s. requesting them to send subscriptions. Many a member has sent his subscription on the receipt of these request cards.

Branch

Branches

From the available record in my office I have made a list of all branches. Their number is 272. 25 new branches were formed during the period

Standing Committee

During the period under report the Standing Committee met only once at Nagpur on 25th and the 26th June 1947. The attendance was 23. Amongst other things, the Standing Committee have its consideration to the recommendations of the Central Pay Commission and unanimously passed a resolution, which for fear of repetition I need not give here. It is printed in the Indian Medical Journal issue of July 1947. In one way this meeting of the Standing Committee was a momentous one, as in that meeting the demands of our Association were formulated and it was resolved to form a Committee of action to carry on province-wise propaganda. Though the

Card Index System

This year I have made a trial in the Card Index system. It has helped me in making an alphabetical index of the members on the registrar. I am of opinion that if the Card Index system is adhered to in future and if the membership cards are kept up to date, it will serve in a good many ways and will surely give at a glance the position of the membership of the Association; and, therefore, sanction should be given for maintaining a regular Card Index system with the necessary cabinet in the General Secretary's office.

Our Journal

During the year under report the journal continued its useful progress under the able editorship of Dr. Viswanathan. From the financial point of view the journal has given us a surplus of Rs. 18,095. Due to paper control restrictions the reading matter of the journal had to be sacrificed but since July 1947 there has been a very useful increase in the number of original articles and scientific contributions and the reinstitution of the medico-political supplement. It is up to our members to increase the reputation of our journal by contributing more and more scientific articles. It is hoped that during the next year, we will be able to show a distinct improvement in the quality of the journal. Responsibility for this is as much on our members as it is on the managing editor.

[March, 1948]

Information Bureau

As in the present critical time number of occasions are bound to arise where the National Government will be requiring the help of the medical men of this country. Famine relief, Refugee camps, Medical Missions to other countries and other emergencies will require the help of medical men. It is in the fitness of things that our Association should be at the fore-front. In order that a band of voluntary workers should be at hand, a Bureau has been opened in my office where the names of all who are desirous to serve in this way are kept so that if the occasion arises those persons can be intimated immediately to proceed to the place where their help is needed. I am glad to note here that the Government has received this idea with satisfaction and has assured us that they will take help from us when the occasions will arise. Some of our members also have intimated to me their readiness to serve and their names are entered in the Bureau. I thank them for their promptness and hope that many more will come forward. I wish that the maintenance of such bureaux should be a part of the General Secretary's office.

Relief Work

This year Chittagong was flooded by inundation. It is very creditable that Dr. Ghosh, the Chittagong branch secretary, organised a medical relief unit in that part. To start such relief units in times of emergencies some arrangement for initial expenses must be at hand. I think the Association should create a separate fund for such Relief work. I have given the factual report in brief. Due to the disturbed conditions in Punjab the treasurer's office could not function for a brief period. Alternative arrangements had to be made from the Managing Editor's office and the routine of the treasurer's office was maintained.

In the end I wish to say a few words about the Association. The transfer of political power has created a number of problems in our country. The transfer of political power has transformed our country from a dependency to a full fledged politically sovereign nation. Great changes are on the anvil. The question before us is how to participate in that change and mould it. The change in the political complexion of the country has removed the barriers and now the medical profession in this country can rise to any height. But there are still barriers operating against our class. There are vested interests in our profession who do not allow us a place in the sun along with the medical graduates. In services, in honorary appointments, in representations on committees and conferences...in appointments to examine cases for Insurance, we are still being treated as proverbial pariahs. We are still being kept outside the pale of the Indian Medical Council. These are a few of the many inequities from which we are yet suffering. Our Association has yet to fight against all these manifold grievances. That is the *Raison D'être* for the Association to exist. The Association will have to carry on that ceaseless struggle which she is carrying on since her inception, till the medical licentiates achieve that social status enjoyed by their graduate brothers. I hope we will be able to harness our strength and fight for that great cause.

RESOLUTIONS PASSED AT THE 35th ANNUAL CONFERENCE HELD IN BOMBAY IN X-MAS WEEK 1947

1. This Conference expresses its condolences on the sad demise of the following members of the Association and extends its sympathy to their bereaved families :—

Dr. Harmohan Mukherjee of Bankura, Dr. Sambhu Nath Dutta of Assam, Dr. Ramani Kant Das of Assam and Dr. B. Kale of Poona.

2. This Conference expresses its deep concern over the serious illness of Dr. A. Viswanathan (Editor, I.M.J.) who is lying in the Madras General Hospital and wishes his speedy recovery.

3. This Conference of the All-India Medical Licentiates, Association congratulates the National Leaders for the consummation of the long-cherished objective of national independence for which Mahatma Gandhi, Pt. Jawaharlal Nehru, Sardar Vallabhbhai Patel and their colleagues were relentlessly fighting for the last 25 years and extends its whole hearted support to the first National Government formed under the able leadership of Pt. Jawaharlal Nehru in all their constructive and nation-building plans.

4. This Conference is of the opinion that the proposals put forward by the President of the Indian Medical Council in the address to the Council at its last session in respect of establishment of an All-India Medical Register, are unsatisfactory because :

(1) They aim to bring out a compartmental register which is against the real purpose of medical registration.

(2) They do not include representation of the medical licentiates in the Council. In view of the fact that all the Provinces except Bengal have abolished the medical schools and that even the Bengal Government have accepted the principle of abolition of medical schools, this Conference appeals to the Indian Medical Council and also the Government of India to recommend the amendment of the I.M.C. Act in such a way as to effect recognition of the Licentiate qualification granted to those who may be admitted to the Medical schools which would automatically result in the establishment of an All-India Register in a normal and permanent manner and representation of the licentiates in the Council.

5. In view of the following facts that (1) The difference in professional education between the licentiates and the graduates is not so material as to warrant the existence of wide disparities in their respective service conditions.

(2) It has been acknowledged by eminent men that the quality of the professional work done by the licentiates in service is in no way inferior to medical graduates in service.

(3) The British Medical Mission which visited our country in 1943 has stated clearly as its opinion that the licentiates are capable of full medical responsibilities and that they are in no way inferior in intelligence and capacity to a large number of graduates and that therefore they should be made eligible to the King's Commission in the Medical Branch of the Indian Army.

March, 1948]

RESOLUTIONS PASSED

41

(4) The Government of India have, during the last war, granted the King's Commission to those Medical Licentiates who volunteered for the war and made them eligible even for the specialist rank of major.

(5) The Conference of Administrative Medical Officers held in November, 1945 has recommended unanimously the establishment of one Provincial Medical Service.

This Conference strongly urges on the Central, Provincial and State Governments and other local authorities to abolish the subordinate medical service on the same grounds which led the central Government to grant King's Commission to the Licentiates, to absorb the existing licentiates in S.M.S. into the Provincial Medical Service on the basis of 50 per cent. antedate and on the scale of pay of Provincial Medical Service.

6. This Conference urges on all the Provincial Governments to amend their Provincial Medical Acts in such a way as to establish a common Medical Register in an alphabetical order without compartments under joint electorates and to throw open the majority of seats in the Medical Council for common election by the Registered Medical Practitioners and recommends to the Provincial Governments to adopt the Madras Medical Council Amending Act (1937) as a model in this respect and which is approved by the Medical profession as a whole.

7. Pending the abolition of non-university medical education, this Conference regrets to note the non-inclusion of any medical licentiate in the Medical Faculty of Eastern Pakistan where there are three Medical schools and requests the authorities concerned to take at least five licentiates in a body of twenty-one members.

8. This Conference observes with much concern the meagre medical aid received by the toiling masses in the country which has brought serious consequences in the society and requests, both the Governments of India and Pakistan, to immediately implement the Bhore Committee Scheme for the better and equitable medical aid for the masses and to utilise the services of all the existing registered medical men of the country on a planned basis and under the State control.

9. This Conference is of emphatic opinion that the Government should create more facilities for medical research and keep them at the disposal of all medical men irrespective of their medical qualifications.

10. This Conference emphatically protests against the recommendations by the Bhore Committee that in order to include medical licentiates in the category of basic doctors the medical licentiates should undergo a course of further studies. This Conference urges on the Government that the medical licentiates as they are should be considered as basic doctors in the full implication of that term.

11. This Conference urges upon the Universities to amend the statutes regarding post-graduate studies in various subjects so as to give access to the medical licentiates for post-graduate studies and requests the Inter-University Board to give a favourable consideration to this resolution and get it accepted by the different universities.

12. Resolved that the Central Governments of both India and Pakistan be requested to absorb the Medical Licentiates displaced from their original homes in the Centrally administered areas and other provinces of the Indian Dominion and Pakistan respectively.

13. This Conference learns with concern the humiliation under which the medical licentiates are asked to serve in the Tea Gardens and urges upon the Provincial Government to intervene so as to provide a scale of pay of Rs. 250 to 450 and requests the I.T.A. to follow the Government rules with reference to the permanency of these medical officers.

14. Since Orissa has been separated politically from 1936, it has no Provincial Licentiate Association of her own. So far licentiates are concerned they have been attached to the Bihar Provincial Branch. So it is resolved that Orissa should immediately be separated from Bihar and the General Secretary should take steps to organise branches with a view to ultimately form a Provincial Branch of the province of Orissa.

15. Resolved that the Government be moved to confirm the services of the temporary and officiating S.A. Surgeons who were appointed to replace the permanent incumbents who were sent out for army services and also for M.B.B.S. course.

16. In view of the fact that the Indian Medical Association has changed its rules as desired by the Amalgamation Sub-Committee of the All-India Medical Licentiates' Association at the meeting held at Amritsar in 1945 and as in the opinion of this Conference the time is ripe that both the Associations be amalgamated, this Conference authorizes the General Secretary to take a referendum forthwith on the question of amalgamation of this Association with the Indian Medical Association under Rule No. 4 cm.

17. In view of the impending Indianisation and reorganisation of the Army, it is resolved that the demobilised licentiate I.A.M.C. officers who intend to rejoin the army may be reabsorbed on the same pay, status and prospects which they were enjoying at the time of release without insistence on the part of the Government for further education or examination, as these officers had already shown their worth in the services.

18. This Conference urges upon the Governments to declare their policy regarding national health and to formulate a comprehensive Health Plan for India and Pakistan in co-operation with organised medical profession. This Conference therefore urges upon the Government of India and Pakistan to institute an advisory medical board both in the Central and Provincial Governments to advise the Governments concerned on problems affecting medical education, medical research and public health policy of the Governments concerned with representation of this Association on the various Boards.

19. This Conference disapproves the policy of the Government of East and West Bengal in continuing the dual system of medical education which has been denounced by the organised medical profession. This Conference further learns with concern that the West Bengal Government has started a double shift of admission in some of the medical schools of Bengal which is contrary to the demand made by the organised

[March, 1948]

medical profession, Medical Council of India as well as against the recommendation of the Bengal Medical Council and Bhow Committee,

20. This Conference notes with regret that despite the authoritative opinion that no standard of medical education other than that is laid down by the Indian Medical Council should be allowed to prevail in our country, some of the Provincial Governments have been tolerating the State Medical Faculties and the College of Physicians and Surgeons, Bombay, to make changes in medical school education as are deliberately intended to perpetuate a dual or even a multiple standard of medical education. This Conference, therefore, respectfully urges on these Provincial Governments to put a stop to such meaningless changes, and to abolish such of the medical schools which are not in a fit state to be converted into Medical Colleges affiliated to the universities.

21. The class of the Medical Licentiates all over India are extremely shocked to find the recommendations of the Pay Commission as regards their scale of pay. The reasonable observation of the Commission as regards the respective qualification of the Sub-Assistant Surgeons and the Asst. Surgeons of today is anomalous with their recommendations of the scale of pay, maintaining the same disparity in the scale between the two grades as before which the Commission themselves have disapproved. Further, in consideration of the scales recommended by the Commission to the staff of similar cadre it is believed that in case of the Sub-Assistant Surgeons there has been an error of judgment either through oversight or hurry. This Conference therefore urges upon the Government, with all emphasis, to immediately accept a deputation to review the case of Sub-Asst. Surgeons and allay dissatisfaction. It is also urged that the designation of Sub-Asst. Surgeons be forthwith abandoned and they be designated as Asst. Surgeons, Class II as has been recommended by the Pay Commission.

22. This Conference urges upon the Indian Medical Council to amend its rules in such a manner at an early date that all the Licentiates including ex-I.A.M.C. officers may be allowed to appear for the final condensed M.B.B.S examination of any recognised University after a course of one and a half years of clinical study at any recognised college, comprising Medicine, Surgery, Midwifery and Gynaecology only.

23. This Conference notes with regret that the families of insured persons are not included for full medical care under the Workmen's State Insurance Bill, and requests the Government of India to take steps for their inclusion before the Bill becomes Law.

24. This Conference places on its record its emphatic protest against (Public Health) Rules 1946 and Government Resolution General Department No. S. 106 dated the 25th September 1946 preventing medical licentiates from giving certificates for inoculation against cholera.

25. This Conference places on its record the good services of Dr. A. Viswanathan as the Managing Editor of the Indian Medical Journal for a long period and sanctions the sum of Rs. 1,001 to be given as a special gratuity to him for his services.

26. In view of the fact that the accounts for the year 1946-47 are not audited and actuals given, it is not possible to frame a proper budget. It is hereby resolved that the Finance Committee be requested to have the accounts audited in two months time from the date of the passing of this resolution and frame the budget for 1947-48 and place before the Standing Committee for passing the same with audited accounts for the year 1947-48. It is hereby further resolved that the work of the Association be carried on and expenses incurred as per last year's budget, during that period.

27. Resolved that in this democratic age, Rule 148 of the B. B. and C. I. Rly. Agent's Manual should be given up and should no longer be allowed to remain on the Agent's Manual, Volume I.

28. Resolved that the Conference expresses its sincere appreciation of the services of the retiring office-bearers and thanks them for the same.

29. Resolved that this Conference do express its sincere thanks to the Chairman, Secretaries and members of the Reception Committee and also the volunteers for the excellent arrangements made by them for the comforts of the delegates and the visitors to this Conference.

30. Resolved that this Conference expresses its sincere thanks to all those persons and authorities who helped the Reception Committee in making this Conference a grand success.

31. Resolved that after the Accounts of the Reception Committee of this Conference have been finally settled, the actual deficit, if any, up to only Rs. 1,000 be paid as a special contribution to the Reception Committee from the Central funds.

32. This Conference accepts the invitation of the Calcutta Branch to hold the next Conference at Calcutta in December 1948.

33. Resolved that the following Office-Bearers and Committees be elected :—

Main Office-Bearers

President.—

55. Dr. M. D. Pustake,
55, Jayaji Bazar,
Lashkar, Gwalior, C. I.

Vice-President.—

628. Dr. Bhagwati Sahaya,
Lakshmi Medical Hall,
Bharthana E. I. E.,
Dt. Etawah (United Provinces).

General Secretary.—

1081. Dr. V. D. Sathaye,
502, Narayan Peth,
Poona City.

Joint General Secretary.—

Dr. R. P. Ghosh.

Treasurer.—

942. Dr. P. R. Trivedi,
Vadilal Sarabhai General Hospital,
Ellis Bridge, Post Ahmedabad.

Finance Secretary.—

3539. Dr. C. Nathamuni Naidu,
Medical Officer, L.F.
Hospital, Post Ambur,
North Arcot Dist.

[March, 1948]

RESOLUTIONS PASSED

43

Editor.—

7107. Dr. A. N. Roy,
P. 27, Prinsep Street,
Calcutta.

Scientific Secretary.—

2958. Rao Saheb Dr. P. H. Sant,
Medical Practitioner,
Bilaspur, C.P.

Standing Committee

All the above, and ex-presidents

Assam.

Dr. G. S. Das,
Gauhati, Assam.
Dr. L. C. Barua,
Tezpur, Assam.

Bengal.

3143. Dr. C. N. Basak,
214 Nawabpur Road,
Dacca Post, Bengal.
4436. Dr. N. Bhattachargi,
28, Harrison Road,
Calcutta, Bengal.

Bihar.

2834. Dr. D. P. Dhar,
Medical Officer,
I/C Government Hospital,
Pusa (O.T. Rly).

1798. Dr. P. C. Sen,
Chaubasa,
Singhbhum (Bihar and Orissa).

Bombay.

1080. Dr. B. G. Modak,
Saraswati Maternity Home,
1286, Jangli Maharaj Road,
Shivaji Nagar, Pona 6.
Dr. A. D. Mastakar,
262, Girgaon Road,
Bombay 4.

Central India.

(Will be sent later.)

Central Provinces.

Punjab.

3987. Dr. L. P. Kapur,
Eye Specialist,
Post Samalkha,
N.W.F.P.
Dr. Arsurising, Chawla.

United Provinces.

Ch. Hardeo Singh Verma,
Civil Hospital, Baraut,
Dist. Meerut, Punjab.
1470. Dr. Y. B. Mate,
Yeshwant Medical Hall,
Jhansi (U.P.).

Madras.

3672. Dr. P. B. Anangarschari,
Sir Mohd. Usman Road,
T. Nagar, Madras.
4868. Dr. G. V. Hanumanth Rao,
Brodipet,
Post Guntur,
Madras.

7

Provincial Secretaries.

Assam.

8272. Dr. Birendra Chakrabartty, L.M.P.,
Zindabazar, P.O. Sylhet,
Dist. Sylhet, Dist. Bengal.

Bengal.

4134. Dr. Jyotirmoy Mojumdar,
27, Dixon Lane,
Calcutta.

Bihar.

Dr. K. P. Agrawal,
Vijay Pharmacy, Darbhanga
(Bihar).

Bombay.

5481. Dr. V. M. Bahlkar,
502, Narayan Peth,
Poona City.

C.P.

964. Dr. D. B. Bhat,
Chhindwara, C.P.

C.I.

Dr. R. A. Bhagwat,
Bohara Bazar, Indore City, C.I.

Punjab.

1430. Dr. Khan Chand Wohra,
Civil Hospital, Hoshiarpur,
Punjab.

United Provinces.

1435. Dr. B. B. Laldixit,
Chaundashi, U.P.

Madras.

343. Dr. D. V. Venkappa,
Dayalbagh, No. 13
Dinadayalu Street,
T. Nagar, Madras 17.

Scientific Committee

President :— (1) Dr. A. K. Chaudhary, Medical
Practitioner, Juna Bilaspur, C.P.

Member :— (2) Dr. Mardikar, A.M.O. Jail Dis-
pensary, Bilaspur,
Member :— (3) Dr. B. C. Chaudhary, Materiolo-
gist, Bakdoi, Hos. Parasia, Dist.
Chhindwara.

Member :— (4) Dr. M. N. Mandkey, Pathologist,
Amrit Bldgs., Sitabuldi, Nagpur.
(5) Dr. A. N. Roy, P. 27, Dixon
Street, Calcutta.

(6) Dr. M. D. Pustake, Lashkar,
Gwalior, C.I.

(7) Dr. V. D. Sathaye, 502, Narayan
Peth, Poona city.

(8) Dr. V. G. Gokhale, Poona.

(9) Dr. A. Viswanathan, Madras.

(10) Rao Saheb Dr. P. H. Sant,
Secretary, Scientific Committee,
Bilaspur, C.P.

Publicity Committee

President :— Dr. M. D. Pustake.

Secretary :— Dr. V. D. Sathaye.

Members :— Dr. A. N. Roy,
Dr. M. M. Asthaputre,
Dr. A. Viswanathan,
Dr. Y. B. Mate,
Capt. Bagchee

Finance Committee

President :—	Dr. P. B. A. Chari.
Secretary :—	Dr. C. Nathamuni Naidu.
Members :—	Dr. G. J. Narayanswami Naidu.
	Dr. R. Sankaran.
	Dr. P. S. Shrinivasan.
	Dr. A. M. Shivraman.
	Dr. D. V. Venkappa.

Members of the Property Committee

Dr. M. D. Pustake.
Dr. V. D. Sathaye.
Dr. P. R. Trivedi.
Dr. C. Nathamuni Naidu.
Dr. U. P. Narayanrao.

A SHORT ACCOUNT OF THE CONFERENCE

By the General Secretary

Bombay witnessed several conferences of medical men practising in several branches in medicine during the Christmas of 1947. It was a Conference week so to say. The compound of J. J. Group of Hospitals where all these conferences were held showed a gay atmosphere. Medical men from all over India had come to witness and to participate in these conferences. They represented unreality a cross section of the nationalist India. Almost all the branches that comprise the allopathic system of medicine had their conferences. The physicians, the Surgeons, the dermatologists, the otto-rhinologists, gynaecologists and Radiologists had met in their respective conference.

The I.M.A. and the A.I.M.L.A. had their 24th and 35th Annual Conferences respectively during that week. A huge pandal for the holding of these conferences was erected. The sessions of these conferences were so arranged by the Reception Committee that each of the Conference could hold its open sessions in the huge pandal.

The A.I.M.L.A. met in its delegates' session on the morning of the 26th, in the Materica Medica Hall of the Grant Medical College. The attendance of delegates was 243. It was really fortunate that, in spite of the turmoils through which the country had to pass after 15th August 1947, so many delegates came traversing long distance to attend the 35th Conference. After Dr. M. D. Pustake took his presidential chair, the General Secretary Dr. Sathaye called upon each provincial secretary to announce the names of the delegates from his province. As each of the Provincial Secretary began announcing the delegates' names from his province they were taken down by the General Secretary. After the enlistment of all the delegates the General Secretary read the annual report, the copies of which were circulated to the delegates and after a few alterations the report was adopted by the session.

The open session of the Conference was held in the huge pandal at 2-30 p.m. sharp. The pandal was full to its capacity. On the dais were seated along with the President and the General Secretary, Dr. Jivraj Mehta D.G.H.S., Government of India. Dr. Kapur from Punjab, Dr. Jamiatram Desai, the founder

member of the A.I.M.L.A. Association from Ahmedabad, Dr. Amesur from Karachi, Dr. D. V. Venkappa from Madras and several other important personages from different parts of the country. The open session began with a sweet song of welcome after which Dr. Mastakar from Bombay, the Chairman of the reception Committee, read his address. After Dr. Mastakar's address Dr. Jamiatram Desai inaugurated the Conference. In his inaugural speech he traced the history of the A.I.M.L.A. in brief and drew pointed attention to the founders who had laid the foundation of this huge organisation. After the inauguration of the Conference Dr. Kapur, the retiring President of the A.I.M.L.A., proposed Dr. M. D. Pustake to the presidency of the Conference and after due seconding by Dr. Venkappa from Madras Dr. M. D. Pustake took the chair. After Dr. Mastakar profusely harlanding the President and the distinguished guests, Dr. Pustake delivered his presidential address. The address was printed both in English and in Hindustani, *lingua franca* of India. As it was for the first time in the history of the A.I.M.L.A., that the President delivered his speech in sonorous and sweet Hindustani. Dr. Pustake caught the imagination of the people attending the conference when he uttered the words that 'he would speak in Hindustani.' The people appreciated his speech in the course of which he put all the problems affecting the licentiates' class and the country in bold relief. After the presidential speech and after the secretary making a few announcements about the subject committee meetings and the delegates' meeting and after the national anthem was sung the session came to a close.

The subjects committee met at 9-30 p.m. in the pandal and continued its deliberations till 4 a.m. of the 27th December 1947. Several resolutions were hotly debated but unanimously adopted by the subject committee.

The second session of the delegates met at 10 a.m. on 27th December 1947, at 10 a.m. several resolutions that were passed by the subjects committee in the previous night were placed before the delegates and after full deliberations, they were adopted. The second session was adjourned to 12 a.m.

Again the delegates met at 2 p.m. on the same day. This time they met in the Bai Motilal Maternity Hospital Building. A few more resolutions were discussed and adopted. Elections of office-bearers were also held in this session. Dr. V. D. Sathaye was unanimously elected to the post of the General Secretary. The election of the Vice-President was hotly contested and election by ballot had to be instituted. As this election took much time and as the delegates had to attend the Mayor's reception at 9-30 p.m.

The adjourned session met at 9-30 p.m. The President announced the election of the Finance Secretary. It was then resolved by majority that the Managing Editor for the new year should be on a part-time basis and his honorarium should be Rs. 150 per month. Dr. A. N. Roy was then elected as the Managing Editor. Then the elections of the different committee were held. Then a few more resolutions

including thanks-giving to the reception committee for the splendid arrangements they had done were adopted. After the President giving his concluding remarks the deliberation of the 35th Conference came to a close.

List of Delegates who attended the 35th Session of the A.I.M.L.A., held at Bombay

Delegates from Assam

(1) Drs: P. C. Duarat. (2) H. D. Nath. (3) A. N. Bose. (4) M. A. Chaudhury. (5) A. Banerjee. (6) S. Ray. (7) R. K. Bhattacharjee. (8) L. M. Chaudhury. (9) L. C. Bora. (10) H. C. Chaudhury. (11) S. C. Nath. (12) K. R. Parkayastha.

Delegates from Bihar

(1) Drs: L. C. Sinha. (2) Murlidhar Gupta. (3) B. A. Bagchi. (4) Miss W. Francis. (5) R. P. Ghosh. (6) D. R. Yadav. (7) Basudeo Prasad. (8) Sahadeo Prasad. (9) Vishwambhar Prasad. (10) S. Bhattacharya. (11) K. K. Saran. (12) R. K. Narain. (13) J. P. Karan. (14) Bishwanath Prasad. (15) R. K. Narain. (16) Nageshwar Prasad Sinha. (17) K. L. Mitra. (18) A. T. Roy. (19) T. P. Chaudhury. (20) K. P. Sharma. (21) J. Bhagat. (22) B. K. Nada. (23) K. P. Agarwal.

Delegates from Bengal

(1) Drs: Amol Nandi. (2) A. Talukadar. (3) J. K. Saha Chaudhury. (4) S. M. Chatterjee. (5) B. Ghosh. (6) Bhadr. (7) Nopendra Mukherjee. (8) Nalini Sarkar. (9) Sabodh K. Mukherjee. (10) B. N. Sen Gupta. (11) Ch. S. Chatterjee. (12) K. K. Banerjee. (13) K. K. Dutta. (14) S. N. De. (15) Capt. S. N. Mitra. (16) Drs. B. C. Roy Chowdhury. (17) N. C. Bhattacharya. (18) K. P. Ghosh. (19) Suresh Chakravarty. (20) Deovrata Das. (21) D. N. Basak. (22) A. C. Roy. (23) B. B. Guha Thakurta. (24) D. C. Roy Chowdhury. (25) A. N. Bhattacharjee. (26) Sahil Dutta. (27) Vimal Ukil. (28) A. Gupta. (29) A. S. Roy. (30) G. P. Ghosh. (31) B. K. Roy Chowdhury. (32) S. K. Ghosh. (33) J. N. Maitra. (34) S. Bhowmick. (35) N. Ghosh. (36) A. C. Sen Gupta. (37) G. K. Moitra. (38) A. C. Chowdhury. (39) A. M. Roy Chowdhury. (40) S. K. Ghosh. (41) B. M. Sen Gupta. (42) P. Bose. (43) S. Ghosh. (44) M. Ghotak. (45) Bholanath Ghosh. (46) Ram. N. (47) Sudhanshu Mukerjee. (48) K. P. Poi. (49) G. (50) Suresh Ch. Guha. (51) Amulya Sen Gupta. (52) Mojumdar. (53) A. N. Roy.

Delegates from Bombay

(1) Drs: S. V. Kulkarni. (2) V. S. Deshpande. (3) P. N. Hoshing. (4) R. G. Tekdi. (5) G. S. Kowadkar. (6) Poddar. (7) V. K. Paranjape. (8) R. N. Atre. (9) M. S. Kulkarni. (10) Mumukshu. (11) Umargi. (12) D. R. Muzumdar. (13) G. C. Trivedi. (14) V. P. Bapat. (15) L. S. Bhawe. (16) Rathod. (17) K. D. Kulkarni. (18) P. V. Bhat. (19) G. S. Purohit. (20) B. G. Modak. (21) Acharya. (22) Desai. (23) Chitko. (24) Bhalerao. T. V. (25) K. S. Inamdar. (26) M. N. Sirsat. (27) M. S. Vaze. (28) S. B. Gore. (29) Gajra. (30) Nigudkar. (31) M. M. Asthaputre. (32) M. G. Bhide. (33) V. G. Paranjape. (34) C. G. Dharap. (35) Mrs. Venutai Lele. (36) R. G. Pashankar. (37) N. G. Bhade. (38) V. K. Vathe. (39) L. D. Kukday. (40) J. W. Joglekar. (41) R. B. Karnik. (42) M. N. Kadhe. (43) Dharwadkar. (44) Limaye. (45) V. D. Dhavale. (46) Jadhav. (47) Aptre. (48) N. S. Gore. (49) S. M. Shah. (50) Vinayak. (51) S. S. Pai. (52) Jhala. (53) U. B. Narayan Rao. (54) R. K. Joshi. (55) Bhat. (56) Trivedi. (57) T. K. Babur. (58) G. B. Patil. (59) R. A. Amesur. (60) A. D. Mastakar. (61) A. D. Patel. (62) Bhairyanan. (63) Bhosle. (64) V. D. Sathaye. (65) V. M. Bahulkar. (66) M. G. Vasavada.

Delegates from Central India

(1) Drs: B. S. Muzumdar. (2) M. P. Singhal. (3) K. M. Muchrikar. (4) S. N. Kauthalkar. (5) N. B. Moghe. (6) D. N. Khandekar. (7) V. V. Oak. (8) Capt. Tatke. (9) Raghunath Singh. (10) Phadke. (11) G. A. Deshpande. (12) R. V. Pandit. (13) N. S. Kulkarni. (14) S. M. Kelkar. (15) S. M. Pathak. (16) V. R. Rai. (17) B. B. Mathur. (18) B. K. Vyas. (19) P. N. Banerjee. (20) Jeiprakash Sharma

Delegates from the Central Provinces.

(1) Drs: N. B. Verma. (2) K. D. Kolwadkar. (3) K. Y. Karandikar. (4) B. Y. Bensod. (5) Ramlal. (6) G. V. Dawoo. (7) K. B. L. Gupta. (8) P. H. Sant. (9) R. P. Pande. (10) R. V. Verma. (11) R. S. Khot. (12) Pendse. (13) Deshmukh.

(14) Tembhekar. (15) Chaudhury. (16) Tamaakar. (17) B. P. Murarkar. (18) Miss Mehendale. (19) N. C. Bhalsma. (20) M. M. Varhadpande. (21) Therjaonkar. (22) Mrs. Therjaonkar. (23) Mahadeokar. (24) S. D. Deshmukh. (25) N. N. Sardeshpand. (26) S. R. Sahu. (27) Hakim. (28) Inamdar.

Delegates from Madras

(1) Drs: K. Rama Rao. (2) P. S. Shrinivasan. (3) S. Ramakrishna. (4) K. Krishnamurthy. (5) G. V. Hanumanrao. (6) N. Nathamuni Naidu. (7) N. Kuvur Wami. (8) N. Suryanarayanan. (9) V. G. Rambhadram. (10) T. S. Raghavan. (11) A. Balu. (12) V. S. Rao. (13) V. Ramisaya. (14) Appaji Shivaraman. (15) D. V. Venkappa.

Delegates from United Provinces

(1) Drs: Rai Saheb Ch. Hardeo Singh Verma. (2) Rajaram Mitai. (3) Mrs. Renuka Devi Dikshit. (4) D. Ganholi. (5) Jagat Narain Saxena. (6) I. N. Saxena. (7) Suba Bahadur Singh. (8) Y. B. Mate. (9) C. S. Sharma. (10) B. B. Lal-Dikshit. (11) Bhagwati Sahaya.

Delegates from Punjab

(1) L. P. Kapur. (2) Pyarelal. (3) H. Khanekar. (4) A. S. Chawla. (5) Govind Ra. (6) Pranlal. (7) K. N. Sharma. (8) Bazi. (9) K. C. Wohra. (10) M. L. Kapur.

Mofussil Delegates

(1) Dr. Kane. (2) Major Ahmedbaksh.

NOTE-WORTHY STATEMENTS MADE AT MEDICAL CONFERENCES 1947 WITH COMMENTS

BY

Dr. T. S. TIRUMURTI, B.A., M.B. & C.M., D.F.M. & H.
Retired Principal, Stanley Medical College, Madras

Lt.-Col. Amir Chand, F.R.C.P., I.M.S. (Retd.), in his presidential address at the 24th Annual Session of the All-India Medical Conference held during the last Xmas week at Bombay has stated.

"In my opinion nothing has hampered the progress of medical relief and prevention of disease in India more than the divorce of preventive medicine from curative medicine and the sooner they are rewedded the better. Without that things will remain as they are." We have been laying stress on the desirability and urgent need of combining the functions of preventive and curative medicine to the largest extent. This recommendation which has been made by the Bhoze Committee also is of extreme importance. Administrative efficiency will increase as a result of such combination.

Also in the matter of debarring whole-time salaried officers in the medical department from engaging themselves in private practice, our opinion finds strong support in the following statements of Col. Amir Chand:—

"If in my opinion the separation of preventive medicine from curative medicine has been the greatest hindrance in the spread of public health in India, the privilege of private practice by whole-time salaried medical officers has been much more than that in the spread of medical relief and medical education and research. The extent to which this privilege has been abused and the corruption which it has led to is indescribable. Equally incalculable is the harm it has done to the advancement of medical science and relief."

Strong words of condemnation, but true and necessary.

Delivering the convocation address of the College of Physicians and Surgeons at Bombay early in January Dr. Jivraj N. Mehta, Director-General of Health Services, has emphasised the need for a national health programme, the object of which should be to provide the individual with adequate curative and preventive medical facilities, not in relation to his capacity to pay for them but in relation to the requirements of his mental and physical conditions. But such provision is contingent on the finances of the Government. He pointed out that though India's finances would not allow of vast expenditure now on health schemes, there was no reason why a health programme suited to the conditions now obtaining should not be evolved. He considers it necessary to bring about the coalescing of the Medical and Public Health Departments in the Provinces into a single organisation, so that the fullest possible measure of co-operation between the two branches of health administration may be secured. In the present financial conditions, he recommends concentrating attention, organisation and expenditure on smaller units at the sub-divisional or taluk levels. As regards Rural Medical Service, he advocates further extension by the present policy to secure a proper distribution of qualified doctors throughout the rural areas, until it is possible to institute a whole-time general medical service for these places. He has drawn the attention of Provincial Governments that in their Health plans adequate emphasis has not been laid on the training of ancillary health personnel, the cost of whose training is relatively less than that required for medical education.

In his inaugural address at the Radiological Conference he has laid the responsibility primarily on the members of the medical profession for enlightening the public in regard to health and disease and for promoting the growth of a public opinion which will demand the establishment, through the efforts of the State and voluntary bodies, of those conditions for healthful living, which alone can provide the foundations for a superstructure of sound public health. How few are the members of the profession who feel this responsibility and volunteer for such service in an honorary capacity! We are afraid that even the salaried members of the profession have not fully realised their duty to the public in this health propaganda. All honour to those few members of the profession, who have been responsible to direct benefactions of charitably disposed persons towards the foundation or the extension of institutions for medical relief, prevention of disease, or promotion of health.

Dr. A. D. Mastakar in his welcome address on the occasion of the conference of the All-India Medical Licentiate's Association has urged the Indian Medical Associations to work for the abolition of the present compartmentalism in medical education, medical services and registration and has pleaded for the amendment of the Indian Medical Council Act to give recognition to the Licentiatees.

In the plethora of medical conferences and various addresses by the leaders of the medical profession in India, who had assembled at Bombay the Xmas week, the Presidential address of Dr. M. G. Kini to the Association of Surgeons of

India deserves special mention. He is the Superintendent of the Stanley Medical College, Madras, and the outstanding Orthopaedic Surgeon in India today. By his high academic attainments, vast experience as a general Surgeon and later as a specialist and his long connection with educating and training of medical students for the University graduate and post-graduate degrees, he has earned to the high regard and esteem, in which he is held by the Surgeons of India and the Medical Educationists.

That part of his address on "Poliomyelitis" will, we are sure, draw the attention of the members of the profession towards the prevention and treatment of this disease on proper lines, especially because the increasing incidence of the disease and consequent problem of rehabilitation of the increasing number of cripples have not attracted any attention even by medical men.

He rightly condemns split minds in medicine and secret remedies and unethical advertisements in the lay press and narrow parochialism in medicine, when the benefits of medicine are universal. These remarks apply to all the systems of medicine which are practised and to the protagonists of those systems.

His statements that medicine should not be confused with mere drug administration and that the outlook of the Government should be not to give a bottle of medicine but to give a bottle of good health would go home to the public and to the Governments. The belief among the public in the bottle medicine should be laid at the doors of the medical practitioners. The lay public are not anxious to drink medicine for the cure of their ailments. They resort to the bottle of medicine only when it becomes necessary. The natural desire is to avoid taking medicines and to return to health when diseased with as less of medical treatment as possible. The public are generally guided to those medical practitioners who are readily available nearby in the economic conditions in which they are placed. The public are not to blame if their environments and economic conditions continue to be at the low level in which they are at present. It is the want of facilities for proper medical advice and institutional treatment, which are the root causes for high disease incidence and mortality rather than ignorance and superstition, which are considered the special attributes of village folk. Dr. Kini has not given any solution for the utilisation of the existing medical practitioners of the indigenous systems or for the prevention of increasing quackery in them by the failure on the part of Government in providing proper education and training in the systems of medical practice by the integration of modern medicine with the indigenous systems of medicine. The medical practitioners exist for the public but the public do not exist for the sake of medical men. The trade-guild-mentality should not pervade the actions of the medical practitioners, to whichever system of medicine they are ardent adherents by conviction. From the point of view of the 80 per cent of the public, who now in the rural areas are dependent on medical relief from the qualified or unqualified indigenous medical practitioners and the poor finances of Government, which exist at present and will do so for many years, owing to the unfortunate political developments, which

have taken place as a result of the division of the country into two in a hasty manner, we have to support that school of medical practitioners, who think that it is not impossible to integrate indigenous systems with the modern system of medicine. Madras has given the lead in this direction. The development in this direction has been retarded by the wavering and changing attitude of the Government.

We endorse the opinion of Dr. Jivraj N. Mehta, the Director-General of Health Services:—It is to be hoped that, with the developments now in progress, the differences between the training of practitioners of indigenous systems of medicine and that of the student of modern medicine will become progressively less and less. The employment of these practitioners of indigenous medicine in State Health Services is a matter which has been engaging the attention of Provincial Governments. It should be possible to utilise them for a wide variety of functions, particularly in the preventive field, with adequate training given to them either or as part of their curriculum or at a later stage before admission to public service.

Dr. C. Dvarkanath in his presidential address at the L.I.M. Conference held recently at Bellary has expressed that it is folly to ignore the modern approach to problems of service, including medicine, and that it is equally unwise to suppress the great heritage of the indigenous medicine. He pleads for developing a synthesis of the Indian and Western methods and has described a scheme for the organisation of research in different aspects of the Indian systems of medicine.

Dr. M. G. Kini is right in saying that

"Sentiment should not outweigh reason and later be faced with a problem of caste which would be difficult to get rid of. It is not by ignoring the indigenous systems of practice that the castes in the medical profession can be abolished. That way lies the perpetuation of castes and persistence of quackery. The Government's policy should be adapted to the existing facts and problems in the country. The plans in pursuit of an ideal and based on conditions in other countries are unlikely to stand the test of immediate and urgent needs in our country."

Dr. M. G. Kini's remarks on the School of Indigenous Medicine in Madras are worth noting. The defects pointed out by him are due to non-implementation by the local Government of the recommendations made from time to time by the Principal and governing body of the Institution. However his scheme for research in Indian Medicine will not find favour with the practitioners of Indigenous systems.

Dr. M. G. Kini's observations on medical education, medical curriculum, selection of students, post-graduate specialisation in Surgery, in Anaesthesia, in Industrial medicine, Training of technicians, Research, etc., merit respectful consideration.

His presidential address is an outstanding one among the large number of addresses read in the conference week at Bombay and has set a standard for presidential address in the future. We congratulate him heartily on his extremely thought-provoking address.

Sir R. N. Chopra in the course of his presidential address to the Thirty-fifth session of the Indian Science Congress has expressed himself strongly

in the following words in order to awaken the practitioners of the modern Western system of medicine in India from the stupor of false self-satisfaction and self-glorification and to shake out of them the superiority complex which is exhibited in their talk and actions:—

"If the state of medical practice in India is examined without prejudice, one is forced to the conclusion that with the exception perhaps of a small number of institutions, such as large hospitals and colleges and of a comparatively small number of practitioners, the practice of Western Medicine is not even a shade better than that of indigenous medicine. . . . The charge of irrationalism applies as much to him as to the practitioner of indigenous medicine. It is a sad commentary on things that though Western Medical Science which has all along received State aid and encouragement has been well established in the whole country for at least half a century, it has not yet succeeded in making the average educated men more health-conscious, to say nothing of the uneducated and ignorant masses." As regards the Indigenous system of medicine his recommendations based on a correct observation of the existing circumstances and on factual findings will receive the widest approval and support. He has stated that "the indigenous systems—good, bad or indifferent as it may be—still caters for the needs of the major portion of the population, particularly in rural areas. . . . It should be used to the best advantage, while the process of evolution of a perfect system of rationalisation of medicine is being worked out. During this transition period it is hoped that indigenous medicine will overhaul itself and become an integral part of the permanent system evolved."

Sir Chopra maintains that at last a partial synthesis of the two systems of indigenous and western medicine is possible. There are about a hundred thousand practitioners of indigenous medicine in India. Many of them could be utilised for extension of medical relief and preventive medicine by putting them through a short course of study and suitable training.

Inaugurating the 17th Madras Provincial L.I.M. Conference, Hon. A. B. Shetty, Health Minister, said that the Indian System of Medicine should not be brushed aside, because it had the accumulated wisdom of centuries in the use of herbs and minerals. The Government's proposals (1) to establish a central pharmacy and stores at Madras for manufacturing standardised Indian medicines and supplying them to hospitals, dispensaries and the public, (2) to attach a Herbarium to the Pharmacy, are steps in the right direction. It is hoped that in the proposed Research Institute stress will be laid on clinical research on the lines drawn up by Vaidya Rathna Dr. G. Srinivasamurthi, the ex-Principal of the School of Indian Medicine. The recommendations of the Governing Body of the school ought to receive proper consideration by the Government.

The Premier Hon. O. P. Ramaswami Reddiar has expressed in his reply to the welcome addresses by the Municipal Council of Salem about the 29th December last year that to a large extent the prevalence of disease in this country is due to poverty and the low economic condition of the people and that owing to

[March, 1948]

Delivering the convocation address of the College of Physicians and Surgeons at Bombay early in January Dr. Jivraj N. Mehta, Director-General of Health Services, has emphasised the need for a national health programme, the object of which should be to provide the individual with adequate curative and preventive medical facilities, not in relation to his capacity to pay for them but in relation to the requirements of his mental and physical conditions. But such provision is contingent on the finances of the Government. He pointed out that though India's finances would not allow of vast expenditure now on health schemes, there was no reason why a health programme suited to the conditions now obtaining should not be evolved. He considers it necessary to bring about the coalescing of the Medical and Public Health Departments in the Provinces into a single organisation, so that the fullest possible measure of co-operation between the two branches of health administration may be secured. In the present financial conditions, he recommends concentrating attention, organisation and expenditure on smaller units at the sub-divisional or taluk levels. As regards Rural Medical Service, he advocates further extension by the present policy to secure a proper distribution of qualified doctors throughout the rural areas, until it is possible to institute a whole-time general medical service for these places. He has drawn the attention of Provincial Governments that in their Health plans adequate emphasis has not been laid on the training of ancillary health personnel, the cost of whose training is relatively less than that required for medical education.

In his inaugural address at the Radiological Conference he has laid the responsibility primarily on the members of the medical profession for enlightening the public in regard to health and disease and for promoting the growth of a public opinion which will demand the establishment, through the efforts of the State and voluntary bodies, of those conditions for healthful living, which alone can provide the foundations for a superstructure of sound public health. How few are the members of the profession who feel this responsibility and volunteer for such service in an honorary capacity! We are afraid that even the salaried members of the profession have not fully realised their duty to the public in this health propaganda. All honour to those few members of the profession, who have been responsible to direct benefactions of charitably disposed persons towards the foundation or the extension of institutions for medical relief, prevention of disease, or promotion of health.

Dr. A. D. Mastakar in his welcome address on the occasion of the conference of the All-India Medical Licentiates' Association has urged the Indian Medical Associations to work for the abolition of the present compartmentalism in medical education, medical services and registration and has pleaded for the amendment of the Indian Medical Council Act to give recognition to the Licentiates.

In the plethora of medical conferences and various addresses by the leaders of the medical profession in India, who had assembled at Bombay during the Xmas week, the Presidential address of Dr. M. G. Kini to the Association of Surgeons of

India deserves special mention. He is the Superintendent of the Stanley Medical College, Madras, and the outstanding Orthopaedic Surgeon in India today. By his high academic attainments, vast experience as a general Surgeon and later as a specialist and his long connection with educating and training of medical students for the University Graduate and post-graduate degrees, he has earned to the high regard and esteem, in which he is held by the Surgeons of India and the Medical Educationists.

That part of his address on "Poliomyelitis" will, we are sure, draw the attention of the members of the profession towards the prevention and treatment of this disease on proper lines, especially because the increasing incidence of the disease and consequent problem of rehabilitation of the increasing number of cripples have not attracted any attention even by medical men.

He rightly condemns split minds in medicine and secret remedies and unethical advertisements in the lay press and narrow parochialism in medicine, when the benefits of medicine are universal. These remarks apply to all the systems of medicine which are practised and to the protagonists of those systems.

His statements that medicine should not be confused with mere drug administration and that the outlook of the Government should be not to give a bottle of medicine but to give a bottle of good health would go home to the public and to the Governments. The belief among the public in the bottle medicine should be laid at the doors of the medical practitioners. The lay public are not anxious to drink medicine for the cure of their ailments. They resort to the bottle of medicine only when it becomes necessary. The natural desire is to avoid taking as less of medical treatment as possible. The public are generally guided to those medical practitioners who are readily available nearby in the economic conditions in which they are placed. The public are not to blame if their environments and economic conditions continue to be at the low level in which they are at present. It is the want of facilities for proper medical advice and institutional treatment, which are the root causes for high disease incidence and mortality rather than ignorance and superstition, which are considered the special attributes of the village folk. Dr. Kini has not given any solution for the utilisation of the existing medical practitioners of the indigenous systems or for the prevention of increasing quackery in them by the failure on the part of Government in providing proper education and training in the systems of medical practice by the integration of modern medicine with the indigenous systems of medicine. The medical practitioners exist for the public but the public do not exist for the sake of medical men. The trade-guild-mentality should not pervade the actions of the medical practitioners, to whichever system of medicine they are ardent adherents by conviction. From the point of view of the 80 per cent of the public, who now in the rural areas are dependent on medical relief from the qualified or unqualified indigenous medical practitioners and the poor finances of Government, which exist at present and will do so for many years, owing to the unfortunate political developments, which

March, 1948]

I. M. J. ADVERTISER

2211

For effective treatment of acute and chronic amoebic dysentery and intestinal Amoebiasis

the best chemotherapeutic agent

VIO-ENTEROL

tablets of Iodochlorohydroxyquinoline

Issued in tubes of 20 tablets of 0.25 gm. each

For further particulars please write to:—

ADCCO LIMITED,
CALCUTTA-27.

BITACAFFIN

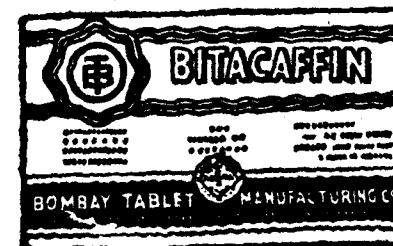
(HEADACHE TABLETS)

Relieves all kinds of pains: Such as head-ache, tooth-ache, pain in the legs and joints, insomnia, pain during menses time etc., and cures Malaria Fever.

No harm to Heart or Stomach.

Available at all Chemists.

Per packet of 3 Tablets 1 Anna.



BITALAX

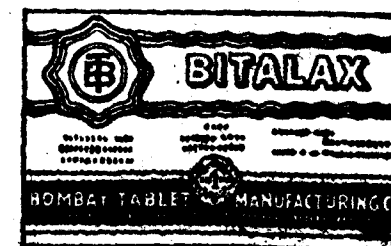
(SWEET CHOCOLATE LAXATIVE TABLETS)

Mild, pleasant and effective remedy for constipation.

Available at all Chemists.

Per packet of 2 Tablets 1 Anna.

Stockists:—M/S. DADHA & CO., P.T., MADRAS.



Manufactured by:—

BOMBAY TABLET MANUFACTURING CO.,

Post Box 2092,

176, ZAVERI BAZAR, BOMBAY 2.

[March, 1948]

high cost, Western medicine is not favoured by the poor people and that the Government's primary duty is to extend medical relief to villages.

Let us hope that before long the recommendations of the Medical and Public Health Conference convened by the Hon. Sri A. B. Shetty, Minister for Public Health, in June last year, will be published and the Government declare in the light of those recommendations their policy and future plan of action in the Department of Public Health, including medical relief and medical education.

The public feel sick of conferences and committees and of their voluminous reports and elaborate recommendations and look forward to quick and safe and practical remedies taken by the local Government to improve the standard of Public Health, remembering that "First things First" is as true of Public Health including Medicine as in other departments of Government.

ANNOUNCEMENTS

The General Secretary, A.I.M.L.A., announces that Mr. S. V. Ramaswamiah, R.A., has been appointed as the Auditor of the Association for the year 1948.

Provincial Secretary, Gujarat and Kathiawar Branch, I.M.A., announces as follows:

Under the auspices of the Gujarat and Kathiawar Provincial Branch of Indian Medical Association, 2nd Provincial Conference of the medical men of Gujarat—Cutch—Kathiawar will be held at Rajkot (Kathiawar) on 27th and 28th March, 1948, under the Presidentship of Rai Bahadur Dr. J. P. Modi, of Ahmedabad. An influential reception committee has been formed under the Chairmanship of Col. Kulvant Rai, Civil Surgeon, Rajkot. Dr. Jivraj N. Mehta, Director-General of Medical and Health Services of India, has kindly consented to inaugurate the conference.

The attention of the Members of the A.I.M.L.A. are drawn to the G.S. Circular and the Voting paper relating to the referendum on Amalgamation of the A.I.M.L.A. with the I.M.A., enclosed in this issue facing the Editorial page.

The Members are requested to send their Voting papers without fail and in time to the General Secretary, 502, Narayanpeth, Poona.

March, 1948]

I. M. J. ADVERTISER

2218

For effective treatment of acute and chronic amoebic dysentery and intestinal Amoebiasis

the best chemotherapeutic agent

VIO-ENTEROL

tablets of Iodochlorohydroxyquinoline

Issued in tubes of 20 tablets of 0.25 gm. each

For further particulars please write to:—

ADCCO LIMITED,
CALCUTTA-27.

BITACAFFIN

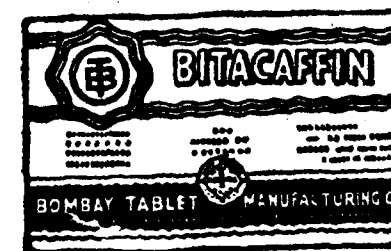
(HEADACHE TABLETS)

Relieves all kinds of pains: Such as head-ache, tooth-ache, pain in the legs and joints, insomnia, pain during menses time etc., and cures Malaria Fever.

No harm to Heart or Stomach.

Available at all Chemists.

Per packet of 3 Tablets 1 Anna.



BITALAX

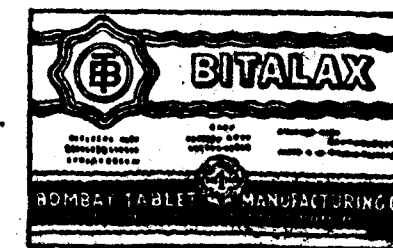
(SWEET CHOCOLATE LAXATIVE TABLETS)

Mild, pleasant and effective remedy for constipation.

Available at all Chemists.

Per packet of 2 Tablets 1 Anna.

Stockists:—M/S. DADHA & CO., P.T., MADRAS.



Manufactured by:—

BOMBAY TABLET MANUFACTURING CO.,

Post Box 2092,

176, ZAVERI BAZAR, BOMBAY 2.