

The Indian

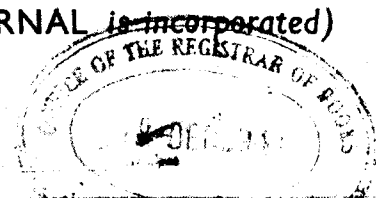


FOUNDED 1906

Medical Journal

Journal of the All-India Medical Licentiates' Association

(With which THE AGRA MEDICAL CLUB JOURNAL is incorporated)



Vol. 35 No. 12

CONTENTS

December, 1941

Addresses and Articles

Electrocution

Dr. G. V. Joglekar, F.R.C.S. (Edin.),
D.L.O. (Lond.) ...

287

Infantile Biliary Cirrhosis (6)—Symptoms, Pathology, Diagnosis and treatment

Dr. S. Balasundaram ...

292

Treatment of Infantile Hepatic Cirrhosis

Dr. A. V. S. Sarma, M.B.B.S., D.C.H.
(Lond.) ...

297

Clinical Notes

Enlarged Thymus in Infants

Dr. A. V. S. Sarma, M.B.B.S., D.C.H.
(Lond.) ...

301

Vaginal Hysterectomy for Placental Polypus

Dr. Miss Kamal K. Tare, L.M.P. ...

302

A case of Pregnancy Hydremia

Dr. M. N. Paladhi, L.M.F. ...

302

Clinical Notes—Contd.

A case of Malarial Aphasia

Dr. M. N. Paladhi, L.M.F. ...

302

Entero-Vioform in Sub-acute Amoebic Dysentery

Dr. S. Balasundaram ...

302

Editorial

Electrical Accidents ...

305

Infantile Biliary Cirrhosis ...

305

Special Articles

War Surgery in the Old World

Dr. Waldemar Schweisheimer, M.D. ...

307

Modern Surgery

T. A. Gopalakrishna Rao, L.M.P. ...

309

Foreign Medical News

Indian Medical News

Epitome ...

311

Abstracts ...

312

Index to Vol. 35, 1941

Medico-political Supplement

314

315

31st A.I.M.L.A. Conference * Ahmedabad * 23, 24, 25 Dec. 1941

President Elect: Dr. A. D. MUKHARJI

A. I. M. L. A. Membership Fee : Rs. 4 per annum

Annual Subscription (Non-members): Indian Rs. 6, Foreign Rs. 7-8

Single Copy: Ordinary Number Annas Eight. Special Number Rupee One

Editorial and Publishing Office: 131, Coral Merchant Street, Madras

PUBLISHED ON THE 15TH OF EVERY MONTH

Ergoapiol-(Smith)

REG. U.S. PAT. OFF. AND FOREIGN COUNTRIES

A Menstrual Regulator...

When the periods are irregular, due to constitutional causes, ERGOAPIOL (Smith) is a reliable prescription. Containing superior ergot and apiol (M.H.S. special) together with aloin and oil of saffron of the highest quality, this preparation effectively stimulates uterine tone and controls menstrual and postpartum bleeding.

In cases of *Amenorrhea*, *Dysmenorrhea*, *Menorrhagia* and *Metrorrhagia*, Ergoapiol

serves as a good uterine tonic and hemostatic. Valuable in obstetrics after delivery of the child and for the menstrual irregularity of the *Meno-pause*.

Prescribe 1 to 2 capsules 3 or 4 times daily. Supplied only in packages of 20 capsules. Literature on request.

As a safeguard against imposition the letters MHS are embossed on the inner surface of each capsule, visible only when the capsule is cut in half as shown.



MARTIN H. SMITH COMPANY
NEW YORK, N.Y., U.S.A.

123977

From one Doctor to another

The Pro

One of the difficulties of medicine is to sub-

maladies, particularly those which are distinctly ple-
and strength-building
on an organism no longer resistant
readily restore vitality and strength.

WINCARNIS is a blend of pure matured red
wines combined with strengthening elements and
vitamin malt extract (Vitamins A and D) prop-
erly balanced and of uniform composition. It is
readily assimilable and may be safely adminis-
tered in all cases when vitality is at a low ebb.

Recommended by the proprietors of WINCARNIS—the tonic wine

WINCARNIS WORKS, NORWICH, ENGLAND.

WI

NIS

★ over 25,000
recommendations from Medical Men



HEWLETT'S MIXTURE

(Mist. Pepsinæ Co. c. Bismutho, Hewlett) With or without opium
for

DYSPEPSIA and DISEASES OF THE STOMACH

OVER 60 YEARS' REPUTATION.

DOSE: Half to one drachm diluted.

Price in England:

4-oz. bottles, 10d. oz.; 10, 22, 40 and 90-oz. bottles, 12/6. lb.

Introduced and prepared only by

C. J. HEWLETT & SON, LTD.,
35/43, CHARLOTTE ROAD, LONDON, E.C.2.

Agents who stock Hewlett's preparations.

CALCUTTA:

Smith Stanistreet & Co., Ltd.
M. Bhattacharyya & Co.
B. K. Paul & Co., Ltd.

BOMBAY:

Amersey Khimjee & Co.
Ratilal Hemrai

MADRAS:

Madras Drug Store
Dadha & Co.
Appah & Co.



one of HEWLETT'S preparations
C. J. HEWLETT & SON, LTD., MANUFACTURING CHEMISTS, LONDON, E.C.2.

THE WELL-RENOWNED KRISHNA PRODUCT

PHTHISIN

Regd.

PHTHISIN is a safe and ideal remedy for Phthisis and Asthma. Innumerable tests and testimonials. Used throughout India for over 16 years. An early and intensive course of Phthisin causes rapid disappearance of symptoms, *Vide Ind. Med. Jr., Vol. 34, No. 2, pp. 43-44.*

PHTHISIN, besides early disappearance of symptoms, causes rapid increase in the body-weight, and the sputum is rendered T. B. free by 10-20 bi-weekly injections. No toxicity and no danger.

LITERATURE AND CASE REPORTS ON REQUEST

Price Rs. 12/- per box of 6 x 1 c.c. ampoules

For doctors: Rs. 10 only—per box.

OTHER KRISHNA PRODUCTS

LEUCOSIN (oral)

A sure cure for Leucorrhoea acute or chronic—
no wash, no injection required. Tasteless.

Price Rs. 5/- full course

Complete cure in 45 days

GONOSIN (oral)

A dependable new medicine for the radical cure
of GONORRHOEA in all its stages. No injection
required.

Price Rs. 5/10/- full course

(45 days)

Sole Distributors:

THE KRISHNA PHARMACY, BENARES CITY, INDIA

For Ready Response in C-avitaminosis

VITACIN

TABLETS :: :: AMPOULES

1 c.c. or 1 tablet

represents 0.025 gm. L Ascorbic Acid
or 500 International Units of vitamin C
and is equivalent to 2 tea-spoonfuls
of fresh orange juice

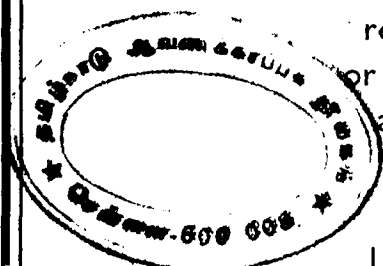
Packings :

1 c.c. & 2 c.c. ampoules for injection
25 tablets in a tube for oral use

BENGAL CHEMICAL AND PHARMACEUTICAL WORKS LD.

CALCUTTA :: :: BOMBAY

Madras Agents:— N. DASAI GOWNDER & CO., 41, Bunder Street



The most recent advance in the treatment
of Syphilis and Yaws

THIO-SARMINE

Di-sodium-dioxy-diamino-arsenobenzene-
methylene sulphonate B.R.I.

Purest Sulpharsenobenzene Compound
Prepared for the first time in India

LOW TOXICITY

CHEAPEST IN PRICE

POWERFUL SPECIFIC

In the Treatment of Syphilis and Yaws

**In all Stages of the Diseases
WITHIN THE SHORTEST TIME**

ARSENO-SOLVENT is supplied with ampoules of
Thio-Sarmine for painless Intramuscular injection.

*Details about its use and reports of
cases treated successfully with the drug
are sent free on application to:—*

The Brahmachari Research Institute

82-3, Cornwallis St., P.O. Shambazaar
CALCUTTA



HIND CHEMICALS LD., CAWNPORE

BACTERODIN

For Solid Defence

Please write for our
illuminating literature
for detailed description

LISTER ANTISEPTICS
CALCUTTA

This specialised non-specific protein
therapy rapidly mobilises the natural
defence forces in our body by
stimulating the reticulo endothelial
system and helps to combat infectious
diseases and diverse inflammatory
conditions. Bacterodin does not
give rise to unpleasant by-effects.

MALARIDOL



Malaridol combats Malaria of all types
by virtue of its composition, the chief
ingredients of which are Chatim Bark
and Chiratta.

PACKINGS :

Bottles of 1000 Tablets Rs. 14-8; 500—Rs. 7-8;
63—Rs. 1-4; 27—0-8; 9—0-3. Each Tablet is
made up of 5 grains.

JAMBU & COMPANY

Manufacturers of Pharmaceutical Products
Thyagarayanagar, MADRAS

**MEDICINES WHICH ADD TO THE
REPUTATION OF DOCTORS
PRESCRIBING THEM**

ASTHAMORINE for Asthma and Bronchitis.

RINGORENE for Ring worm and allied
skin diseases.

TRACHORINE for Trachoma and its com-
plications.

LEUCOMINE for Leucoma, Corneal Opa-
cities, Blepharitis, Ptery-
gium, etc., etc.

*For free literature and full details
write to:—*

THE JAWAHIR CHEMICAL WORKS,

Head Office :

AGRA

Branch Office :

DALIGANJ, LUCKNOW



'SALVITAE'

THE TOXEMIA OF PREGNANCY

The keys to success in dealing with the Toxemia of pregnancy are to be found in elimination, alkalinization and the maintenance of high metabolic efficiency on the part of the organism. The parental care programme should include the systematic use of SALVITAE. The nitrogenous products of putrefaction, ordinarily rendered harmless by the liver, may be pathogenic in the pregnant woman. So sensitive is the body in the antitoxic state to slight additional poisoning that SALVITAE will tip the scale in the right direction. Under its use in conjunction with proper diet and hygiene both the minor and major evidences of toxemia may be forestalled or controlled and the majority of women of the pre-eclamptic category carried safely to term and delivered without toxemic disaster.

MULLER McLEAN & Co., Inc., Tower House, Chowringhee Square, Calcutta and Hashim Building, 38, Church Gate St., Bombay; 87, Sule Pagoda Road, Rangoon, (British Burma).

WILSON & Co., 5-8, Jehangir St., George Town, Madras.

AMERICAN APOTHECARIES COMPANY, (New York)

GYNOMIN

TRADE MARK Regd. No. UK.609162

SOLVING

A DIFFICULT PROBLEM

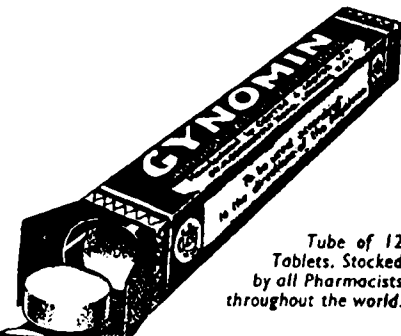
The question of contraceptives is probably one of the most difficult that you are called upon to answer. Upon it the health and future happiness of your patient must depend. You can recommend only a preparation which has been tried and tested and found absolutely reliable.

GYNOMIN was formerly marketed under the name of **SPETON**

Manufactured by

COATES & COOPER, LTD.

21, Eastbury Road, Northwood, Middx. ENGLAND.



Tube of 12 Tablets. Stocked by all Pharmacists throughout the world.

MOST RELIABLE AND BEST TOLERATED



CALCIUM FOOD

WITH IRON AND VITAMIN D.

The fact that in many leading hospitals for Women and Children, Alembic ALCALZIUM is now a routine treatment, is sufficient proof of its therapeutic efficiency. Thousands of Doctors have endorsed it as an ideal calcium compound, most invaluable in all cases of disturbed calcium metabolism—whatever its cause.

INDICATIONS:

In all conditions of calcium deficiency e.g. rickets, teething, deficient growth, anaemias, pulmonary tuberculosis, dental caries, convalescence, sprue, pregnancy, etc.

CONTAINS
Calcium Lactate 3.5 gr.
Sodium Lactate 2.5 gr.
Dicalcium phosphate 2.0 gr.
Ferri et Ammon Citras 1.0 gr.
Vitamin D 100.0 units.



Alembic **ALCALZIUM**
WITH IRON AND VITAMIN D.
ALEMBIC CHEMICAL WORKS CO. LTD. BARODA

MYELADOL

A biologically assayed nutritive reconstructive tonic containing
vitamins A, B, D, & G with iron

Each fluid ounce contains:

Super D Cod Liver Oil	... 120 mins.
Glycerinated Extract Red Bone Marrow	... 10 mins.
Iron and Ammonium Citrates	... 4 grs.
Malt Extract, non-diastatic	... q. s.

Myeladol contains 25 per cent by volume of Super D cod liver oil which is biologically standardized by the official U. S. P. methods for both vitamins A and D. The vitamin A content is also verified by calorimetric and spectrographic methods. Each ounce of Myeladol represents not less than 12,000 U. S. P. units of vitamin A and 2,200 U. S. P. units of vitamin D.

The malt extract furnishes a generous supply of the vitamin B complex. Each ounce of Myeladol is biologically standardized to contain 60 Sherman units of vitamin B and 50 Sherman units of vitamin G.

The iron salts with bone marrow extract are of value in anæmias of nutritional origin.

Myeladol is an excellent source of nourishment, having a caloric value of about 150 calories per ounce.

Myeladol is particularly useful as a nutrient tonic in wasting diseases, underweight, malnutrition and convalescence where there is apt to be some degree of nutritional deficiency disease and anæmia.

DOSAGE:

1 to 2 dessertspoonfuls after meals for adults.

1 to 2 teaspoonfuls after meals for children.

Available in 4, 8, 32, and 128 ounces bottles.

MANUFACTURED BY:

THE UPJOHN COMPANY,

KALAMAZOO, MICHIGAN, U.S.A.

Head Office:

T. M. THAKORE & CO.,

43, Churchgate Street,

Fort, Bombay.



Sole Agents:

T. M. THAKORE & CO.,

1/10 & 1/10-A, Stringer St.,

G. T., Madras.

Branches:

CALCUTTA—KARACHI—LAHORE—RANGOON—NOVA-GOA

TRACHEOBRONCHITIS.



As an adjuvant to internal medication

PROLONGED HEAT

Non-irritating

No Systemic Reactions

Sample on Request

THE DENVER CHEMICAL MFG. COMPANY

163 Varick Street, New York

Prompt relief
without discomfort

ASTHMA

TRADE MARK 'VAPOROLE' BRAND

SOLUTION OF ADRENALINE 1 in 100

For oral inhalation. Gives satisfactory symptomatic relief in asthmatic attacks, without the discomfort and inconvenience of hypodermic injection.

5 c.c. in glass-stoppered bottles

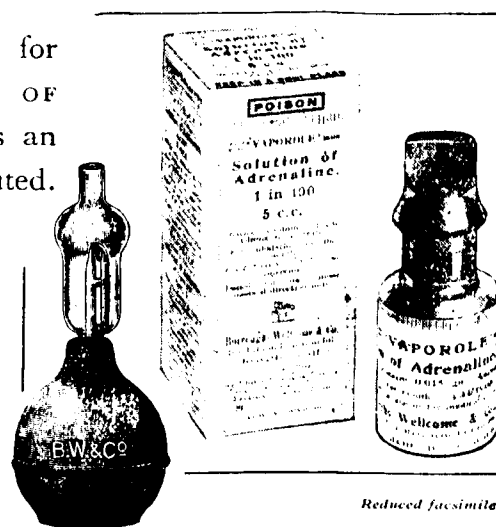
TRADE MARK 'AGLA' BRAND

ATOMISER

Designed and introduced primarily for use with 'VAPOROLE' SOLUTION OF ADRENALINE, 1 in 100. Enables an exceedingly fine spray to be distributed.

Packed in strong cartons

Unpleasant side-effects, which frequently follow subcutaneous injection of adrenaline, are rarely experienced after inhalation of 'VAPOROLE' SOLUTION OF ADRENALINE, 1 in 100.



Literature to Medical Men
on request



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

H 3861 Ex.

COPYRIGHT

ADDRESSES AND ARTICLES

Electrocution*

● Dr. G. V. Joglekar, F.R.C.S. (Edin.), D.L.O. (Lond.)
(Surgeon, Jaya Arogya Hospital, Lashkar—Gwalior)

Technical Electricity and Accidents

As a result of the rapid scientific and industrial development that has occurred since the beginning of the present century, technical electricity is being more and more widely used for industrial and domestic purposes, not only in the highly industrialised countries of Europe and America but also in this country where a large number of industries are using electricity extensively. Naturally, workers engaged in these industries are constantly exposed to dangers of accidental injuries from electric current. Electricity is being similarly used for domestic purposes not only in the big cities and areas surrounding factories and mills, but even in smaller towns which are being increasingly supplied with electricity for street lights and domestic use. Owing to this increasing use of electricity, it is inevitable that cases of accidental injuries from the electric current will be on the increase, and that workmen, first aid workers, and medical men in India will have to deal with such cases in an increasing measure.

At present there is neither any literature, nor any clinical reports or statistics on this subject published in our country. It is reported that in the year 1937, there were 79 deaths from technical electricity in England but none from lightning, though in the year 1936, nineteen persons met their death from lightning in that country.

Under war conditions, there is a likelihood of an increase in the number of deaths from electrocution. Electrocution is a form of asphyxial death, a condition of suspended animation, in which all the ordinary clinical tests for death are entirely fallacious and require immediate prolonged and persistent artificial respiration.

Underlying Factors

If the underlying factors of this condition are more fully appreciated and the value of prolonged artificial respiration more generally realized, many more lives can be saved by the efforts of medical men, first aid workers, and trained workmen.

Apparent death due to electrocution is likely to occur suddenly, unexpectedly, and dramatically in the home, factory, or power station. Such accidents occur under conditions in which onlookers are apt to lose their heads, and in circumstances and situations far removed from hospitals and dispensaries.

For these reasons, it is necessary to consider mainly those methods of resuscitation which can be applied at once and on the spot, and which do not involve the use of complicated apparatus, such as is hardly likely to be available under the conditions in which these accidents generally occur.

* A lecture delivered at the Lashkar Branch of the Gwalior Medical Association, on 6th September 1941.

As Jellinek puts it: "People have been killed or injured by atmospheric or technical electricity, by low or by high tension, by direct or alternating current, by low or by high frequency, while others in similar circumstances have not suffered any injury whatsoever." Electrocution may thus be the result of lightning or of any type of electrical current. In electrical accidents it is often too readily assumed that all that matters is the question of voltage, on the assumption that the risk to life bears a simple relation to voltage.

This, however, is largely fallacious. The voltage factor is one of the many factors which must be considered in connection with the accident; some of the other factors being the perfection of the contact, the duration of the flow, the condition of moisture of clothing and skin, the resistance offered by the body, and even psychological factors such as awareness of the individual of the possibility of a shock.

In the case of lightning, the victim is likely to be caught out of doors, while in the case of technical electricity, the accident may occur in the power house, on the electric train, or in the home, office or factory, or out of doors in connection with repairs to or work upon electric mains or cables.

A proportion of these accidents will therefore occur under conditions of shelter.

These accidents whether due to natural or to technical electricity produce their effects in three ways: first by passage of the current through the central nervous system they produce unconsciousness and an acute bulbar palsy; secondly, they produce electric burns, and thirdly, fractures may result from the violent and spasmodic contractions of muscles.

From the point of view of treatment of these cases, attention must be directed first to the injuries to the central nervous system.

The victims of these accidents are often rendered unconscious by the passage of the current or they may be conscious but unable to release themselves from the contact. They are, however, rarely killed outright as the result of the electric shock. If unconscious they are really in a state of suspended animation. Respiration has ceased, the pulse is absent, the heart sounds are inaudible, and the normal reflexes can no longer be elicited. According to ordinary clinical tests they are apparently dead, but they are not actually dead although they will certainly die, if left untreated. Death is the result of an acute bulbar palsy which may lead to failure of the heart, or of the vasomotor or the respiratory system.

Electrical conductivity of the heart persists for a considerable time into the phase of suspended animation and normal rhythmical activity may be restored by prompt artificial respiration. Cerebral oedema may rapidly develop in some of the cases and be responsible for the motor agitation and for the prolonged periods of artificial respiration, which are at times necessary.

Treatment of Electrocution

In the electrical accidents treatment will involve a consideration of the following factors:—freeing the victim from electrical contact, treatment of unconscious-

ness and suspended animation, treatment of cerebral œdema, treatment of electrical burns, and treatment of fractures and other injuries.

Freeing the victim from electrical contact:—The victim must be freed as rapidly as possible. This will involve cutting off the current or removing the victim from the contact whichever is quicker. Many fatalities might be prevented by cutting off the current, the moment the accident is recognised. If this is not possible, the victim must be dragged away from the contact, the greatest care being exercised, or else the would-be rescuers may be electrocuted also. This may be carried out by the use of rubber gloves, or with the hands carefully padded with newspapers, or by means of non-conductors such as a dry stick, broom handle, dry rope, or a dry coat. But whatever method is used, this freeing must be done quickly and carefully. In cases where this is impossible it might be necessary to cut off the source of electrical current with an insulated tool such as an axe with a long wooden handle.

Treatment of suspended animation:—As soon as the victim is freed from contact with electrical current, artificial respiration must be started. This should be instituted even before the doctor is summoned and if only one person is present, he should start artificial respiration without delaying to send for the doctor, and even if it is believed that the man is dead, artificial respiration should be carried out, until the doctor declares the victim dead.

The method most often employed in England, France and the U. S. A. is that known as Schäfer's, while in Central European countries, specially Austria, Sylvester's method is favoured. In India, holders of St. John Ambulance Association First Aid Certificates are taught both the methods.

Experimental work suggests that Sylvester's is the more efficient in terms of pulmonary ventilation but this is not a sufficient reason to abandon the widely known Schäfer's method. The advantages of Schäfer's method are, it is simple, it can be carried out unassisted if necessary and it is not essential to hold the tongue and jaw forward as with Sylvester's method. It is impossible to be dogmatic as to which method should be employed in any given case. The choice will vary with the condition for which artificial respiration is being carried out; the personal knowledge, ability, and skill of the rescuer; the number of assistants available; and the presence of associated injuries. It is more important that the artificial respiration be immediate, prolonged and persistent than that any particular method should be carried out.

The following details of Schäfer's method are based upon a paper by Bates, Gaby and MacLachlan in the *Canadian Medical Association Journal* (1938, 39, 120).

1. Rapidly remove from the mouth any foreign material such as false teeth or tobacco. If the mouth is tightly shut, pay no more attention to it till later. Do not stop to loosen the patient's clothing unless it is obviously tight. Every moment is precious.

2. Lay the patient on his belly, one arm extended, the other arm bent at the elbow, and with the face turned outwards and resting on the hand and forearm, so that the nose and mouth are free for breathing.

3. Kneel straddling the patient's thighs. Place the palms of the hands on the small of the back with the fingers resting on the ribs and the little finger over the lowest rib.

4. With the arms held straight, swing forward slowly so that the weight of your body is gradually brought to bear upon the patient. The shoulder should be directly over the hand at the end of the forward swing. Keep the elbows straight. This movement should take about two seconds.

5. Now immediately swing backward and completely remove the pressure.

6. After two seconds swing forward again. Thus repeat deliberately twelve to fifteen times a minute the double movement of compression and release—a complete respiration in 4 or 5 seconds.

7. Continue artificial respiration without interruption, until natural respiration is restored or until there are unequivocal signs of death, such as rigor mortis, cooling of the body, or post-mortem staining.

8. When the artificial respiration has been started and while it is being continued, get an assistant to loose any tight clothing about the patient's neck, chest or waist.

9. *Keep the patient warm.*

10. Give nothing by the mouth.

11. To avoid strain on the heart, when the patient revives, he should be kept lying down and not allowed to stand or sit up. Hot drinks may be given after revival and the return of consciousness.

12. Artificial respiration should be carried on at the nearest possible point to where the patient receives the injuries. *He should not be moved from this point until he is breathing of his own volition.*

13. Should it be necessary, owing to extreme weather conditions, other injuries, etc., to move the patient before he is breathing normally, artificial respiration must be carried on uninterruptedly during the time he is being moved.

14. A brief return of natural breathing is not a certain indication for stopping artificial respiration. At times, the patient after a temporary return of natural breathing, stops breathing again. He must be watched and if natural breathing stops, artificial respiration must be resumed at once.

15. In carrying out artificial respiration, it may be necessary to change the operator. This change must be made without interruption and without losing the rhythm.

16. If alone with the victim, do not neglect to start artificial respiration at once, the first few minutes are valuable.

17. In apparent death due to electrocution, the ordinary tests for death, such as pulse, heart sounds, respiration, and corneal reflex, must not be accepted. Death should only be assumed in the presence of rigor mortis, cooling of the body, or post-mortem staining.

This artificial respiration must be carried out systematically, and rhythmically till normal respiration is established or until unequivocal signs of death appear.

This ensures the safety of those cases in which the circulation is not completely arrested, the ventricles being in a state of fibrillation. It is just possible that in such cases artificial respiration may act in the same way as cardiac massage and restore a normal rhythm. Such patients, although 'apparently dead' must be having their circulation intact to some extent, though not apparent to superficial examination. Revival after complete circulatory arrest is almost certainly impossible after an interval of half an hour.

The victim of an electrical accident is in a state of suspended animation, due to an acute bulbar palsy, a state from which recovery is highly probable if immediate, prolonged and persistent artificial respiration is carried out.

No attention or consideration should be paid to the information that the voltage producing the shock was a particularly high one or that artificial respiration has been carried on for several hours without result.

Above all, it is necessary to avoid panic and to act coolly. Jellinek once contrasted seven people with injury from low tension current, five of whom died, with eight patients who had sustained grave injury from high tension current and all of whom recovered. In the former group the emergency treatment was inadequate; the bystanders hesitated as to what should be done and neglected to institute artificial respiration. Even such an obvious act as to switch off the current was forgotten.

Bates has recorded a case of recovery from an electrical shock of 26,000 volts after artificial respiration had been carried out for eight hours. So far this is the longest period on record after which recovery has taken place. The victim must always be treated on the spot and no attempt made to move him at this stage. At the same time, such of the following adjuvants to artificial respiration may be applied, as can be obtained in the circumstances of the particular accident.

Adjuvants to Artificial Respiration

The extent to which other methods of treatment are applicable in cases of suspended animation must depend upon the individual case, but in considering these adjuvants to treatment, it must be remembered, that there is no possible substitute for efficient artificial respiration.

Warmth:—Keep the victim as warm as possible by the use of clothing, blankets, hot water bottles or other means.

Massage:—Massage of the limbs, especially the lower, towards the heart, will help to maintain the circulation and to stimulate body warmth.

Drugs:—Coramine 1 c.c. may be given either direct into the heart or into a vein. Atropine 1/50 to 1/25 grain may be of use in lessening cardiac inhibitory impulses. A capsule of amyl nitrite is of value in improving the efficiency of the coronary and pulmonary circulation. The use of adrenaline is debatable, and many workers consider it dangerous. The advantage of drug therapy is that it can be readily applied, if a medical man is available.

Inhalation:—These methods will only be possible in special circumstances. A mixture of 5 per cent. CO₂ in oxygen is a most valuable adjuvant. It should be given at the rate of three litres a minute and preferably through a laryngeal tube.

Rectal Salines:—These will help to maintain body warmth and the volume of the circulation.

Respiration:—If the victim has been transferred to hospital, keeping him in an Iron lung may prove invaluable for maintaining artificial respiration for long periods.

Method of counter shock:—Laymen are often advocates of the so-called McLaglan's system or 'counter-shock' in restoring a victim of electrocution. Thus by violent jarring, pummeling, or shaking, they attempt to restore animation to a victim apparently dead. In the *Mining Electrical Engineer* for 1923, it is mentioned, that 'the unconscious victim should be placed in a sitting position and the nerves of the pectoral arch and diaphragm digitally stimulated. At the same time, the rescuer should deliver a violent blow with his knees

over the region of the victim's seventh dorsal spinein order to stimulate the pneumogastric nerves and further more he should emit loud shouts for the purpose of 'exciting the auditory apparatus'. There is a certain amount of clinical and experimental support of the efficiency of this procedure. It has been stated, that a victim falling hard after a shock is likely to recover more quickly than one who does not fall. A baby who had touched a badly insulated lamp was apparently lifeless but recovered after its mother had shaken it frantically. The laboratory animal whose heart is thrown into a state of ventricular fibrillation by means of a moderate current may recover after the application of a second and stronger current.

The evidence is far from being convincing however and scarcely warrants the deliberate adoption of a dangerous method of treatment. Recent careful work by A. Campbell, L. Hill and Urquhart suggests that counter-stimulation has no beneficial effect on electrocuted laboratory animals.

Treatment of Coma 298

Cardiac stimulants may be necessary as soon as spontaneous respiration has been restored. The patient's temperature should be raised by applying warmth to the body. Rectal hot coffee may be of service. In Austria, it is customary to apply counter-irritants over the præcordium and the anus. Medicinal treatment is traditionally carried out though its efficacy is open to question. Thus injection of strychnine, camphor in oil, adrenaline, pituitrin and ether are usually prescribed. In the case of laboratory animals with electrically induced ventricular fibrillation recovery has sometimes followed the intra-cardiac injection of adrenaline, urethane, strontium chloride, herudin, or intravenous pilocarpine. Such measures, which have to be supplementary to cardiac massage, are of course impracticable in human industrial cases.

For coma supervening upon severe electrical or lightning injuries, the treatment will be like that of acute cranial injury. One clinical difference is of importance in the fact that gross intra-cranial bleeding is not likely to be present in the former. The chief morbid change will consist of severe cerebral œdema, with an associated high intra-cranial pressure. This is usually treated by hypertonic salines, whether in the form of intravenous injection of saline (30 per cent. solution 30 c.cm.) or rectal magnesium sulphate (4 oz. in 8 oz. of water). Recent experiences with acute head injuries have demonstrated the drawbacks—if not the actual dangers—of hypertonic salines, by pointing out than an excessive rise in intra-cranial pressure usually follows rapidly upon an initial decrease.

Probably the safest method of reduction of cerebral œdema after electrical injuries is the prompt withdrawal of cerebro-spinal fluid. This can be repeated as often as required. It must be strongly emphasized, however, that the precise tension of cerebro-spinal fluid should always be determined by means of a spinal manometer at every lumbar puncture.

The chief advantages of lumbar puncture in electrical coma are (1) cerebral hypertension and coma are rapidly reduced, (2) the cerebro-spinal fluid itself may be at an excessive temperature, (3) cerebro-spinal

fluid may possibly contain toxic products of electrolysis and (4) there is no danger, as in cases of cranial injury, of starting or restarting dangerous intra-cranial bleeding. In cases of motor agitation and delirium accompanying the unconsciousness, lumbar puncture should be followed by attempts at sedation. The room should be darkened. An icebag to the head is impressive but probably useless. Purgation is less effective than lumbar puncture in reducing intra-cranial pressure. Injection of morphia or hyoscine are often efficacious but dangerous. The new remedies, such as rectal nebulal, avartin or paraldehyde, or intramuscular injections of Somnifaine or Luminal may be given.

Treatment of Burns

The special features of electrical burns which influence treatment are (1) the unusual depth of the lesions and their circumscribed nature, (2) the rigidity and friability of the surrounding blood vessels and (3) the tendency of the lesions to spread.

Two widely divergent views are held as to the correct management of electrical burns. Conservative measures are advocated by Jellinek and others while Wells advises immediate radical treatment. Jellinek advocates that early amputations and tissue resections should never be adopted. Except in rare cases in which dangerous toxæmia has developed, it is better to leave the necrosed areas alone. Jellinek stresses the innate healing propensities of electrical burns and advises simple antiseptic vaseline dressings with a splint where necessary. To accelerate the separation of sloughs, Jellinek induces active hyperæmia. Blue advocates the following treatment in cases of electrical burns. After thorough cleansing of the wound with soap and water, followed by lavage with sterile water, dressings soaked in ice-cold solutions of aluminium acetate ($\frac{1}{2}$ oz. to the pint) are applied. Dead and charred tissues should not be removed. During the stage of repair various dressings may be employed. Dusting with an antiseptic powder may be sufficient; lint soaked in paraffin or (paraffin with picric acid or flavine) may be applied. Some prefer to cover the injured limb with a cradle in which electric bulbs are suspended. Skin grafts or plastic operations may finally be necessary. Tannic acid applications prove as satisfactory in electrical burns as in other types of burns or scalds. Wells differs widely from Jellinek in advocating strongly an immediate resection or debridement of the necrosed tissue. He claims that in this way healing takes place more rapidly and with less ultimate deformity. Resection *en bloc* of the eschar—sparing of course such structures as large vessels, nerves and joints—is followed either by primary suture or by immediate skin graft. J. P. Tourneax advocates a similar resection of the diseased tissues in electrical burns of the cranium. By trephining the skull beyond the involved areas, it is claimed that the cranial wounds will heal in one-seventh the time. Blue, however, considers this treatment worse than the disease. Whichever line of treatment is adopted, whether radical or conservative, complications are to be expected in the second or third week. Owing to the morbid fragility of the blood vessels surrounding the burnt area there is a grave danger of reactionary hæmorrhage and in the third week such hæmorrhage should be anticipated and the necessary instruments and dressings should be kept

ready. Ligation of the principal blood vessels is usually required but owing to the diffuse spread of the degenerative vascular changes, the ligature must be applied at some distance proximal to the bleeding point. In the same way, where amputation is necessary, it should be carried out well above the limits of the necrosed area. Otherwise the spreading nature of the burn may cause the flap to be invaded and produce severe secondary bleeding.

Treatment of fractures and other injuries after electrocution differs in no way from that of fractures and other injuries due to other causes.

Treatment of victims shocked and unconscious after lightning strokes differs in no way from the foregoing. One may refer to a superstition which still survives in parts of the U.S.S.R. It is believed that persons struck by lightning become highly charged with electricity and that this can be extracted by burying them in earth up to the neck. A newspaper report says that a doctor in the Ukraine buried six persons struck by lightning leaving only their heads exposed. Five are said to have survived.

Case Reports

(1) G., a healthy muscular young man of 22, working in the Jeewajirao Cotton Mills, was cleaning some machinery on 1-9-39, standing on a bamboo ladder when, it is reported, he came in contact with a bare overhead wire carrying an alternating current of 440 volts. It is said that as his head came in contact with the wire, he adhered to the wire with his head and at the same time by the jerk of the electric shock, the ladder he was standing on, slipped and fell to the ground and he remained hanging from the wire. Other workmen working in that department pushed him with sticks and he dropped down unconscious.

He was removed to the mill hospital and when seen by the medical officer of the hospital, he was comatose, while his whole body was stiff. The medical officer gave the victim an injection of morphia and atropine, followed by injection of camphor in oil and ordered four men to massage his body with mustard oil. The workman received the shock at about 9 a.m., and when seen by me at 12 noon, he was lying stiff with laboured respiration. Heart sounds normal, pulse regular, 80 per minute. He was unable to speak and had difficulty in swallowing. Pupils normal, reacting to light. He was getting spasms, when his whole body used to become stiff with muscles hard like wood. After massaging for about ten minutes, the spasm used to disappear and then his limbs could be flexed and extended, but in a few minutes, his body used to get stiff again. Although he had difficulty in breathing, the lips did not appear blue.

I advised that he should be given full doses of morphia and four attendants were put on duty at a time to massage his body continuously, to reduce the muscular spasm. He could not pass urine and the urine had to be drawn with a catheter.

On 2-9-39, he was slightly better, the frequency of the spasm was less and he was able to swallow very slowly, only liquids. So today, he was given a sedative mixture containing pot. bromide and chloral hydrate.

He was still better on 3-9-39. He had only two fits of spasm during the previous night. He was still not able to speak and felt pain in the neck on attempting to whisper. Treatment today: soap water enema, glycerine, ferri paint to throat, argyrol drops in the eyes, and mist. pot. bromide.

From 3-9-39 to 10-3-39, the same treatment was continued and he was slowly improving. But his right upper extremity was paralysed. His voice had not returned and probably as the result of starvation during the first few days, he developed a voracious appetite.

On examination of the larynx the appearance was nearly normal, the vocal cords, although congested were moving freely and were not paralysed. His temperature was normal. He was gradually improving when on 11-9-39 he vomited clots of blood.

On 12-9-39, he again vomited blood and now he lost his appetite. He could now speak in a low voice but his right upper extremity was still paralysed.

So on 13-9-39, he was transferred to J. A. Hospital Lashkar, for treatment of hæmatemesis and paralysis. Nothing abnormal was detected in his blood, urine and stools. He was being given electric bath to his right arm. He then again had vomiting, the vomit contained blood clots.

The notes on his case sheet, dated 22-9-39 are: his is a case of hysteria(?), there is no organic disease. Is it a mild case of scurvy? He left the hospital on 22-9-39. He was readmitted to the mill hospital on 24-9-39, and he again vomited clots of blood—this time nearly three-fourths of a big kidney-shaped tray. Treatment prescribed: Cal. lactate, mist. pot. bromide, gum paint and pot. permanganas gargles.

On 26-9-39 the case notes say: he again had big clots of blood in the sputum and became unconscious. He was under observation in the hospital, so malingering was out of the question and the clots were too profuse to be coming from the gums. His larynx and throat were again examined and were found to be normal in appearance. He used to complain of pain in the neck and he was still unable to use his right upper extremity. He was given Stypticin tablets and 15 c.c. of his own blood intramuscularly.

He again had an attack of vomiting on 28-9-39 and the vomit contained large amount of blood clots. He was given an injection of Congo Red 10 c.c. intravenously. He now started to complain of pain in his chest and used to get violent, especially at night. Treatment at this stage was: mist. pot. bromide, and Luminal at night, whenever necessary. After this he had no further attacks of vomiting but he was still unable to use his right arm and was very irritable and sensitive and even violent at times. He was gradually improving but insisted on going home. So he was sent home for a fortnight. Since his return from home he is working satisfactorily in the mills. There is neither any paralysis nor any other symptom.

(2) It is reported that a telegraph clerk went to see his wife, who was an in-patient in a hospital. As he entered the building where his wife was kept, he was warned that an electric wire had got loose and was hanging in the way. He told these people that as a telegraph clerk he knew how to deal with electricity wires and that he would remove the wire out of harm's way in a few minutes. He tried to shift the wire, it is said, with a stick but the wire slipped and coiled around his body and he died of electrocution.

(3) A Sadhu was passing along a street during an outburst of rain with lightning and thunder, holding an umbrella with an iron handle, to protect himself from the rain. It is said, the tip of his umbrella handle came in contact with an iron street pole carrying electric current wires and he dropped down dead. Probably no attempt was made to give artificial respiration. He was brought to the Ujjain Civil Hospital and the house surgeon after examining, declared him to be dead. On discussing the accident with the electrical engineer, he said, he had immediately gone to the spot where the accident had occurred and on testing, he found that the street pole, from which the sadhu was supposed to have received the shock, was not charged with electricity. He explained that the accident might have happened, not from the technical electric current, but from lightning passing through the street pole carrying electric wires and the iron handle of the wet umbrella of the sadhu.

(4) In the first week of August 1941, it was reported in the daily papers, that a Bengali resident of Calcutta, was listening to his radio in his flat in the evening. His children were playing on the terrace of the building and his daughter touched the probably badly insulated wire of the aerial and got stuck to it. Her mother hearing her screams went to her rescue, but herself got electrocuted. The father then went to the terrace, but he also got attached to the wire. The neighbours were called for rescue, the daughter survived the accident but both the parents died of electrocution. In this case an innocent looking thin aerial wire, being badly insulated, killed two grown-up persons although a child survived.

(5) It is reported in *Javaji Pratap* of 28-8-41, that a cyclist while going towards Morar, got down and kept his cycle leaning against a street pole carrying electric current wires. When he tried to remove the cycle from the pole, he was electrocuted. Another man went to his rescue and as the rescuer approached near the first victim he was also attracted and could not free

himself from the body of the first victim. The second man was saved by others coming to his rescue and detaching him from the first man with the help of sticks. The second man was saved but the first man died of electrocution.

These are only a few recent reports, but if one is on the lookout, many more reports of a similar nature may be easily collected. But as most of these reports are published in the newspapers, minute and correct details as to how the accident occurred are not available and so these reports are of no value for scientific investigation.

Summary

In a case of electrocution

1. Avoid panic and act coolly,
2. Remove the victim from contact and
3. Give artificial respiration which must be *immediate, prolonged and persistent.*

References

- Critchley, M. (1935) *British Medical Journal*, 2, 1217.
Payne, R. T. (1940) *British Medical Journal*, 1, 819.

A Short Practice of Ophthalmology

(Ancient & Modern)

BY

Dr. K. Krishna Murty & Bidyadhar in collaboration with eminent ophthalmologists.

Price Rs. 6/- Prepublication Price Rs. 4/-

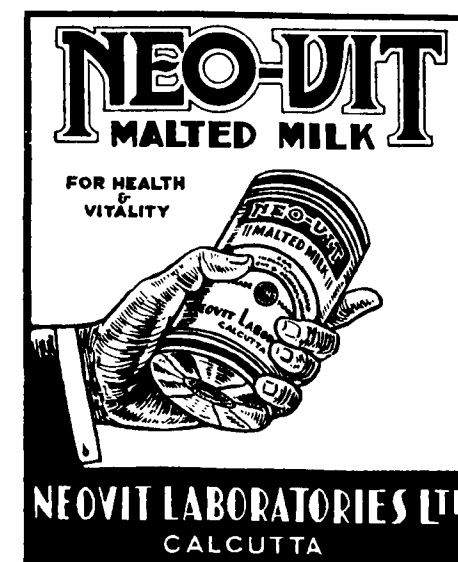
About 300 pages, full of illustrations.

Book your orders now to get the concessi on price.

The Ophthalmological Book Publishing Co.,
CHODAVARAM, (S. India).

Bombay Stockists ...	The Popular Book Depot.
Delhi " ...	The Practical Medicine.
Madras " ...	Sree Krishnan Bros.

Ideal Food for Children and Adults
in Health and Diseases



9-B, SAHANAGAR ROAD, KALIGHAT

Infantile Biliary Cirrhosis

(6)

Symptoms, Pathology, Diagnosis and Treatment

● Dr. S. Balasundaram

(Director, Ehrlich's Laboratory, Madras)

A study of the symptoms of this disease is not easy as sufficient number of cases under close observation, necessary for arriving at definite conclusions, is not available. With a view to find out whether any of the City Hospitals would have admitted and recorded enough cases of such a nature, I went through the records of these hospitals with the kind permission of the Superintendents of these institutions. But unfortunately not many cases of this sort were admitted and even in the few cases that were admitted sufficient information had not been obtained. This is due to two facts: (1) The allopathic treatment, so far, cannot boast of a specific treatment for this disease and admission in the hospitals is therefore not considered by parents as of any avail. (2) The few cases that came up to the hospitals were at such a late stage that it was not possible or useful for the hospital authorities to do the necessary investigations and hence elaborate clinical findings were not recorded.

Symptoms

So I had to content myself with the data from my own cases and those that I could command with the help of colleagues who were dealing with cases of this type in fairly large numbers. Leaving aside the large number of cases which cannot be strictly considered to be cases of Infantile Biliary Cirrhosis the number of typical cases studied were fifty-seven and the present discussion of the various aspects of the disease is based on these cases. These may be grouped under two broad categories: (1) Children suffering from this disease and in a very bad condition, practically at a stage when nothing useful could be done. (2) Those which were in a sufficiently earlier stage. For the sake of discussion, I am giving below the occurrence of the symptoms from the beginning of the disease to the end without referring to any demarcation between these two stages. The onset of the disease is insidious and hence it is difficult to spot out the case in its early stages. From the history given by the parents of majority of the patients the first symptom noticed is found to be passing of urine containing plenty of amorphous phosphates and this fact is usually expressed by the mothers of children as "white patches observed on the floor at the places where urine was passed by the affected children". This symptom, though present in all intestinal disorders, is invariably present in cases of Infantile Biliary Cirrhosis. The next symptom observed is probably occasional vomiting, constipation, or sudden bouts of fever, any one of these or all of them together. Constipation may not be appreciable in the beginning but becomes so later. The stool is clay-like and devoid of pigment. There are some cases where vomiting or constipation is not noticed throughout the course of the disease. Sometimes there is even a definite diarrhoea. It is only when such disturbances occur that the child is taken to a practitioner and the routine examination by a doctor reveals a palpable liver just below the costal margin. The once playful and attentive child becomes by this time

dull and apathetic and prefers to lie on the ground always. The abdomen is found to be full and on close inspection fine plexuses of venules are seen under the skin in the region of the liver. Many children are usually quite their usual size and weight at this stage with no marked emaciation. All the other systems of the body are found to be normal. Urine examination shows only the presence of phosphates, but no albumin or sugar. A blood smear examination reveals the presence of an increase of polymorphonuclear leucocytes or lymphocytes. Blood phosphates are found to be increased. The red cell count shows a normal figure or just below normal. Culture of the urine and blood produces no growth. Faeces does not show any pathogenic organism. From this stage some cases quickly go downhill in spite of vigorous treatment. Such cases usually are those where fluid begins to accumulate soon. The quickness with which such an accumulation takes place and the nature of the fulness of the organs and tissues suggest to us an oozing of the fluid into the tissues. The whole body is swollen up soon, the navel protrudes and ascites is very marked. Blood at this time shows definite anæmic changes, and coagulability is low. But even at this advanced stage the quantity of urine voided is not diminished and motions are being passed without much trouble. Jaundice slowly supervenes and symptoms due to pressure over vital organs, such as cardiac distress, passive congestion of the lungs, etc., appear. Retention of urine and occasionally retinitis develop in the final stages when death takes place. When fluid begins to accumulate, either the liver is not felt, or if it is felt it is found to be board-like in consistency with granular feeling to the touch.

Those cases which do not get into such a bad stage soon but tend to recovery, though slowly, have a different course. Some of these cases may show even a slight icteric tinge in the conjunctiva; the liver slowly enlarges till it is felt even below the umbilicus; and emaciation also may be present. Spleen is found to be enlarged but probably not to such a great extent as the liver. The child is irritable, has a capricious appetite and behaves roughly. Intelligence is never less than usual and perhaps even at its maximum in such children. From this stage again, the disease may progress and get into the bad condition mentioned before. Some of the cases, however, recover but very slowly. The recovery is not quite marked, as the liver is not found to diminish in size appreciably in a short time. The recovery is always by slow degrees. Recession of the liver may be spread over several years. A rapidly receding liver indicates unfavourable prognosis.

Diagnosis

There is a lot of difficulty in the diagnosis of this disease in its early stages. But a persistent constipation with occasional vomiting, capricious appetite, irritability and an inclination of the child to lie down on its stomach on the floor and passage of phosphates in the urine should create enough suspicion to look for an enlargement of the liver. But enlargement of the liver is noticed in almost every ailment of a child. In a study of the case sheets of children admitted to the Children and Maternity Hospital at Egmore during the year 1938-39, I found that in as many as ninety cases admitted for ailments where liver was found to be enlarged, only eight were cases of cirrhosis. The diseases for which they were admitted are given below:

Name of disease	No. of cases
Dysentery	13
Diarrhoea	11
Obesity	1
Malnutrition	6
Ascariasis	5
Marasmus	5
Anemia	5
Convulsion	4
Jaundice	4
Bronchitis	4
Idiocy	4
Wasting	1
Cirrhosis	8
Broncho-Pneumonia	3
Malaria	3
Adenitis	1
Scurvy	2
Nephritis	2
Cardiac failure	1
Aphasia	1
Phimosis	1
Empyema	1
Tetany	1
Bronchiectasis	1
Impetigo	1
Osteo-myelitis	1
	90

The above figures show that in almost every disease of the child the liver is found to be enlarged and hence mere enlargement of the liver is not indicative of Cirrhosis. But in the absence of any other complaint, if there is a marked enlargement accompanied by the usual symptoms mentioned before, the possibility of biliary cirrhosis should always be kept in mind. A marked leucocytosis with increase of polymorphos or lymphocytes in a blood smear examination will further aid in the diagnosis. There is no harm in starting the treatment definitely for this disease when there is even a suspicion of it, as any further waiting for the onset of more characteristic symptoms will be unsafe. In the later stages diagnosis is fairly easy and is even done by laymen. But still it often happens that the cedema and general swelling of the body create confusion in diagnosis. The board-like liver, granular to the touch, the plexus of venules over the hepatic area and other prominent signs are of real help in diagnosis.

This disease is found to take a toll of a number of children in the same family. Most often they are males, and why this is so has been shown in my first article on this subject. Some times it is the female only. But whatever it is, in a particular family, only the males or females die of this disease. The reason for this we shall discuss later. Whether there is a history of venereal disease in these families has been studied by me. In every case that came under my investigation, blood of the child, mother and the father were examined for Wassermann and Kahn, and 90 per cent. of the cases were found to be negative. An important fact observed was that in about 70 per cent. of the cases the mother was found to be below par in health, if not always, at least before the delivery of these children which succumb to this disease.

Histopathology of Liver

The liver is an important organ next only to the heart, in as much as it is "a great organ of metabolism"

in the words of Robert Huchison. Since metabolism is particularly active in a child the liver at this period of childhood is relatively larger than in adults. In fact it occupies so much space in the child's body that the abdomen looks bigger for the body. The organ as a whole is about one and a half times greater in size than in adults in proportion to the weight of the body. Another noteworthy fact is that in children the liver can normally be felt below the costal margin due not only to the size but also to the sub-costal angle being wider than in adults, which fact makes the organ to be in contact with the anterior abdominal wall. This is to be borne in mind when children are to be examined for enlargement of the liver.

Drs. Tirumurthy, Ramachandra Rao and Radhakrishna Rao have done extensive work on the histopathology of liver in infantile cirrhosis. It is enough for our purpose to know some of their findings to compare them with the normal structure of the liver. The characteristic appearance in Infantile Biliary Cirrhosis can be summed up as follows:—

1. Varying degrees of necrosis of the liver cells uniformly distributed throughout the organ.
2. An avascular non-inflammatory oedematous connective tissue network enclosing in its meshes small islands of hepatic parenchyma of unequal sizes and in varying degrees of degeneration.
3. An obliterative lesion of the terminal and some of the bigger divisions of the hepatic venous trees without appreciable changes in the portal, venous and biliary trees.
4. Areas showing disorganisation of the reticulum of the sinusoidal capillary bed mostly around the hepatic venous terminus.
5. An unsuccessful attempt of regeneration of the hepatic parenchyma as evidenced by the small size of the rounded lobules of the liver cells distributed throughout the organ.

From a study of the several aspects of the structure, physiology and histopathology of the liver both in the normal and in this diseased condition we can arrive at some inferences which are useful from the point of view of its ætiology.

1. The origin, growth and maintenance of the foliated structure peculiar to the parenchyma of the liver is connected with the vascular network of the organ from the embryonic stages to the adult.
2. The major part of the arterial blood is supplied to the bile duct and the oxidative processes are mainly dependent on the combination of bile and adreno-oxidising substances in the hepatic artery.
3. The nerve supply to the organ shows the independent control of functional activity of the organ.
4. The study of the functions in general and the histopathology of the liver in this disease in particular shows that the liver is subjected to a uniform destruction of its cells through the circulation, and the extraordinary regenerative capacity of the liver is put to use in the production of replacement fibrosis.
5. The bile ducts play a very little part in the regeneration of the hepatic tissue.
6. The obliterative lesion of the hepatic venous tree points to the fact that there is an effort to prevent the passage of certain substances from the liver to the general circulation which are evidently the products of destruction of liver cells or substances which are very essential for the regeneration of the liver tissues.

7. The absence of appreciable changes in the portal, venous and biliary trees is suggestive of the fact that the toxins, if any, responsible for the disease is not propagated through these channels and hence no necessity was found by the system to interfere with the biliary circulation of the portal.
8. The ascites caused in a case of Infantile Biliary Cirrhosis is not probably due to direct obstruction but due to interference with the water metabolism controlled by the liver.

Ætiological Factors

Contrary to usual practice I have reserved the discussion on this important aspect to the last. The ætiology is not known definitely so far, but it is justifiable to draw the following conclusions from my study and investigation previously recorded in the *Journal*.

The important and relevant facts in this connection may be mentioned here for immediate reference:

1. This disease occurs in early childhood (*I. M. J.*, Vol. 33, No. 11, Nov. 1939).
2. Male children appear to be predisposed to this disease. (*Ibid.*)
3. The density of population has no bearing on this disease (*Ibid.*)
4. There is a pre-adaptation in the form of an increased activity of some of the endocrine organs of children born of parents living in places of phosphorous shortage in food. (*I. M. J.*, Vol. 34, No. 2, Feb. '40).
5. Even the ordinary diet like cow's milk may disagree with a child with a hyperactive endocrine glands. (*I. M. J.*, Vol. 34, No. 3, March, '40).
6. The diet given by parents to children susceptible to Infantile Biliary Cirrhosis does not materially differ from that given to other children by their parents. (*Ibid.*)
7. The oxidative processes of liver in children with hyperactive endocrine glands are enhanced, as also phosphorous inflammability. (*I. M. J.*, Vol. 34, May '41.)
8. Damage to the liver due to the above causes possible but not infection. (*Ibid.*)
9. The phenomena usually observed in Infantile Biliary Cirrhosis are due to the intolerance of children of the type mentioned for too much or too little fat. (*Ibid.*)
10. Castor oil, as a habitual purgative, though cannot produce any harm, yet on account of its composition it is likely to disturb children of the type mentioned on account of its being a thick fatty oil. (*I. M. J.*, Vol. 35, April '41.)

The peculiar nature of the regenerative process as also the vascular control of the liver through the hepatic artery and by obliterative lesion of the hepatic venous tree in the diseased condition; the fatty degeneration of the liver cells, replacement fibrosis of the liver, the constriction of the terminals of the hepatic venous tree, with no interference with the portal venous terminals etc.; all these point to the most important fact that nature is trying to prevent something passing out of the hepatic veins rather than something entering through the portal veins. Either the substances very essential for the regeneration of the liver cells are tried to be prevented from going out, or the products of destruction of the liver cells are kept back. In either case the portal veins have nothing to do with these efforts. Evidently the causative factor for the destruction of the liver cells is entering the liver by the circulation.

In the light of the foregoing observations, let us now take the existing theories regarding the causation of this disease, and the probable lines on which speculation

can be undertaken in the direction of fitting up these theories with known facts. The usual ætiological factors considered probable by various workers are as follows:

1. Infection.
2. Gastro-intestinal causes.
3. Toxic agents.
4. Vitamin deficiency.
5. Disturbances in the endocrine system.

Infection may be through the blood or through the intestinal tract. Infection through the former can be excluded by the fact that blood cultures do not reveal any organisms at any stage of the disease, and injection by me of the blood of these children into rabbits or guinea pigs has not produced any disease. These together with the other fact that the disease runs only in certain families and affect children only at certain ages can fairly exclude the possibility of infection as a factor in its ætiology. There is no reason why it should affect only certain families and certain children if it is due to infection. Infective diseases generally occur in large numbers in overcrowded places but we have seen that the density of the population has no bearing on this disease. But then there is one possibility that can be thought of, viz., syphilitic infection. A routine examination of the blood of all the patients that came under my care for Wassermann and Kahn Tests and the same tests carried out for the parents also of these patients have revealed that in about 90 per cent. of the cases the blood have been found to be negative. Hence syphilitic organism or toxin circulating in the blood of these children, or as being transmitted to them by their parents, is but a very remote possibility.

Diseases like malaria, kala-azar, etc., as causative agents, have been excluded by investigations by Tirumurti and Radhakrishna Rao.

Infection through the intestinal tract also can be excluded for two reasons. (1) If infection is travelling through the portal vein the leucocytes found in abundance there would be able to destroy that infection. If in spite of these leucocytes infection tries to pass on, nature's efforts would have been to prevent such a thing by constriction of the portal capillaries rather than the terminals of the hepatic venous tree as is found in the liver of children suffering from this disease. (2) An inflammatory condition of the liver, at least at the entrance of the portal capillaries necessary and expected in infection through the portal veins, is not to be found.

The connective tissue network in the enlarged liver is avascular and non-inflammatory in nature.

Gastro-intestinal causes:—Disturbances of the gastro-intestinal system created by certain foods and the effects of overfeeding and underfeeding have been stressed by certain workers. That the diet of children suffering from this disease does not materially differ from the diet of other healthy children has been already shown by me. Overfeeding and underfeeding are as common in other families as in those that are affected by this disease. In fact, in many children of the poorer classes who have suffered from very bad intestinal disorders due to dietetic errors this disease is not to be found.

Toxic agents:—An exogenous toxin can enter the system only through the intestinal tract, and any toxin of that nature has not been known hitherto. But the probability of an endogenous toxin being the cause cannot

be excluded easily. The disease taking a toll from certain families and only children of particular age and sex make the toxin theory understandable. The probabilities of such an endogenous toxin passing from the mother to the child *in utero* in certain families is said to be the cause by some. But they do not take into consideration the fact that if the toxin had remained in the body of the mother for a sufficiently long time to be passed to the child without affecting the mother herself it would have certainly produced sufficient anti-bodies in the mother to neutralise the toxin and this anti-body would have passed also through the milk to the child. In fact the breast milk is noted for its abundance of anti-toxic bodies. This being the case a maternal toxin being the cause is out of the question.

Parasitic diseases produce particular types of histopathology of the liver which are absent in these cases.

Vitamin deficiencies:—The pathological changes produced in children by deficiency of vitamin A have been studied by Morris and Walback, and they are metaplasia of the epithelial cells of the body and the characteristic high changes. Such changes in the infantile liver suffering from Biliary Cirrhosis have also been noticed by them to a certain extent. The pathological changes due to deficiency of vitamin B have not been studied so far. Infantile Beriberi does not produce any identical pathological changes observed in Infantile Biliary Cirrhosis. The irritability of the child and its restlessness may be attributed to this vitamin deficiency, but this alone cannot warrant its consideration as a causative factor.

Recent extensive work on the pathology of vitamin C deficiency by Hojer and his observations are interesting. The liver is found to show an atrophic and degenerative changes and there is a general interference according to him with cell function throughout the body. It has been observed by him that vitamin C is essential for the dynamics of every normal cell. So wherever there is a lot of chemical activity, for example in the liver, this substance is essential. The deficiency of vitamin C produces the characteristic disease Scurvy which is easily recognised. So, probably the deficiency of vitamin C is a predisposing factor or may be a conjoint cause but not likely to be a primary one. Anyhow its importance is worth noting.

It has been known that metabolic processes in cases of vitamin D deficiency are so disturbed that the lime salts cannot be precipitated in the lower border of the proliferative cartilages to favour the zones of calcification, resulting in osteoporosis. But no appreciable changes have been observed in other organs, by them. Vitamin E does not relate to children.

Vitamin F and G are sub-divisions of vitamin B and are also known as B₁ and B₂ and hence need not be discussed. The deficiency of vitamin K is said to produce a diminution of prothrombin production of the liver. But detailed pathological phenomena observed in the liver in the deficiency state of this vitamin have not yet been closely studied.

With regard to these vitamins one important thing has to be remembered. It is that these substances are in liaison with endocrine system and a deficiency of a

particular vitamin causes a particular disturbance of the endocrine system. Often, a marked hypo-vitaminosis produces certain pathological tendencies or even changes in the system which may further be augmented by corresponding disturbances in the internal secretory organs. There is, no doubt, a close relation between the internal secretory organs and vitamins, which makes the study of these two factors independently impossible.

Disturbances of the Endocrinal system:—I have shown as a result of my investigations that some children are born with a tendency towards hyperactivity of the endocrine glands. The hyperactive tendency in children is of such a general nature that there is a homogenous increase of activity of the thyro-para-thyroid, the adrenals, and the anterior pituitary glands. Certain families only are liable to have such a disturbance, and it has been shown by me that susceptibility of children to this disease occurs only in those born of parents who have been experiencing a phosphorous shortage in the food for some reason or other. I have also shown that such children cannot bear even a small disturbance of fat metabolism created by ordinary feeding. An excess or shortage of fat produces the same effect in them. Thus a fluctuating fat content even in cow's milk can produce a disturbance in predisposed children and hence a disturbance of the metabolism becomes inevitable in such children. A diminution of fat produces fatty degeneration of liver cells and too much of fat produces the accumulation of inorganic acid and products of metabolism in the tissues resulting in the production of ammonium phosphates which are excreted by the kidneys. This explains the presence of large amount of phosphates in these children. The degeneration of the liver cells necessitates replacement by fibrous tissues. Thus if a child has got an increased endocrinal activity and is fed on excess of fat a vicious circle of incidence takes place within the body resulting in the fatty degeneration of liver cells. This is further aggravated by the augmented adrenal secretion dilating the capillaries and thus supplying more oxidates; and the thyro-para-thyroid and the anterior pituitary secretions combining together produce greater phosphorous inflammability which is likely to help the destruction of the nuclei of cells. This total or relative destruction of liver cells is possible only under such circumstances. The regenerative process is not able to cope with the rate of destruction though the liver cells are noted for their splendid capacity for regeneration. Nature perhaps tries to prevent this wholesale destruction of cells by producing obliterative lesions of the terminal hepatic venous trees and thus attempts to break the vicious circle by preventing the passage of the products of destruction into the circulation.

The influence of the thyroid activity is perhaps shown by the greater agitation, restlessness and capriciousness of the child. The unexplainable fever may also be attributed to the excessive thyroid activity. In the subsequent stages of the disease there is noticeable exhaustion of the thyroid and adrenals, perhaps due to overwork, by which time fluid tends to accumulate due to loss of control over the water-metabolism. Only in the last stages symptoms produced by the pressure of the fluid over the organs are noticeable. It appears to me from the study of the symptomatology and pathology of this disease that they fit in well with the

theory of the disturbances of the endocrinal system being responsible for the production of Infantile Biliary Cirrhosis :

1. A predisposing cause, namely, an increased activity of the endocrine system in children, constituted by the adrenals, the anterior pituitary and thyro-parathyroids.
2. An exciting cause which very often is inevitable in such children in the form of a dietetic irregularity produced by the administration of excess of or less fat.

Prevention

Preventive treatment :—Ante-natal care of pregnant women is specially important with regard to this disease. Phosphorous shortage in them should be tackled efficiently. The administration of some hypophosphites may be recommended during pregnancy. The injection of liver extract to pregnant women considerably lessens the chances of children being born with proclivity to cirrhosis. Administration of calcium to pregnant mother is sometimes necessary. This avoids the adaptation of the child for shortage of calcium.

The preventive methods that can be adopted in children are very few, owing to the very nature of the suggested causative factors, but disturbances due to excess of or too little fat in their diet can be avoided if proper care is taken to see that these children are not fed at random as other children. It should always be borne in mind whenever such children are fed that these are not likely to tolerate the food-stuffs containing fat to as great an extent as other children will. It is very necessary that in families where number of children die of this disease, breast feeding should be continued to a greater period than is otherwise necessary. Breast milk is best suited to all the peculiar needs of the child and is any day better than any preparation that we can think of. But this involves the keeping up of the health of the mother and attention to her diet.

Treatment

Among drugs which can produce an appreciable effect over the endocrinal glands, arsenic is the one which holds the field, and hence the administration of this drug in very small doses is recommended. The use of this drug by Ayurvedic physicians is well known, probably they have struck upon the usefulness of this remedy in this disease empirically. Their powders usually contain arsenic, zinc and iron salts. Zinc is no doubt useful since it is able to assist regeneration of the hepatic cells. But the oxide preferred by the practitioners is in my opinion to be avoided as it increases the oxidation of the cells.

Iron is an important substance both for the improvement of the blood condition and the regeneration of the liver cells. An organic combination of iron, zinc and arsenic will be the best thing to administer but in the absence of any such preparation we have to be content with prescribing the scale preparations of iron and liquid arsenicalis. To this prescription can be added an alkaline or neutral salt of ammonia so that sufficient ammonia may be liberated in the blood to neutralise the excess of acid produced by the rapid combustion of tissues and the fats. By this means we avoid the necessity for the child to produce enough ammonia in the body to neutralise these acids. One important drug to be avoided is mercury. This is often neglected. It is very common for practitioners to advocate and

prescribe grey powder. Though it is useful in other liver disorders, it is contra-indicated in this disease as mercury is a strong stimulant of the endocrine system. If a laxative is needed the vegetable laxatives like rhubarb and senna should be used. Castor oil should be avoided for the mere reason of its being a thick fatty oil. When fluid begins to accumulate, iron and zinc should be withheld and only arsenic in small doses should be administered as it has some effect in the control of water metabolism. Frequent diuretics only aggravate the disease as it interferes with the normal working of the kidney. Vitamin A and C are useful to a certain extent. Synthetic tablets are preferable to oils containing these vitamins, since fat in any form should not be given.

Diet :—Capricious appetite is the usual thing with children suffering from Infantile Biliary Cirrhosis. Starvation of such children is fraught with danger as it only aggravates the destruction of body fat. There is no reason why in the early stages a rice or any other carbohydrate meal should be withheld, especially when a lot of combustion is going on in the body. That the liver may be unable to deal with carbohydrates is a misconception. Till late in the disease the carbohydrate metabolism is not disturbed to an appreciable extent, so also protein metabolism. Fat is the only thing that can produce harm. The burden of the whole treatment is a liberal carbohydrate diet, and the administration of a judicious combination of iron, zinc and arsenic in the early stages, preferably an organic combination, and arsenic only in the later stages.

(This completes the author's series of articles on this subject. His previous articles are mentioned below for ready reference :

1. A Preliminary Enquiry regarding Incidence and Distribution, Nov. '39, p. 349.
2. Soil and Environment, Feb. '40, p. 37.
3. Diets and Habits of Children, March '40, p. 64.
4. Cow's Milk as diet, May '40, p. 118.
5. The role of Castor oil, April '41, p. 89.)

LEUCODERMA

TREATMENT WITH

OLEUM PSORALIA CORYLIFOLIA (S. C. T.)

2 oz. bottle Rs. 4 net.

Oleum Psoralia (S. C. T.) in demand from Europe, America and other foreign countries, widely used throughout India and strongly recommended by the Dermatologist, Medical College, Calcutta, and Calcutta School of Tropical Medicine.

"I used your oil for Leucoderma which I found excellent." (Sd.) B. WEIDLE,

Risalpur, N. W. F. P.

"... The result is very satisfactory ... sure to cure the disease." (Sd.) M. A. BHASKARAN,

Medical Officer, Govt. Lepet Clinic, Cochin State.

"Found miraculous result."

(Sd.) J. G. CHATTERJEE, L.C.P.S.,

Leprosy Officer, Bankura, Bengal.

"I am very much satisfied."

(Sd.) S. N. ROY CHOWDHURY,

Manager, Unit Pharmacy, Delhi.

Free Literature and free Medical Advice :

SCHOOL OF CHEMICAL TECHNOLOGY,
4, Satyen Dutt Road, Ballygunj, CALCUTTA.

DEXTROSOL

(d-Glucose Powder)
guaranteed **99.8%** pure **DEXTROSE**

DEXTROSE is the active principle in all glucose powders, and its main functions are:

- a) to effectively detoxicate the system by replenishing the depleted glycogen stores of the liver; and
- b) to provide nourishment without taxing the digestive organs.



DEXTROSOL on account of its purity and freedom from foreign matter fulfils both these functions to a degree not approached by ordinary glucose powder preparations and equalled, if at all, only by competitive brands available at several times its price.

In the interest of your patients make sure that your prescriptions contain the brand name

DEXTROSOL



Full particulars and booklet

"Advances in treatment with DEXTROSOL"

free on application.

CORN PRODUCTS CO. (INDIA) LTD.,

P. O. Box No. 894,

BOMBAY

ESSENTIAL PREPARATIONS for MODERN CHEMOTHERAPY



DAGENAN
TRADE MARK
M & B 693

FOR
GONOCOCCAL INFECTIONS

Allows immediate institution of treatment. Prevents complications.

Supplied in containers of 25 x 0.5 gm. and 25 x 0.125 gm. tablets.

*Sulphonamide
Therapy*
MAY & BAKER

SOLUSEPTASINE

TRADE MARK
FOR
STREPTOCOCCAL INFECTIONS

Colourless aqueous solution for parenteral administration. Singularly low toxicity. Supplied in boxes of 6 x 5 c.c. and 6 x 10 c.c. ampoules 10 per cent solution.

Where it is desired to administer an anti-streptococcal drug by mouth PROSEPTASINE (Trade Mark), in tablet form, is the preparation of choice. Supplied in containers of 25 tablets.



MAY & BAKER (INDIA) LTD.
11 CLIVE STREET, CALCUTTA

Treatment of Infantile Hepatic Cirrhosis

● Dr. A. V. S. Sarma, M.B., B.S., D.C.H. (Lond.)
(Hon. Asst. Physician, Stanley Hospital)

A line of treatment for infantile hepatic cirrhosis is suggested below, and the same is based on a personal study of more than a hundred cases. The clinical condition of infantile liver like migraine or asthma seems to embrace different types viewed from the point of pathogenesis. The probable types of the disease may be classed under the following heads:—

- (i) Cases with *allergic disturbances* in the family, or in the child himself.
- (ii) Cases where *toxic-infective states* (pre-natal, natal, or post-natal) have an important bearing.
- (iii) Cases arising mainly from *dietetic errors*.
- (iv) Cases of *obscure and mixed origin*.

The following, it is hoped, will serve to divert increasing attention towards the treatment of the malady, which is the chief difficulty for those engaged in the arena of clinical medicine.

Preventive Treatment

This part of the article justifies elaboration as the curative treatment of fairly advanced cases yields unsatisfactory results. This section is dealt with under the following items:—

- (1) Allergy. (2) Prevention of toxic or infective conditions. (3) Diet and surroundings. (4) Detection and treatment of early cases.

Allergy:—I believe that allergy forms the basis of a definite type of infantile hepatic cirrhosis. While the inheritance of allergic diathesis cannot be prevented, consanguinity of marriage is to be avoided.

Mothers with allergic disturbances must control their diet during pregnancy, and during lactation, may have with benefit pepsin and dilute hydrochloric acid by mouth.

Ideal infant feeding means breast milk or in its absence acid milks with an optimum supply of vitamins A, B, C and D. Substances known to upset a baby (egg-white, milk proteins, rice, potato, wheat, oils—castor oil and fats) must be avoided. Unwary dietetic regime during an intestinal catarrh easily starts food allergy.

Coming to bacterial allergy, avoidance of vaccination with vaccinia in a susceptible child is advisable. Wearing a mask by nurses or mothers who have colds is also useful. Treatment of focal sepsis and preventive measures against enteric infections and pertussis are useful. Careful ante-natal care is essential.

Toxic or infective conditions:—The various items that deserve study in this connection are:—(1) Toxæmias of pregnancy, particularly hyperemesis, eclampsia, anæmias, and neuritis. (2) Constipation or diarrhoea in infants. (3) Prolonged use of castor oil, chloroform, chloral hydras, etc., in pediatric therapy. (4) Pertussis, diphtheria, typhoid, bacillary dysentery, repeated upper

respiratory infections, sore-throats including tonsillitis, small-pox, etc. (5) Helminthiasis (particularly ascariasis).

The prophylaxis of toxæmias of pregnancy is not dealt with here. The bearing of allergy on the toxæmias of pregnancy, like hyperemesis and eclampsia, and the beneficial uses of vitamin C and adrenal cortex in the treatment of the same may be recalled to mind at this juncture.

Efficient treatment of constipation or diarrhoea in infancy is of paramount importance. Castor oil in large doses for constipation, and in small doses for diarrhoea is to be used with care. Treatment of diarrhoea (dietetic, medicinal or specific) must be on sound lines to prevent later hepatic damage or allergic explosions.

The use of chloroform or chloral hydras is attendant with the damage to hepatic tissue. A child receiving chloral hydras, chloroform, or their derivatives has to be carefully watched. A safe clinical method would be to administer such drugs as chloroform, chloral, etc., for a definite period only. Chloral hydras or chloroform, with or without the addition of codeine used in a proprietary medicine and administered to a child with pertussis resulted in hepatic involvement.

Prophylaxis of bacterial diseases is a subject that has to be strictly enforced in pediatrics. Preventive vaccination against small-pox, though of approved utility, should be withheld in the case of a susceptible child,—a family wherein children are reported to have died of liver disease after vaccination.

Scientific feeding of infants and efficient treatment go a long way to prevent the incidence of helminthiasis. When worm infestation is observed, specific but safe treatment only need be given. Anthelmintics chosen should be non-toxic to the liver.

Incidence of hepatic cirrhosis seems to be independent of concurrent tuberculosis and congenital syphilis. Incidence of tuberculosis, more commonly pulmonary, in a cirrhotic child only hastens the end of the patient. A combination of congenital syphilis and hepatic cirrhosis carries much worse prognosis than either of the two diseases singly.

Diet and surroundings:—Mother's milk is ideal for the baby and therefore breast feeding should be strongly recommended. The technique of breast feeding must be willingly mastered by every mother. Allergic mothers may take during the period of lactation pepsin and dilute hydrochloric acid with some advantage, and should always avoid things known to upset them or their children. A tuberculous or pregnant mother should stop suckling her child. Breast milk of a mother who has had eclampsia may be denied to the baby during the puerperium. When a wet-nurse is employed, one has to remember occasional intolerance (anaphylaxis) from the baby's side.

Artificial feeding with cow's milk—which seems more economical—is a method which has to be studied both by the mother and the nurse. There are recognised methods of artificial feeding: (a) By determination of the percentage of the contained food elements,

(b) By establishing the caloric value of the food elements, and (c) By reckoning the amounts of milk and water per pound of body weight in the light of accepted standards. (Paterson and Smith emphasize this method as the simplest and most useful one.)

When proprietary foods are used the usual scheme of a half cream dried milk till the third month and full cream dried milk till the six month is followed. Intolerance to fat or protein of cow's milk has always to be remembered, and during such contingency, suitable proprietary products like Frailac, Lacidac, Almata, etc., are used.

In the method based on milk and water requirements per pound of body weight or on the addition of water to proprietary milk products, I feel that it is better to give a concentrated feed at a time, *i.e.*, by decreasing the diluent, and to supply the baby additional drinking water in between the feeds. This slight adjustment has played a useful part in minimising the risk of vomiting and diarrhoea of infants. This concentration of feeds is important also in the feeding of cirrhotic infants, as water-metabolism is greatly deranged in hepatic cirrhosis.

During the third quarter of an infant's life, weaning is attempted, and this process of weaning deserves great attention. Introduction of extra carbohydrate may with benefit be in the form of dextri-maltose and not as pure starch (rice, sago, etc.) which is the usual practice. Malt from cholam (millet) is a cheap product and promises to be a good substitute for addition to milk feeds of infants from after the sixth month. The composition of malt from cholam is as follows:—

Moisture	7.69	per cent.
Ash	1.53	..
Crude protein	10.30	..
Fat	3.65	..
Crude fibre	0.31	..
Carbohydrate (By difference)	84.21	..
Total	100.00	..

Pungent, irritant, fibrous, and non-nutritious elements in diet have to be eschewed to prevent gastro-enteritis. Administration of sweets, and dhall puddings is only asking for digestive upset and food allergy. The dietary combinations of South India are a legion, and the fond mother out of love and ignorance forces her baby in spite of his dislikes and protests to partake of items of her own diet, and this is the beginning of the trouble. It is, therefore, useful to educate a mother to respect her baby's dislikes and protests and not to disobey them, as the baby's instinctive dislikes seem to cover a protective purpose.

The diet should be sufficiently rich in calcium and phosphorus as also vitamins A, B, C and D. Vitamins of the B group are recognised recently as being very important for the human economy. B₁ deficiency has been reported to produce adrenal hypertrophy, fatty degeneration of the liver, intestinal engorgement and allied conditions. Vitamin C is in my opinion an important dietetic agent for the prevention of infantile hepatic cirrhosis, as it particularly exerts an anti-allergic action. Fruit juices (tomatoes, oranges) are useful sources of vitamin C, but if children are sensitive

to them, synthetic ascorbic acid may have to be specially given. Ostomalt, Radio-stoleum emulsion with vitamin C are useful patent-products in pediatric therapy as poly-vitamin tonics.

The later half of the first year seems to be the elected period for the beginning of infantile hepatic cirrhosis, and therefore this particular period has to be watched with care for an enlarging liver.

Association of children with others having contagious diseases or frequent upper respiratory infections is undesirable. Water given to children needs to be clean and even sterile—sterilised by boiling.

Detection of Early Cases

An early case of hepatic cirrhosis is really difficult of certain diagnosis. My criteria for the diagnosis of early hepatic cirrhosis are:—

1. Body weight is lower than the normal average.
2. Gastro-intestinal complaints—particularly cyclic diarrhoea, disturbances like irritability, fever, constipation and torpor, cough, lying down on the ground, etc.
3. Occurrence of asthma-like syndrome after intake of certain foods or medicines—castor oil has been observed to produce a condition indistinguishable from asthma.
4. Enlargement of liver and spleen in advanced cases.

Occasionally a vascular webby appearance is seen when the abdominal surface is inspected and this is similar to the characteristic vascularity of the head of a congenital syphilitic child.

The liver of children has to be felt very carefully and an outline may be marked with a pencil. The anterior margin of the liver is wavy or at least definitely irregular. The right lobe of the liver is more enlarged than the left in cases arising after the incidence of dysenteries or diarrhoeas.

5. Negative laboratory tests.

The urine of pre-cirrhosis children shows increasing quantities of sulphur even when a fixed diet is given.

6. A critical study of the complete case-history in each case has been very useful in my practice. I have sometimes correctly anticipated hepatic cirrhosis in some children on this basis alone. I attach great importance to the presence of allergic disturbance in the patient or his family.

The Treatment of an Early Case

1. Suspicion of cirrhosis is no indication for the cessation of breast feeding when the mother takes an acid and pepsin mixture during the lactation period, and regulates her diet. In cases of artificial feeding, correct adjustment of diet, particularly decreasing of fat which is badly tolerated as a rule, increasing of carbohydrate—addition of glucose—and protein. Each feed is given concentrated, and drinking water is given, in between feeds. In the case of older children (*i.e.*, for those after the ninth month) increased carbohydrate is allowed. I prefer in this connection to give plantain fruits and honey.

2. Addition of vitamins A, B, C and D and ensuring calcium and phosphorus in adequate quantities. A dietetic corrective like ostomalt is used. Some children need specially large quantities of vitamin C and B factors, and in such cases cervibex tablets (P. D. & Co.) are useful. A combination of yeast and absorbent charcoal is very useful.

3. Ensuring proper bowel action daily by the use of drugs, is necessary. Rhubarb or cascara sagrada is sufficient. Pure yeast given to constipated children whose diet has also been simultaneously adjusted, produces satisfactory bowel action. Sometimes it seems to produce colicky diarrhoea, and then yeast is combined with activated carbon.

Purgation induced by magnesium sulphate is to be avoided.

Juice of *Eclipta Erecta* has been found useful in early cases.

4. A mixture containing pepsin and dilute hydrochloric acid before feeds or the use of acidified milks or Lacidac in cases with allergic diathesis is desirable. Papain has also been given to some children as an alternative to the above recipe.

5. A special treatment is the administration of adrenal cortex either orally or parenterally.

If the child does not improve and weight is only stationary or is decreasing, vigorous treatment must be launched. Loss of appetite is a grave prognostic sign, and is best treated by injections of vitamin B₁. The presence of good appetite is a very favourable prognostic sign.

Curative treatment:—While discussions are raging as to the exact causation of the disease, which is now accepted as a definite clinical entity, I am only attempting at a rational line of treatment for the disease from the clinical standpoint.

The curative treatment is tackled under the following heads:—

- (1) Hygiene, (2) Diet, and (3) Drug treatment.

Hygiene:—The environment should be healthy, and particularly free from tuberculosis, malaria, kala-azar, intestinal infections, and eruptive fevers (particularly influenza, whooping cough and measles). The water used for drinking purposes should be pure, and clean, and may be used only after filtering, boiling, and cooling. Very hot areas are trying for the patients. Changes in the weather, particularly from the hot to the cold rainy weather, are badly stood by these cirrhotic patients.

In all active cases rest is essential. Sponge-baths are preferred to ordinary leisurely bathing. Oil baths should be discontinued, as every oil-bathing has in my experience been responsible for high rises in temperature.

Diet:—The aim of diet building is the formation of a balanced and vitaminous diet with lowered fat content and raised carbohydrate and protein moieties. Carbohydrate is preferred as pure dextrose or intermediate products of starch digestion, and not as starch. For infants below the ninth month, breast milk or artificial feeding—preferably acidified milk—is the routine. For older children increased carbohydrate as plantain fruit, soft part of bread and honey are

added to the diet at first. Later on, twice-boiled rice, wheat (*ravat*) conjee, thick barley conjee are added. Butter milk (curd churned and diluted with an equal part of water) has been extensively and safely used independently and as medium for boiled rice. Juice of oranges, tomatoes, pine-apple, aqueous extract of wood apple, are useful as suppliers of vitamin C. The use of *Amalaka* (*Phyllanthus Emblica*) either as pulp or juice deserves more popular use in this connection. Articles of diet either vegetarian, or non-vegetarian producing intestinal allergy must be forbidden. The danger of hypersensitivity has to be borne in mind particularly when a child is recovering. A child that was recovering from hepatic cirrhosis relapsed after the use of egg-white to which the baby was known to be sensitive. Avoidance of tubers, sweets, hard irritating and fibrous foods, and fermenting diet (*laddu, jangri, halwas*) is essential. Excess of fat (ghee, milk puddings, cream) is to be carefully avoided.

Sometimes the pyrexia is very persistent and then very often a latent pyelitis is present or the rise of temperature appears to be in some way related to the presence of helminthiasis. Pyelitis is treated with alkalies and autovaccines, but sulphonamide preparations are avoided. Quinine has acted in pyrexial cases where other drugs failed; the response to quinine being by the reduction of the temperature, and the voidance of worms in the motions.

Drug treatment:—All my little patients receive a prescription on the following lines:—

I. Pepsin grains 6 and acid hydrochloric dilute minims 60 in six doses given before feeds thrice a day. Or papain in powder form is given before feeds.

II. Sodi salicylas, calcium gluconate, diuretin, Ext. Kalmeghi Liq. (B. C. P. W.)

Ext. Penarnava Liq., Ext. Gulvel Liq.

Oleum anisi in a glucose base given $\frac{1}{2}$ hr. after feed.

Additions to the above recipe with special indications are tabulated below:

1. Ext. Cascara sagrada liq. for constipation.
2. Tinct. Digitalis for myocardial insufficiency.

Special lines of treatment:—In a few cases (children with an allergic basis) I had gratifying results with an extract of spleen, but this substance produces reactions.

Adrenal cortex extract given orally or by injection (preferred) has given very useful results, particularly in cases with an allergic diathesis. I feel that adrenal cortex is specially useful in early cases and should be given in adjusted doses. Fat intolerance is controlled by adrenal cortex and vitamins of the B group.

Torantil has been used in two cases with considerable temporary benefit.

Vitamin C and B factors as also concentrated preparations of vitamins A and D are useful and should be given from the beginning.

Autovaccines made from the germs present in the septic foci and particularly from the throat and tonsils, given in small doses and spaced without producing reactions, are always attendant with good improvement, and serve to prevent febrile attacks, complicating cholangitis, pneumonia, pyelitis, etc. Sulphonamide preparations are known to affect the liver adversely and hence are better avoided or used only with caution in treating a complicating condition like pneumonia or some other septic condition.

Infective diarrhoeas are usefully treated with a polyvalent bacteriophage or serum.

The allergic crises seen in some cases with respiratory distress, abdominal distension and constipation, and rise in temperature are best treated with vitamin C and calcium.

Discussing the use of zinc oxide in infantile cirrhosis of liver, M. B. Prabhu writes: "Zinc oxide in a daily dose of $1\frac{1}{2}$ to 3 grains has given more relief than other drugs, and it seems to retard the rate of progress of the disease; even in fairly advanced disease (I will not use the word "cure") satisfactory results have been obtained. This drug, if considered necessary, can be prescribed with other suitable cholagogues. About the nature of the action of zinc on liver I cannot say anything. Could zinc in some form have a specific action on this type of disease as arsenic in syphilis or antimony in kala-azar?" Commenting on the above U. Srinivasa Rau writes: "In his (Prabhu's) hands, it has proved quite harmless and seemed to retard the progress of the disease even in advanced cases. Nobody is able to explain the action of zinc on the liver. I have attempted to modify the evolution of toxic cirrhosis due to carbon tetrachloride in experimental animals, like albino rats, by simultaneous oral administration of vitamins A and C and zinc oxide, suspended in olive oil and the last mentioned drug has definitely delayed the induction of cirrhosis and produced a milder type of fibrosis of the liver in the animals." U. Srinivasa Rau has recently reported beneficial results from the use of acetyl choline in this disease.

I have also used zinc oxide in infantile cirrhosis and earned the impression that its action may be of the nature (non-specific) common to all heavy metals. Zinc oxide is used sometimes to combat the sweats of phthisis and also (in despair) for cases of epilepsy. From clinical experience, I feel that zinc probably acting as a heavy metal keeps the system in an improved condition (stimulation of the reticulo-endothelial system?), and that it does ultimately benefit the patient.

Symptomatic Treatment

Fever:—During the pyrexial stages, diet is reduced (especially fat) and more bland liquids like barley water and fruit juices with increased glucose are given. The pyrexia is treated with sodii salicylas and ammonium benzoas which are usually effective. Vitamin C and calcium are effective in allergic cases. Hydrotherapy is used whenever convenient.

Cough:—That the myocardium and the lungs are damaged in the course of infantile hepatic cirrhosis has been stressed by the writer elsewhere.

The cough which is present in the earlier stages and which seems to be due to the constant presence of upper respiratory infections (vitamin A deficiency?) is best treated by raising the general resistance of the child, i.e., adjusting the diet and administering a tonic rich in vitamin A, and sometimes the use of auto-vaccines. The cough that is present in advanced cases is due to the pulmonary damage and is best treated by a liberal use of calcium and vitamin D.

Helminthiasis:—Worm infestation is tackled either by quinine or bismuth salicylas. Warm enemata could be given to older children.

Insomnia:—Hydrotherapy and/or a dose of ammonium bromide has answered the purpose. Barbiturates and opiates are undesirable.

Constipation:—Reformation of diet with a liberal supply of fluids (barley water and even Mellin's food may be added, fruit juices, glucose and water) in between feeding intervals is the first step. In the case of older children increase in the bulk of food by way of soft part of brown bread and honey, ripe plantains, twice-boiled rice (when tolerated) is essential to have satisfactory bowel action. The "roughage" diet should not be advised to children to overcome constipation.

Vitamins of the B group are specially given, preferably and particularly B₁ parenterally in the early stages. The writer has had a very favourable response from the oral use of equal parts of yeast and active carbon.

Drugs should be resorted to in the end, the first in the list is olive oil or liquid paraffin and the last is the unfailing cascara sagrada. Magnesium sulphate or castor oil has not been used by me as the first seems to invite a pyelitis, and the second is not only a sensitising drug but also suspected to be a hepatic poison.

Diarrhoea:—Constipation and diarrhoea alternate with each other, and deserve early tackling. Generally, administration of vitamin B regulates digestion and bowel action.

Rancid, hard faecal concretions call for reduction in the fat of the diet, and when available the use of adrenal cortex and vitamins of B group. Green diarrhoea calls for reduction in carbohydrate. Protein leathery curds in motion summon reduction in the proteins of the diet.

Parenteral diarrhoea demands rational therapy.

Diarrhoea of enteric and bacterial origin has been treated by me by using either a polyvalent bacteriophage which is chosen for cases with blood in motions and toxic signs like rise of temperature etc. The following recipe has been an alternative for the above—

Bismuth salicylas (grains 2).
Calcium lactas (grains 2).
Ammonium benzoas (grain 1).
Oleum cinnamomi (minim 1).
mucilage tragacanth q. s.
add aqua to bulk.

This is given thrice a day, for a child one year old.

A rise of temperature (toxic absorption?) follows complete arrest of the diarrhoea and for such an undesirable state an emulsion of liquid paraffin and bismuth salicylas is used for a couple of days. Eldoform tablets are also useful.

Apple jelly or Kaopectate (Upjohn), weak tea, and Horlicks are dietetic adjuvants. Thin arrowroot water with a small quantity of pure glucose is allowed. Buttermilk (diluted) may be useful liberally during the recovering stages.

After recovery acidified milk and feeds with low fat content are used. The diet is slowly built up with an optimum supply of vitamins A, B, C and D.

Anæmia:—Liver extract with the addition of vitamins of the B group and vitamin C are given and these act very well, while iron and arsenic are badly tolerated.

DECEMBER, 1941]

CLINICAL NOTES

A combination of bone-marrow and hæmoglobin serves well in many cases—hæmogen (B. I.)

Hæmorrhagic tendency:—Calcium and vitamin C combat the bleeding tendency satisfactorily. Post-hæmorrhagic anæmia is combated with liver, vitamin B factors, and C and iron; the last being given cautiously. Ferri et ammoni. citras is the safest.

In urgent and severe cases of gastro-intestinal hæmorrhages, hemoplastic serum may be used but Manetol-Bayer seems to be ideal.

Vitamin K has to be used in the case of hæmorrhages.

Complications like pneumonia, or septic fever with coccal infections of the skin indicate very bad prognosis. Pertussis as a complication has responded well (in a case) to the parenteral use of dissolved pertussis vaccine.

Hæmorrhages from the bowel herald an impending fatal termination.

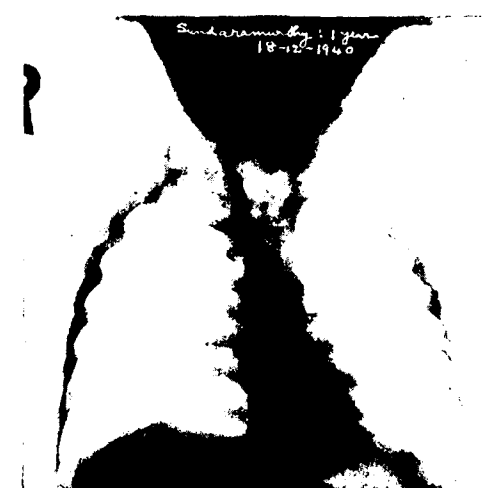
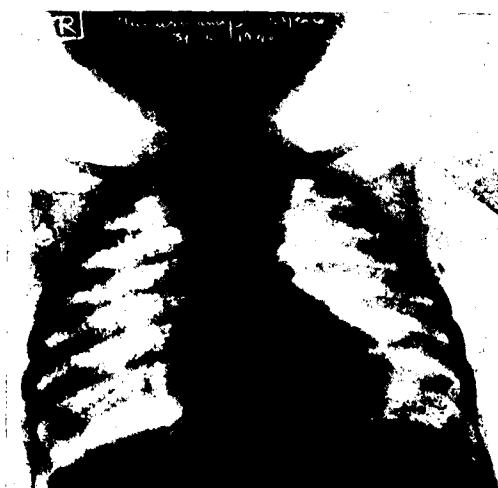
I am indebted to Mr. P. Venkataramiah, M.A., B.Sc. (Edin.), Government Chemist, Coimbatore, for having supplied me samples of cholam malt and active carbon and some data regarding the same.

Indian Medical Journal

Vol. 35, No. 12

ENLARGED THYMUS IN INFANTS

Dr. A. V. S. Sarma, M.B., B.S., D.C.H. (Lond.)

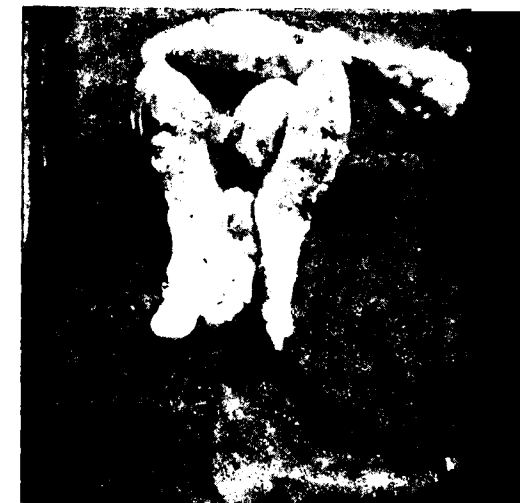


Note the supra-cardiac shadow in the superior mediastinum

SUB-MUCOUS POLYPUS WITH

LEFT OVARIAN CYST

Miss Kamala K. Tare, L.M.P.



Removed by vaginal hysterectomy

terminal cholangitis—and in the advancing stages of the disease, an autovaccine made from the bacterial flora of the bowel is used. The idea is to decrease the incidence of an ascending infection of the biliary tract. This procedure has had practical utility in the writer's hands. Vitamin K and bile salt therapy may be given particularly as a prophylactic against hæmorrhage.

Arrest of growth and the recovering stage:—As the cirrhotic child is recovering the body develops a condition akin to renal rickets; and this is treated by a balanced diet and administration of calcium and phosphorus. The alkaline reserve seems to be lowered in these cases and administration of alkali orally would be effective.

ratory and expiratory stridor and also cyanosis present. Clubbing of finger and toe nails present. Pulse 140 per minute. A harsh systolic murmur heard internal to the nipple. (Congenital morbus Cordis?). Liver $\frac{1}{2}$ " enlarged. X-Ray chest:—A supra cardiac shadow seen in the superior mediastinum.

2. Sundaramurthy. 1 year. Male. (18-12-1940). Fits and dyspnoea. Fever (100.2°F.). Lumbar puncture was done and C. S. F. found normal. X-rays chest:—A supra cardiac shadow seen in the superior mediastinum.

I am indebted to Dr. G. R. Dinker Rau, M.D., Superintendent and First Physician, Government Stanley Hospital, Madras, for permitting me to study the above cases under his care.

Reference

Diseases of Infancy and Childhood, Wilfred Sheldon (1936).

VAGINAL HYSTERECTOMY FOR PLACENTAL POLYPUS. Miss Kamal K. Tare, L.M.P., writes:

With the advance of asepsis and anaesthesia, vaginal hysterectomy is given up nowadays for abdominal hysterectomy as great safety is afforded in opening the abdomen. But, no doubt, vaginal hysterectomy has its own advantages, especially in cases of chronic endometritis, small submucous fibroids, metro-pathia hæmorrhagica and intractable functional hæmorrhage near menopause. In these cases hysterectomy by vaginal route is safer as the uterus is not much large in size and there is no absolute indication for opening the abdomen as in cases of large fibroids and other malignant conditions of the appendages where there is no other alternative.

This operation is frequently practised by Dr. N. A. Purandare, M.D., F.C.P.S., the famous gynaecologist and obstetrician of Bombay. Great discrimination has to be exercised in selecting the proper cases. Indiscriminate decision invariably tends to disastrous results. Great precaution is also to be taken during the operation to check hæmorrhage completely and not to injure the closely surrounding vital structures such as the ureters and other blood vessels. Done in proper way it has some advantages over the abdominal operation in lessening the shock to a great degree and thereby the mortality. There is no danger of infection of the peritoneal cavity with an unhealthy cervix.

The following is the record of operations of hysterectomy done in Dr. Purandare's hospital during the last five years.

Out of a total of ninety-seven operations for hysterectomy thirty-two were done per vagina, mortality or post-operation complications being nil so far.

The following is a typical operation with an interesting history behind it.

Patient's Name—Jamunabai Jamnadas Damaniya.

Age—37 years. Wt. 81 lbs. B.P. 135/95.

Main complaints—Patient admitted to the hospital on 23.8.41 for continuous bleeding per vagina for five months. Bleeding commenced while patient was two months pregnant and continued till abortion took place after further two months. Pain stopped but bleeding continued.

Menstrual History—

(1) Previous menstrual cycle—Regular, normal flow lasting for five days. No dysmenorrhœa.

(2) Present menstrual cycle—Irrregular, profuse flow lasting for days together with severe dysmenorrhœa.

(3) Last menstrual period—bleeding since five months' with occasional pain.

Obstetric history—

Eight full term normal deliveries.

Three premature labours.

Six abortions.

History of manual removal of placenta in all the deliveries. No puerperal fever.

P. V. Exam—Uterus large about the size of two months' pregnancy deviated to the right. Left ovary cystic. An old tear in the cervix extending to the left fornix.

Diagnosis before operation—Submucous fibroid(?) with ovarian cyst.

Diagnosis after operation—Submucous polypus with left ovarian cyst.

Operation—Under spinal stovaine (1.75 c.c.) the cervix was exposed and was found to be unhealthy and hypoplastic. After transfixation of the cervix the utero-sacral ligaments, the broad ligaments with uterine vessels, the ovarian and round ligaments and the tubes on both sides were ligatured and the

uterus was removed per vagina. After removal of the uterus a cyst of the size of a big lemon protruded out of the wound. It was also removed after ligaturing its pedicle and the wound was stitched in layers as usual.

On section of the uterus it was found that the uterine walls were soft and hypertrophic. There was a small polypoid-tumour on the posterior surface near the fundus.

Microscopic examination of the section from the tumour revealed in it normal chorionic villi with organised blood. The ovarian cyst was a common pseudo-mucinous cystadenoma.

Patient's condition after operation was satisfactory and no complications occurred during her fifteen days' stay in the hospital and was discharged cured on the sixteenth day.

A CASE OF PREGNANCY HYDREMIA. M. N. Paladhi, L.M.F., Lohaghat Hospital, Almora, writes:

I was recently called in to see an eighteen years old Hindu primipara in her eighth month of pregnancy. On examination I found (1) Labia Majoræ enormously swollen (2) Both feet slightly cedematous which pitted on pressure (3) Urine high coloured and scanty, and contained slight albumin (4) Heart and lungs normal.

The patient was kept in recumbent position with her leg raised. Gonlard's solution was applied to the labia, while an alkaline mixture with Tr. apocyni was given orally. There was no appreciable diminution of labial swelling. To ease the discomfort and the anxiety of the patient, I expressed a considerable amount of fluid by puncturing the labia with a sterilized needle, after which hot boric fomentations were given every four hours. By this method, labia was restored to normal in a week's time, and the patient had a normal delivery at full term.

This is obviously a case of pregnancy hydremia, that is, increase in the amount and proportion of the watery element in blood. I believe this is uncommon, since this is the first case I have met with in my fifteen years of practice.

A CASE OF MALARIAL APHASIA, Ibid.

On 10-7-39, I was called in to treat a thirty-five year old Muhammadan male for fever followed by aphasia. On examination I found (1) temperature 104°F., (2) pulse 135 per minute, (3) respiration 40 per minute, (4) face flushed, (5) conjunctivæ intensely injected, (6) tongue coated, (7) liver and spleen markedly enlarged. At the same time, I was amazed to find that the man could not speak, though quite conscious. The thought of malarial aphasia came to my mind. After four days of treatment with quinine, intramuscular and oral, fever came down, and with it the patient had recovered his power of speech. Aphasia in malaria is indeed rare, hence this note.

ENTERO-VIOFORM IN SUB-ACUTE AMOEBIC DYSENTERY. Dr. S. Balasundaram, Director, Ehrlich's Laboratory, Madras, writes:

The diagnosis of the disease known as Amœbiasis is fraught with as much difficulty as its treatment. Though the text-books describe the various clinical differences between amœbic dysentery and bacillary dysentery, yet in practice, all this information and knowledge is of no avail mainly because clinical symptoms of cases of dysentery met with in our practice do not conform to standard types and are indistinguishable from bacillary dysentery. The identification of Entamoeba Histolytica is, as far as I know, the only clue to clinch the diagnosis in a case of amœbic dysentery and hence there is enough justification for the fact that

practically it is a safe and good principle to regard any acutely developing diarrhœa as a forerunner of amœbic or bacillary dysentery. An examination of a fresh specimen of motion should be the routine practice in these cases. The discovery of active amœba containing ingested red blood corpuscles is sufficient to diagnose infection with the Entamoeba Histolytica. Such a procedure, of course, makes the diagnosis simple and easy. But the real difficulty arises only when we have to deal with cases of chronic or sub-acute cases of amœbic dysentery. The sub-acute types are those which show both the vegetative and the cystic form in one and the same motion or alternately in different motions on different days. The identification of the cysts is not very easy and it is very common that only some specimens of motion of the same patient contain these cysts while others do not. Hence almost every motion in a day has to be examined for these cysts and no case should be pronounced free from these until, according to Manson, at least the "stool has been searched on each of seven consecutive days." The method usually adopted by me and approved by many for the identification of these cysts is by mixing the fresh fæces with a solution of Gram's Iodine which brings out their nuclei prominently.

The chronic cases are those which have only the cysts and never the vegetative forms in their motion. These patients usually complain of a lot of gastro-intestinal symptoms without the motions being actually dysenteric. Many of these cases are difficult to be differentiated from other gastro-intestinal disorders, and the spotting out of the cysts is the only method of diagnosis of this phase of the disease.

Treatment

Emetine—the alkaloid of ipecacuanha—still holds the field in the treatment of acute amœbic infections. The old-fashioned method of giving laudanum by mouth and following it up with ipecacuanha powders is not resorted to nowadays after the advent of the potent alkaloid of the latter. The efficacy of the treatment with emetine depends upon the adequacy of the quantity given. While stress should be laid upon the bad effects and toxic action of large doses yet insufficient dosage usually results in temporary arrest of the disease, only to return in full force after some time. For an adult one grain of emetine in 1 c.c. of distilled water for at least ten or twelve days is considered to be effective in acute cases both to cure and to prevent further attacks of dysentery. But the sub-acute and chronic cases do not seem to be affected by this drug. At any rate, though the clinical symptoms may be better, the cysts are not disappearing from the motion by the above treatment alone.

Usually the older practitioners used to follow up the emetine treatment with emetine bismuth iodide by mouth. This has been found to be not so convenient owing to the lot of difficulty and worry it causes to the patient and to the practitioner. One of the chief troubles with this drug is vomiting, even if given in the form of hard tablets, and it very often passes through the intestinal canal unabsorbed. Patients have come to me complaining that the tablet itself was found in the motion. The possibility of administering it in cachets should not be forgotten. It has got other disadvantages in that it cannot be dispensed at short notice and in all

dispensaries. Some times, even if it is administered in proper way, diarrhœa ensues which confuses both the practitioner and the patient as it is difficult to know whether the diarrhœa is the result of this drug or a recrudescence of the amœbic infection. Even in spite of all these difficulties if the drug is pushed on, still cure cannot be assured as cases resistant to this treatment and showing cysts in their motion are none too uncommon.

All these facts made me try one of the patent preparations known as "Entero-Vioform (Ciba)" to find out its efficacy in such sub-acute and chronic cases of amœbic dysentery.

Altogether out of a large number of cases of dysentery which came under my observation, thirty-seven cases were clinically classified as sub-acute amœbic dysentery diagnosed by the microscopic examination of motions for cysts and amœba. The effect of Entero-Vioform tablets, as studied in these cases, was as follows: After an initial enema in every case, two tablets of Entero-Vioform thrice daily were given for ten days and all motions passed were examined for cysts and amœba. Such examinations were continued even after the disappearance of amœba and cysts consecutively for seven days. If during this period no cysts or amœba were found they were pronounced as cured. Out of these thirty-seven cases treated, twenty-nine were found to have been cured by the above criterion. Fifteen of these cases have been followed up for about an average of eight weeks and no amœba or cysts were found in the motions examined during this period. The remaining fourteen were followed up only upto an average of five weeks as these patients could not be convinced of the necessity to attend the laboratory. In four cases, who complained of severe tenesmus, enemata of Entero-Vioform tablets in normal saline were resorted to with good results, and the patients showed immediate relief from the spasms. The remaining eight cases were intractable and therefore put on mixed treatment.

Entero-Vioform has also been tried in some chronic cases but as these were not followed up, no definite conclusion could be arrived at.

Other kinds of gastro-intestinal disorders such as entero-colitis were also found amenable to this drug, but cases of this type studied by me are too small to warrant any conclusions.

No case of amœbic hepatitis turned up in the series studied by me, and hence the effect of this drug on this phase of amœbiasis could not be made out.

Conclusions

1. Diagnosis of cases of amœbic dysentery should always be by microscopic examination of the stools.
2. In acute cases emetine hydrochloride in good adequate doses is the best line of treatment.
3. In sub-acute cases Entero-Vioform (Ciba) is a useful remedy which gives good results in at least 78 per cent. of the cases.
4. The criterion of cure should be a consistently negative result of examination of every motion of the patient on each of seven consecutive days after the clinical symptoms have subsided.
5. Chronic cases may also be amenable to Entero-Vioform of treatment, but is to be confirmed by further observation.

SPECIAL EMERGENCY COMMISSION

The Government of India have decided to offer a limited number of Special Emergency Commissions in the Indian Medical Service to Specialists from among civil medical practitioners possessing appropriate post-graduate medical qualifications and sufficient experience in the special subjects of Medicine, Surgery, X-Ray and Anæsthetics.

These officers will be commissioned as Lieutenants in the first instance but would only hold that rank for a day or two before receiving the acting rank of Major which will be granted to them in virtue of their Specialists posts.

They will be exempted from preliminary military training.

The initial pay for Majors in the Indian Medical Service is Rs. 800 with overseas pay if admissible. Disability and family pensions will be as for other I. M. S. officers. Appointments will be made on the recommendations of an Indian Medical Service Selection Board and physical fitness of Army Category of A or B will be required.

Full particulars of these appointments may be obtained on application to the Director-General, Indian Medical Service.

SPECIAL NUMBER ON "SURGICAL EMERGENCIES"

This Special Number has been scheduled for publication during the first half of the year 1942. The exact date of publication would be announced in due course.

We invite medical men to contribute on any one of the following aspects:—

- | | |
|--|--|
| 1. Diagnosis and treatment of Epistaxis | 6. Compression and Concussion of the brain as a result of cranial injuries |
| 2. Diagnosis and treatment of Hemoptysis | 7. The diagnosis of Acute Abdomen |
| 3. The causes and treatment of Retropharyngeal Abscess | 8. Causes and treatment of Retention of Urine |
| 4. Management of Pleural Effusion of sudden onset | 9. Paracentesis of Thorax and Abdomen—when and how to do it |
| 5. Causes and treatment of Pulmonary Embolism | 10. The position of specific anti-sera in serious surgical infections |

Each contribution should not exceed 10 foolscap sheets, typed on one side only with double spacing, and with sufficient margin on the left.

Long quotations should be avoided, and all references should be checked before submission.

It would be greatly convenient if the manuscript is sent to reach this office on or before 30th April 1942.

The best one among the contributions received will be awarded a prize of Rs. 15, and given a place of honour in this Special Number.

Editor:

INDIAN MEDICAL JOURNAL
131, Coral Merchant Street, MADRAS

For the treatment of URINARY INFECTIONS

NEOKET

COMPOUND
MANDELIC ACID
GRANULES

Neoket consists of pleasantly flavoured, effervescent granules containing Mandelic Acid and Sodium Acid Phosphate, suitably sweetened with Saccharin, and Sodium Bicarbonate is present in sufficient quantity to effect neutralisation of the Mandelic Acid. No Ammonium Chloride is contained in Neoket and the collateral use of additional acidifying agents is not usually necessary.

Supplied in bottles containing 1½ ozs. and 6 ozs. (approx.)

AMMOKET

ELIXIR OF AMMONIUM MANDELATE

FOR THE TREATMENT OF
URINARY INFECTIONS

The Ammonium Mandelate contained in Ammokat is split in the body into mandelic acid which is excreted in the urine, and ammonia which is converted into urea. With Ammokat the mandelic acid produced is sufficient to maintain the required pH value of the urine, and at the same time exert a powerful bactericidal effect.

Supplied in bottles of 8 oz. and 16 oz.

FOR PARTICULARS PLEASE APPLY TO: BOOTS PURE DRUG CO. LTD., 10 LALL BAZAR, CALCUTTA.

MANUFACTURED BY:
BOOTS PURE DRUG CO. LTD. NOTTINGHAM. ENGLAND

FELLOWS

COMPOUND SYRUP

helps to overcome the devitalizing effects of respiratory infections, pregnancy, dietary deficiencies; and it is an excellent appetite stimulant. This dependable, bitter, and reconstructive Tonic contains valuable mineral salts; and it has been prescribed by doctors the world over for more than 60 years.

Such care is devoted to the preparation of FELLOWS' SYRUP that only by making sure of the name "FELLOWS" can you be certain of the same unvarying quality.

Samples on Request

Fellows Medical Mfg. Co., Inc.
26 Christopher Street New York, N. Y.

CADMINOL

(Cadmium-thio-Gluconate in 1½% oily suspension)

IS

A Golden Remedy for Pulmonary Tuberculosis

Advantages of Cadminol :

1. Less toxic. It does not produce any reactions.
2. A fall in temperature is markedly noticed after a week's treatment.
3. Economical in price.
4. Clinical standardization of every batch under expert control.

Packings of 30 c.c. and 10 c.c. respectively are available in the market.

For detailed literature please write to :

UNION DRUG CO. LTD. CALCUTTA.

Telephone :-
Cal. 1159
Cal. 4975

285, Bowbazar Street
Madras Agents :-
Messrs. APPAH & CO., MADRAS

Telegram :-
" Benzoic "
Cal.

THE Indian Medical Journal

SUBSCRIPTION NOTICE

Subscribers are kindly requested to remit their annual subscription for the year 1942 on or before 31st December 1941 to Dr. Khan Chand Wohra, Honorary Treasurer, All-India Medical Licentiate's Association, Borstal Institution, Lahore.

In case he does not receive the remittance by that date he will issue V. P. P. cards which may kindly be honoured, as otherwise the Association stands to lose a heavy amount on this account. It is cheaper for the subscriber to remit his subscription than to have it recovered through V. P. P. Subscribers are also requested to invariably quote their roll numbers (printed on the wrapper of the Journal) on the money order coupon. Subscription is strictly payable in advance at the following rates :

- Rs. 4/- per annum for members.
- Rs. 6/- „ non-members.
- Rs. 2/- „ bona-fide medical students.
- Rs. 7/8 „ foreign members and subscribers.
- Rs. 6/- „ Burma members.

Vol. 35 || MADRAS: December 1941 || No. 12

Electrical Accidents

With the increasing use of electricity for industrial purposes in our country, electrical accidents are bound to be more frequent, and Dr. Joglekar's article on this subject in this issue of the *Journal* is, perhaps, the first attempt to survey the medical problems in relation to such accidents. Electricity for domestic and municipal purposes, and as a source of industrial power supply, has rapidly grown apace, and the extent of its use may be inferred from the fact that practically the whole of South India, particularly the Mysore State, is now using electricity in the place of steam and oil and that all our important industrial cities derive their power from electricity. It is, therefore, incumbent on medical men to study the problem of electrical accidents and to be in a position to give effective medical aid. As Dr. Joglekar points out, such accidents are likely to occur suddenly, unexpectedly and dramatically in the home, factory, power station or along the frequented or unfrequented areas traversed by the cable; and in conditions in which onlookers are apt

to lose their heads and in situations far removed from sources of medical aid.

It would be fallacious to presume that high voltage and high tension are indispensable to produce electrocution or severe electrical injuries. Dr. Joglekar warns against this complacency by instancing cases of death or injuries caused by low voltage and low tension electric currents.

Another factor of importance which he justifiably stresses is not to presume death by electrocution till artificial respiration for a long period has proved futile. It may be that according to ordinary clinical tests the patient may look apparently dead, and die if left untreated. But more often than not such a patient is really in a state of suspended animation owing to acute bulbar palsy, from which the patient could be revived by prolonged and continuous artificial respiration, at any rate till circulation completely fails.

Electrical injuries may be of many kinds, each of which requires suitable treatment according to its nature. Cerebral oedema, fractures, burns, paralysis, shock and coma are some of the more common results of severe electric trauma, and the methods of treatment suggested by Dr. Joglekar deserve consideration and further study.

Besides, the methods of freeing the victim from electrical contact should be popularised in an ever increasing measure. Not unoften, owing to the ignorance of such methods, the rescuer himself becomes the victim to electrocution.

Infantile Biliary Cirrhosis

Although its aetiology is still subject to much speculation, yet Infantile Biliary Cirrhosis has been accepted as a definite clinical entity in pediatrics with a more or less characteristic syndrome of symptoms and histopathology of liver, an organ which is ostensibly the primary seat of this disease. During the last two years, many articles have been appearing in the *Journal*, dealing with some of the more important aspects of the subject, notably by Dr. S. Balasundaram and Dr. A. V. S. Sarma who have been, on their own initiative, doing some good work in this connection. The last of their contributions are published in this issue, and we are therefore tempted to review the recent

development of opinion about this elusive disease in the light of publications that have appeared in the *Journal* and elsewhere.

One thing on which there is unanimity of opinion is with regard to its incidence being largely confined to the Hindu community, particularly the Brahmin section of it. This peculiarity in its incidence rules out of consideration the common pre-conditions of ill-health, viz., insanitation, overcrowding and poverty. Another common observation is its familial incidence, and strangely enough it affects male children more than the female although both live under the same environment. The third point of agreement is that the disease attacks children mostly between the ages of six months and three years.

These three outstanding clinical observations on which there is little difference of opinion give a short shrift to some of the otherwise plausible theories about its aetiology. Bacterial infection has been ruled out because the disease bears none of the essential characteristics of an infectious disease—its circumscribed incidence and negative cultures of blood, urine and stools are much against this possibility. Congenital syphilis also has been excluded by serological tests of both the parents and the affected children. Dr. Balasundaram¹ has even shown that there is little difference between the accustomed diet of the affected and the unaffected children, and Dr. Narayanamurthi² argues that even excess of carbohydrates, to which the Brahmin community is prone, could not be a factor since it should help the liver to recover and not retard its function.

Thus its aetiological factors are narrowed down to the consideration of congenital proclivity, allergy, endocrine imbalance, specific avitaminosis and virus infection. These may act singly or in combination. Dr. Prabhu³ points out the striking analogy which infantile cirrhosis bears to some of the heredo-familial disorders with inborn tissue defects. Dr. Sarma has been able to recognise some cases as definitely due to allergic factors related to diet, drug or inheritance. Dr. Balasundaram stresses on the endocrine hyper-activity being transmitted from the parent to the child resulting in the impaired integrity of the endothelial cells of the liver and pathological alterations in the hepatic architecture. Dr. Ramachandra Rao⁴ and Dr. Sarma attribute

to avitaminosis C the genesis of the fibrosis of the hepatic venous terminals in the cirrhosis of infantile liver. Col. R. N. Chopra⁵ interprets the focal necrosis of hepatic cells as possibly due to a virus infection on the analogy of small-pox and influenza, diseases attributed to a virus where there is evidence of necrosis of hepatic tissue. All these suggestions are based on the essential characteristics of the histopathology of liver in this disease which are (1) endothelial damage, (2) consequent, if slow, fibrosis of the hepatic venous terminals, (3) repeated focal necrosis of hepatic cells and (4) intralobular fibrosis.

The treatment is mostly symptomatic. Fat-free diet and fruit juices are warmly recommended by all. Dr. Sarma has noted beneficial results from administration of adrenal cortex which is rich in anti-marasmic and anti-allergic factors, and also of vitamin C. Dr. Sreenivasa Rao⁶ has found that administration of vitamin C to animals undergoing induction of experimental toxic cirrhosis has prolonged the relative period of induction more than in the control animals. On this basis and on the accepted view of its beneficent action on the endothelial integrity of the hepatic capillaries, he strongly advocates the prolonged administration of synthetic vitamin C such as Redoxon, supplemented with plenty of orange and lime juice. Dr. Prabhu recommends small doses of zinc oxide, and he is supported by others. It is not known how it acts, but Dr. Sreenivasa Rao⁶ has experimentally shown that it delays the induction of cirrhosis and he attributes the good results with this metal to this factor. It may be noted here that the commonly used indigenous 'liver cures' contain this drug. Dr. Balasundaram recommends, besides these, arsenic in some form or other, but we believe there is neither clinical nor experimental justification for the use of this drug so toxic to liver and so infinitely capable of abuse.

It is thus obvious even from this too brief a review that much more remains to be known about this disease, and we do hope that further work will be devoted to find out its specific aetiology and treatment.

1. *Ind. Med. Jr.*, March '40, p. 64.
2. *Jr. of the Stanley Med. College*, Jan. '40, p. 8.
3. *Ind. Jr. of Pediatrics*, July 40, p. 121.
4. *Jr. of South Ind. Medicine*, Dec. '40, p. 109.
5. *Handbook of Tropical Therapeutics*, 1932.
6. *Journal of South Ind. Medicine*, Dec. 40, p. 109.

SPECIAL ARTICLES

War Surgery in the Old World

● Dr. Waldemar Schweisheimer, M.D.

(New Rochelle)

An extremely strange cure is reported in the Trojan myth. Telephos, king of Mysia, son of Herakles, had been wounded by Achilles with a spear in the left side. The wound did not heal and the king was confined to his bed for years. Even the famous physicians, Podalirios and Machaon, could not do anything but give the king relief from his severe pains.

The king finally sent to an oracle of Phoibos Apollon and was told that only the spear that inflicted the wound would be able to cure it. Podalirios and Machaon interpreted the mysterious oracle in a peculiar way: they filed off some rust from the spear of Achilles and spread it over the wound. This brought about a complete cure within a very short time.

In a way this treatment is similar to the principle of homœopathy: *Similia similibus curantur*, or as Samuel C. F. Hahnemann (1755-1843), the founder of Homœopathy, put it: "Medicines must only have the power of curing diseases similar to those which they produce in the healthy body."

Podalirios and Machaon, sons of Asklepios, are the eminent physicians mentioned by Homer as the leading physicians of the

Greek Army at Troy.

Podalirios was more the successful pathologist, and internist while Machaon was a skilful surgeon.

Homer is a rich source of knowledge about ancient surgery. In the *Iliad* the detailed description of wounds, their anatomy and pathology and their treatment, reaches an amazing degree. He distinguishes mainly two kinds of injuries: fractures and wounds produced either by missiles from slings or stone and rock otherwise hurled, or produced by cutting instruments such as swords, spears, lances and arrows. In the *Iliad* 147 war injuries are described, as compared to only nine in the *Odyssey*.

The parts of the body mostly injured were trunk, head and neck. This does not correspond to the frequency of war injuries in modern times. The mortality of the war wounded is very high in Homer,—about 78 per cent. according to a detailed statistic. The most dangerous weapon is the sword which injured fatally almost in every case. Spear and stone are somewhat less dangerous, and the arrow is the least dangerous of these weapons. All injuries of the head are fatal, wounds of the trunk in 85 per cent. of the cases, wounds of the neck in 81 per cent. while wounds of the limbs are fatal only in 14 per cent. of the cases. Where the liver has been seriously injured the outcome is always fatal.

A good survey of the kind of treatment given to a wounded soldier is given in Homer's report on Patroklos

treatment of Eurypylos whom he led back from the battlefield to his tent. Eurypylos had an arrow wound in his thigh.

"A servant spread,
Upon his entering, hides to form a couch;
And there Patroklos laid him down and cut
The rankling arrow from his thigh, and shed
Warm water in the wound to cleanse away
The purple blood, and last applied a root
Of bitter flavor to assuage the smart,
Bruising it first within his palms: the pangs
Ceased; the wound dried; the blood no longer flowed."

When Menelaos was wounded by a superficial arrow wound, Machaon examined the wound, sucked out the blood and sprinkled on the wound soothing drugs "which of yore the friendly Chiron to his father gave." Sucking the blood from a wound was supposed to protect the injured from wound infection.

Arrows and spears were torn out or cut out. "For a leech", Idomeneos tells Nestor, "is of the worth of many other men for the cutting out of arrows and the spreading of soothing simples."

The Surgery of the Old World did not know, however, how to master a bleeding; ligature was unknown at that time. The red-hot cautery, on the other hand, was used to stop bleeding, as we know from Hippokrates' works.

The usual treatment consisted of

Cleansing the Wound

with hot water, and spreading on it some assuaging and hæmostatic medicament. The hæmostatic simple to which Homer refers, is believed to have been a kind of opiate or opium dry substance which was reduced to powder by rubbing and then sprinkled on the wound. Others believe that herbs with astringent and styptic qualities were used for this purpose in order to coagulate the superficial layers of the wound. Such herbs partly have bactericidal qualities too.

Then the wound would be suitably bandaged. The water in which wounds were washed, was filtered or boiled; dressings preferably were made of new linen. Other applications for wounds were wine and oil. For cleanliness' sake the surgeon's hands and nails were to be kept clean. Cooling of the wound was done with the help of fresh herbs. Hippokrates too used cataplasms of boiled herbs or fresh leaves of several plants.

Hippokrates, in his treatise on Wounds of the Head, gives us an exact account of the operation of trepanning. The name of the inventor of this operation has been lost, but even human skulls of the neolithic period have been discovered which bear evidences of trepanning. Hippokrates knew many surgical and obstetrical instruments, a few of which, according to Ligeros, were the blunt-hooked embryulkos, known by him as ichthye, the embryotome or onyx, the obstetrical forceps such as the kephaolotome or kephaolotribe, the metromele, the metrotome or metroclast, the spektroskope or dioptra, the metroskopie reed, the catheter, the hysteroklast, the hedgehog or nrchin pen, the cautery, the surgical saw, the scraper or odontagra, and various other devices for reduction and extension.

The Roman Army Medical Service reached a remarkable stage of detailed organization which was necessary because of the continuous wars of this bellicose nation. While they adopted most of Greek scientific methods, they concerned themselves also with amputations,—partly with success.

A particularly interesting operation was the Removal of the Amazons' Right Breast

in order to make them fit for war duty. In "Airs and Places," one of the works in the Hippocratic collection, the writer speaks of a Skythian Nation, referring perhaps to the Amazons, and says that "their women have no right breast:": for while still of a tender age their mothers heat strongly a copper instrument, constructed for this very purpose, and apply it to the right breast, which is burnt up, and its development being arrested, all the strength and fullness are determined to the right shoulder and arm."

Oliver St. John Gogarty believes, however, that this was done, not to determine "all the strength and fullness to the right arm," but to save the breast from the bowstring, as anyone who has shot in a bow will realise. It was done in an age before brassieres were invented. According to his opinion it is one of the few operations of ancient surgery that was directly utilitarian and inspired by commonsense.

Old World for the Scandinavian nations means the period of the

Vikings

in the early Middle Ages. Wounds were well attended to in those centuries—which is small wonder considering the belligerent life of those tough Northern nations. Even amputations were performed, and wooden legs were not uncommon. Mention is also made of the operation called gastroraphy. In Gautreksson's saga one of the king's enemies has been wounded. The king examined the wound himself, he saw that the belly was ripped up, only the peritoneum (*lif hinna*) was holding back the entrails. The king who apparently was an expert in surgical technic, cleaned the wound, took a needle with silk thread and sewed up the wound. He poured all the salves which he considered helpful, into the sewed wound, and then made a skilful dressing. Some Viking kings were famous in medical art.

A famous story is told about the battle of Stiklestad (1030 A.D.). One of the King's men, named Thormed Kolbrunarskald, has been wounded and is about to be bandaged by a woman expert in medical art. The woman had thrown crushed leek and other herbs into a stone kettle and had boiled them. She ordered the wounded man to eat this mixture and then examined, by smelling the wounds, whether the wounds were connected with the deep body cavities.

Wounds would be cleansed and bandaged with healing vulnerary herbs. In the Edda's Volsung story Sigmund had bitten Sinfjotli in his throat. Afterwards "he saw where two weasels went, and how that one bit the other in the throat, and then ran straightway into the thicket, and took up a leaf and laid it on the wound, and thereon his fellow sprang up quite and clean whole; so Sigmund went out and saw a raven flying with a blade of that same herb to him; so he took it and drew it

over Sinfjotli's hurt, and he straightway sprang up as whole as though he had never been hurt." If some wounds bled profusely, then dried vegetable powders were sprinkled over them and the bandage was tightened.

Probes were used early as well as other instruments from stone, wood and metal. In Sweden some trepanned skulls were discovered which date from the second or third century. An early operation was also the removal of foreign bodies, particularly of arrow-points. Fractures could be healed skilfully. Small bone-splinters were given the dead into their graves to set them on their journey to Valhalla with undamaged limbs. Magic formulæ or spells (charms) are considered extremely valuable for medical aid. There are special wound-spells which must be uttered along with the stroking and kneading of massage of convalescent wounded parts of the body.

In the battles fought by the Celtic nations, the Druids

played an important part. They took care of the wounded and restored them to military fitness. In the battle of Moytura in Ireland, which is said to have been fought in 487 B.C., the leader, King Nauda, lost his arm, and his physician, Diancecht, staunched the blood and dressed the wound. Diancecht, a Druid physician, was credited with all the potentialities of a Celtic Asclepius, he even was supposed to be a god. King Nuada's son lost a hand in a battle, but Diancecht provided him with an artificial hand wrought in silver and so mobile in every joint that it was thought natural.

The Druids were simultaneously priests, physicians, judges and legislators, and corresponded to the Magi of the ancient Persians and Chaldeans of Syria. Britain was reputed to be the fountain-head of Druidism, and the Druids were the priests and physicians of the ancient Irish civilization. The Gallic Druids were important persons up to the time of Julius Caesar. They communicated their knowledge to initiates only by oral communication.

The Druids were excused from military service. In time of war, however, numerous Druids accompanied the fighting troops, each Druid bearing a bag of salves and herbs, at his girdle. The Druidesses by their medical skill were able to afford great assistance to the wounded in war.

The surgery of the Druids was of a simple but useful character, and had to do principally with setting broken bones, reducing dislocations, and healing wounds,—all this combined with magical ceremonies. They acquired some knowledge of human anatomy from the custom of human sacrifice which they had to assist. Diodorus Siculus described one of their sacrificing methods. "They take a man who is to be sacrificed and kill him with one stroke of a sword above the diaphragm; and by observing the posture in which he falls, his different convulsions, and the direction in which the blood flows from his body they form their predictions."

The mistletoe (*Viscum album*) was the "all-healer" of the Druids, and they used it for the treatment of war wounds too. It was said to heal ulcers most effectively, if only the sufferer chewed a piece of the plant and laid another piece on the sore.

BLOOD-VITA

IDEAL TONIC & BLOOD PURIFIER

It is also highly efficacious in Anæmia, Dyspepsia, Rheumatism, Gout, Blood-pressure, Nervous debility, Liver and Kidney troubles and other cognate complaints.

IT IS BIOLOGICALLY AND CHEMICALLY TESTED IN THE LABORATORIES OF THE GOVT. OF INDIA AND THE GOVT. OF BENGAL

Prices:— 8 oz. phials Rs. 1/8
16 oz. phials Rs. 2/12

Available at all Chemists and Druggists

ADHYAKSHA MATHUR BABU'S
MEDICAL RESEARCH LABORATORY
P. 23, Central Avenue, CALCUTTA



A Standard Prescription in ASTHENIA & MALNUTRITION

R
VINOCOD
(HEALTH TONIC)

1 Tablespoonful B.D.P.C.

Other Indications:—

- Anæmia,
- Convalescence,
- Tuberculosis,
- For Expectant & Nursing Mothers.

Indian Health Institute & Lab. Ltd.
Beliaghata Main Road, Calcutta

Ext. Cod-liver & Vit. A & D.....
Ferropeptone.....
Cal. & Sodii Glycerophosp.....
Ext. Cascara Sagrada.....
Alcohol.....



CORAMINE
Ciba

A circulatory and respiratory stimulant with a wide margin of safety for emergencies and prolonged treatment

CORAMINE is manufactured exclusively by CIBA

CIBA (INDIA) LIMITED P.O. BOX 479 BOMBAY

Modern Surgery

• Dr. T. A. Gopalakrishna Rao, L.M.P.

(Medical Officer, Thondamuthur)

Although historical evidence is accumulating to establish that the roots of surgery are to be found in the ancient civilizations of Egyptians and of the Hindus, long before the Christian era, yet modern scientific surgery is of recent blossoming and can claim only the tradition of the last two to two and a half centuries. It had its birth in the monastery at Mount Cassino. This first independent Medical School with its teachings and traditions established a world-wide reputation. The writings of this school show descriptions of many surgical procedures. De Challuc, the great French surgeon, was the first to write a text-book on surgery about the fourteenth century, and about the same period flourished in England John Arderne, the earliest known of English surgeons.

Since medicine was held a monopoly by the members of the religious orders, there arose the need to employ what are now called 'technicians' for the manual part of the work. This view of the secondary or the subservient position of Surgery to Medicine persisted for a very long time. Abdominal emergencies were till recently admitted into the medical wards, where the physician made the diagnosis and summoned his surgical colleague to hear his views and carry out his suggestions. The old opinion appears to be that physicians were invariably men of letters with better scientific outlook, as they spent years in post-graduate study, whereas surgeons had no great facilities for post-graduate work except perhaps in anatomy. It was generally held that majority of surgeons became great mainly by force of character, and manual dexterity. This may not perhaps be an overdrawn picture, since nearly three centuries intervene between the inception of the Royal College of Physicians and the Royal College of Surgeons. When the Royal College of Surgeons was established on Royal Charter, the Surgeon's company built a hall in Old Bailey and the members of the Court showed their determination to put surgical teaching on the forefront of their activities by passing a resolution that an operation theatre be the first part of the new building. The theatre was for the teaching of anatomy and for lectures in surgery.

In this renovation, the place of honour has to be given to the gifted Hunter brothers, William and John. John Hunter was responsible for much of the success of this school and he may rightly be called the father of scientific surgery. A brilliant teacher and good surgeon, he awakened in his pupils a desire to advance surgery along rational lines. His work has been handed down in the Hunterian museum of human and comparative anatomy of the Royal College of Surgeons. William Hunter has left his collection of books, pictures, and anatomical specimens to the University of Glasgow. Following John Hunter and his pupils came generations of brilliant surgeons who carried the Hunterian tradition; among them are such names as Cline, Abernethy, Astley Cooper and Hey, and later Paget. In the fourth generation of the Hunterian school came Joseph, and

Lord Lister, who also learning by experiment, constitute with John Hunter the pillars on which Modern Surgery is founded. Of late, the pendulum has swung to the other side. Surgeons are held in higher esteem today and the cream of medical graduates at home and abroad take to surgery and the Fellows of the College of Surgeons of England—the hallmark of British surgery—are found widely distributed doing admirable work in the relief of suffering humanity.

Three to four decades ago it was the highest praise to call a surgeon a brilliant operator—resourcefulness and time factor were everything. Today operation is part of a plan of treatment which precedes or follows it till its object is attained, rather than being considered as an isolated event of a spectacular character.

A Resume of Surgical Advances

- 1876 Porro's Cæsarean section with the excision of adenexa.
Discovery of the resistant anthrax spores by Koch.
- 1877 Bacillus of malignant œdema described by Pasteur.
- 1878 Freund's extirpation of cancerous uterus.
- 1879 Gonococcus discovered by Neisser.
- 1880 Iodine introduced into surgery by Moorhof.
Streptococcus and staphylococcus isolated by Pasteur.
- 1881 First nephropexy by Hahn.
Vaginal excision of uterine tumour.
- 1882 First excision of gall bladder by Langenbuch.
Sænger's improved Cæsarean section.
- 1883 Diphtheria bacillus discovered by Klebs.
Anti-diphtheritic serum introduced by Behring.
Lawson Tait's operation for extra-uterine pregnancy.
- 1884 Cocaine introduced as an anæsthetic in eye surgery.
Gastro-enterostomy introduced by Woelfer.
Introduction of Crede's silver nitrate installation for infantile conjunctivitis.
Tetanus bacilli discovered.
- 1885 Spinal anæsthesia.
- 1886 Steam sterilization in surgery introduced by Bregmann.
- 1887 Vaginal hysterectomy of cancerous uterus by Mary Jones.
Howard Kelly's hysteroraphy.
- 1889 Introduction of a cystoscope by Nitze.
- 1890 Surgical asepsis in surgery introduced by Bregmann.
- 1894 Infiltration anæsthesia introduced by Schleid.
Direct laryngoscopy introduced by Kirskin.
- 1895 Discovery of the X-ray film by Roentgen.
- 1896 X-ray plate of the hand published.
First case of heart suture by Farina.
- 1898 Direct bronchoscopy introduced by Killian.
Madame Curie discovers radium.
- 1900 Wertheim's radical operation for cancer of the uterus.

- 1901 Adrenalin isolated by Takamine.
- 1903 Bier introduced artificial hyperæmia.
- 1905 Novocaine discovered by Einhorn.
- 1906 Wassermann reaction described.
- 1907 Calmette's conjunctival reaction.
- 1909 Invention of sphygmomanometric oscillogometer.

The Great War of 1914-1918 gave an opportunity for the study of improvement in the treatment of war wounds by projected missiles by the introduction of "debridement" (wound excision) developed more or less independently by Gray of the British army, Depage of the Belgium army and Lemaitre of the French army. Balkan frame for the suspension of injured extremities was introduced. Thoracic surgery especially in the extraction of missiles from the lung under the fluoroscope came into vogue during this period.

Development of post-war surgery is too recent to need recapitulation, yet mention has to be made of the epoch-making discovery of insulin by Drs. Banting and Best; introduction of liver extract by Drs. Minot, Murphy, and Cohn of Harvard University; the sulphanilamides by Domgak; and application of X-rays to diagnosis.

The above events have contributed much to surgical diagnosis and treatment more than in the past. From whatever angle the matter is viewed, even in Surgery, as in other fields of Medicine, diagnosis occupies a dominant position, but unlike in Medicine it does not look upon it as the chief expression of its art. Surgeon is essentially a man of action—decision is more important than hunting after the exact cause. In surgery, treatment has to be immediate to be effective; delay and hesitation in this direction will only shift the patient from the surgical wards to the mortuary.

Modern surgery has indeed taken full advantage of the valuable lessons which other advancing sciences have offered, and is only the richer and the better for it, as considerable improvements have been effected in surgical theory and practice.

In the early years of the twentieth century began the tide of specialization. Like cardiologists and neurologists in Medicine, we have in Surgery today surgical specialists in different branches of surgery, as gastrologists, urologists, proctologists, surgeons for the eye, ear, nose and throat, etc. This specialisation is a corollary of the growth of natural sciences and their application to medicine. The mass of information opened out by recent advances is so large that it is not possible for the ordinary man to master all facts and the surgeon, like others, has to resign himself to a limited field.

Another aspect of modern surgery is that it is more preservative and less excisional, and for this change modern discoveries like radium are chiefly responsible. To take a few examples, extensive dissection of tubercular glands of the neck are rarely undertaken now; Gastrectomy for gastric ulcer is slowly giving place to conservative methods; the testosterone treatment of enlarged prostate suggested by Prof. Kennaway has interesting developments.

Post-war conditions have necessitated the formation of medical and surgical units. This is a step forward in

the right direction enabling clinical education to be placed on a more scientific basis than had hitherto been possible. This has been accepted and brought into operation in the larger medical institutions of the world.

No sketch, however brief, on modern surgery is ever complete without at least a passing reference to the advances in anæsthesia which is the pedestal on which surgery is mounted.

Pre-war anæsthesia consisted mostly of ether and chloroform for long operations, nitrous oxide and ether for short operations. Now spinal anæsthesia and regional anæsthesia are extensively used, but experience has taught that in abdominal operations it was insufficient and some pre-medication has to be resorted to. Thus barbiturates, avertin, paraldehyde, sodium amytal and nembutal became handy and are extensively used today.

Intravenous anæsthesia was attempted twenty-five years ago, not with great success in the early days, but now it has come to stay. Pentathol, evipan sodium and nembutal hold the field today.

The work of late Howard Jones has put spinal anæsthesia on a scientific basis.

On the whole the surgical patient today enters the modern operation theatre with better confidence and composure than his kind of the older generation.

FILARIA

Do not give up hope. You may depend on

ARSENO-TYPHOID

The best tried remedy for

Elephantiasis and all kinds of filarial

scrotum, legs, hands, etc.

Calcutta Clinical Research

6, Chowringhee, Calcutta

MENESTRIN CAPSULES

Sure Remedy for Amenorrhoea, and the Safest Contraceptive by Mouth.

Action: Physiological

Ingredients: Iron, Quinine, Manganese, Thyroid and Ovary.

Doctors advise ladies dreading pregnancy to take MENESTRIN Capsules a week before the expected menstrual cycle.

Manufactured by:

The Oriental Research Laboratory, Vepery, Madras

Available at all Chemists in Madras, and M/S P. M. ZAVERI & CO., Princess Street, Bombay

FOREIGN MEDICAL NEWS

Our American Letter

(From Our Own Correspondent)

Sulfa Drugs and Gonorrhœa

The sulfa drugs, sulfathiazole and sulfapyridine, offer a four to one chance for cure of gonorrhœa in men within five weeks after beginning of treatment, so the U. S. Public Health Service announced recently. Of the two sulfa drugs, sulfathiazole is more effective in gonorrhœa than sulfapyridine, clearing up symptoms faster and having fewer toxic effects. Treatment of gonorrhœa by sulfa drugs is now so effective that the Public Health Service officials believe the disease could be eliminated as a public health problem within several years if an adequate nation-wide programme were developed.

The Sub-Committee on Venereal Diseases of the Committee on Chemotherapeutic and Other Agents of

the American Medical Association has prepared an outline of the up-to-date diagnosis and treatment of the venereal diseases. In it the following recommendations for treatment of acute gonorrhœa in males and females have been given.

(1) Local treatment (for males), i.e., irrigations, instillations or other procedures should not be used in any form except for patients resistant to the sulfanilamide compounds or for those with complications (posterior urethritis, prostatitis, seminal vesiculitis), and then only by specially trained personnel in the dispensary or hospital. In cases of the acute condition local treatment may do more harm than good.

(2) Local treatment (for females), in the acute stage, means external cleanliness only,—no douches. For acute pelvic inflammatory disease rest in bed, application of ice bags to the abdomen, keeping the bowels open and hot cleansing douches.

(3) Chemotherapy. Even under ambulatory conditions, acute gonorrhœa may be cured by appropriate measures in a large proportion of cases. Sulfathiazole

Treatment Scheme for Acute Gonorrhœa

PLAN A

Day Plan (Inclusive)	Drug	Daily Dose, gm.	Each Dose, gm.	Daily Administration
1st	Sulfathiazole	3.0	0.5	Every 3 hr., 6 a.m. to 9 p.m.
2nd to 4th	Sulfathiazole	2.0	0.5	Every 5 hr., 6 a.m. to 9 p.m.
5th	Examine patient. If discharge persists, stop sulfathiazole and switch to plan B. If symptoms have disappeared, continue plan A, as follows:—			
5th to 9th	Sulfathiazole	2.0	0.5	Every 5 hr., 6 a.m. to 9 p.m.
10th	If patient remains symptom-free, stop all treatment			
10th to 14th	None			
14th	Proceed with determination of cure			

PLAN B

To be used for sulfathiazole-resistant patients on fifth day				
5th	Sulfapyridine	3.0	0.5	Every 3 hr., 6 a.m. to 9 p.m.
6th to 10th	Sulfapyridine	2.0	0.5	Every 5 hr., 6 a.m. to 9 p.m.
10th	Examine patient. If discharge persists, stop sulfapyridine, and if patient is not already in hospital transfer to hospital for special care.			
	If symptoms have disappeared, continue plan B as follows:—			
11th to 15th	Sulfapyridine	2.0	0.5	Every 5 hr., 6 a.m. to 9 p.m.
16th	If patient remains symptom-free, stop all treatment.			
16th to 20th	None.			
20th	Proceed with determination of cure.			

and sulfapyridine are better than sulfanilamide. In the doses to be advised, neither sulfathiazole nor sulfapyridine is likely to cause serious toxic manifestations. If sulfathiazole fails, use sulfapyridine. If neither is available use sulfanilamide. Other medication by mouth (such as copaiba, sandalwood oil or alkalies) is unnecessary and should not be used.

Before treatment, a careful inquiry should be made as to previous treatment with sulfanilamide or its derivatives, special care being taken to exclude the possibility of self-administered chemotherapy.

Here are some of the recommendations for local treatment for sulfanilamide-resistant patients or those with complications arising during treatment. Daily until discharge ceases, gently irrigate the anterior urethra with 1,000 c.c. of warm 1:5,000 potassium permanganate solution by the gravity method,—do not distend the urethra. Daily until discharge ceases, inject no more than 8 c.c. of 5 to 10 per cent. mild protein silver

solution into the anterior urethra; retain for three minutes by having the patient compress the meatus with a thumb and a finger. For the active stage of posterior urethritis occurring as a complication of treatment: Stop all local treatment until acute symptoms have subsided; give hot hip baths for painful urination; resume daily irrigations of the anterior urethra with potassium permanganate solution 1:5,000 when acute symptoms have subsided.

Shortage of Drugs

Scarcity of essential chemical and pharmaceutical supplies, attributed to diversion of the basic chemicals to industrial uses in the defense programme, was reported by both private hospitals and New York City's Purchasing Office Division of Chemical and Drug Purchases. Druggists, although still able to buy patent medicines with little difficulty, were finding it hard to purchase several crude drugs.

Typical of the products affected by the defence log jam, producers said, was methanel and its product, formaldehyde. These are used extensively in the manufacture of pharmaceuticals and also are important in production of resins from which plastics are made, and the plastics are getting the priority ratings. With all available zinc going into munitions and defence production, zinc oxide and zinc stearate production has been cut sharply. Glass ampules which used to be imported from Europe, on the other hand, are now produced in America, and a major problem of hospitals has been solved. Cod-liver oil, normally imported from Norway, is very hard to buy and prices are nearly three times the pre-war levels.

Frozen Plasma

Preservation in the frozen state of blood plasma is the method of choide, according to Strumia and McGraw. Plasma preserved by freezing may at any time be dried

from the frozen state. Dried plasma is of advantage in cases requiring concentration, such as cerebral oedema, and in instances necessitating storage, transportation and administration under adverse conditions. It is estimated that, of all the plasma used, not more than 10 per cent. needs to be dried.

It is not practical or necessary for the average hospital to dry plasma for its own needs. A few larger hospitals selected for their capability and with regard to the density of the population and means of transportation should be equipped to dry plasma from the frozen state, in quantity far exceeding their own needs. Thus they would be in a position to act as "drying units" for a large number of smaller institutions on a co-operative, non-profit basis. These units would work at considerably less than full capacity; thus they could be readily expanded to take care of local and national emergencies of civil and military nature.

out that while these materials were not being produced in this country till recently and were mainly imported from Germany, Messrs. Pioneer Chromate Works have undertaken the manufacture of both these materials at Bombay and other factories including Messrs. Bengal Chemical and Pharmaceutical Works Ltd., have undertaken the production of Sodium Dichromate.

Drug Adulteration in India

"From the number of enquiries received from all over India and from the interest evinced in this type of work from all quarters, including the medical and pharmaceutical professions and the lay public, there seems little doubt that the Biochemical Standardisation Laboratory has filled a definite gap and removed a long-felt want in the medical and public health administration of the country," says Col. Sir R. N. Chopra, Director of the Biochemical Standardisation Laboratory, in his first report covering the period, 1937-40.

During the three years under report, the Laboratory carried out a general survey of the quality of medicinal drugs in the Indian market, both imported and locally manufactured and distributed. Specimens of drugs from various parts of India were secured and more than 1,500 samples of drugs were carefully tested both by pharmacological and chemical methods. In every case a report on the quality of the sample was forwarded to the party concerned.

Particular attention was paid to certain drugs such as Digitalis, Stronhanthus, Squill, Ergot, Pituitary Extract, Adrenaline, Cod-liver Oil, Quinine, Insulin, Organic Arsenic and Antimony preparations, Essential Oils, Salts of heavy metals, Salicylate, Alkali salts, etc., which are commonly used in pharmaceutical practice and which are more liable to be adulterated or to undergo deterioration in tropical climate.

This comprehensive survey, undertaken systematically by the Laboratory for the first time in India, has revealed that there can be no doubt about the seriousness of the situation regarding drug adulteration in this country. Perhaps a more alarming picture would have been presented if proper arrangements were available for checking of imports, policing of manufacturing houses, frequent inspection of retail dealers' stores, etc. With the enforcement of the Drugs Act, such investigation is now possible.

INDIAN MEDICAL NEWS

Our General Letter

Production of Heavy Chemicals in India

The present position about the production of heavy chemicals including Acids, Alkalies, their Compounds, Fertilizers and Coal and Wood Distillation Products in this country and the possibilities of the manufacture of the materials not produced so far, have been indicated in the Report of the "Acids and Alkalies" and "Coal and Wood Distillation Products" Sub-Committees, of the Indian Chemical Manufacturers' Association. The Association convened an All-India Conference of Chemical and Pharmaceutical Manufacturers about a year and a half ago, when Special Committees were appointed to investigate the possibilities of production of essential and basic materials in this country.

While referring to the production of sulphuric acid in India, the Report points to the paucity of sulphur in the country and suggests various sources of obtaining sulphur such as by tapping sulphur resources in and near the country by recovering sulphur wasted in iron and copper works, by utilising coal, gypsum, marine sources and pyrites etc., for the production of sulphuric acid. Other acids including Hydrochloric, Nitric, Acetic, Citric, Oxalic, Tannic, Tartaric, etc., have been dealt with in the Report and the position about their production is shown.

As regards the Alkalies, it is stated that while Soda Ash and Caustic Soda, which are important basic materials in several industries including glass, paper, soap, medicines, etc., have been mainly imported, certain projects including that of the Tata Chemicals Ltd., Mettur Chemical and Industrial Corporation Ltd., and the I. C. I. are under way, and the Dhrangadhra Chemical Works have already begun the production of Soda Ash. The Sub-Committees, therefore, hope that the country will shortly produce a considerable proportion of the requirements of these materials. The other important chemicals, viz., Sodium Sulphate, Bleaching Powder, various sulphates, Zinc Chloride, Sodium Sulphide, Sodium Cyanide, Potassium and Sodium Dichromates have also been referred to. As regards Potassium and Sodium Dichromates, the Report points

SUPPLEMENT TO

THE INDIAN MEDICAL JOURNAL

MADRAS

DECEMBER 15, 1941

Vol. 3, No. 12

CONTENTS

	Page		Page
Some Problems of Rural Medical Aid by Dr. P. J. Bhat, L.C.P.S.	109	Finances of the Association. Annual Report for 1940-41	113
Vagaries of the Bombay College of Physicians and Surgeons	111	Association Notes	115
		Index to Vol. 3	118

Some Problems of Rural Medical Aid

●Dr. P. J. Bhat, L.C.P.S.

(Medical Officer, Varsada, Cambay State)

Is this Medical Aid ?

With the spread, and even partial success, of the scheme of subsidized rural medical relief, the qualified doctor has arrived in the village. Away from rail and road, post and telegraph, company and comforts, the doctors of our epoch are continuously coming in the rural areas to make their living. Yet I may state from my experience that the suffering masses are in the same sorrowful plight as they were before. That is because rural medical aid of today does not reach even the upper layer of the rural mass, and even the degree of such medical aid varies in actual practice. In some places the doctor visits the village with a few of the elementary drugs. In other places the doctor is asked to open a dispensary with no staff to help him. Invariably the rural medical centres are so ill-equipped that no medical aid to serious diseases is possible. As things stand today, the rural medical aid consists of an occasional visit of the doctor to a village or a small dispensary with no adequate drugs. The doctor is expected to exhaust his energies and waste his time in moving from village to village, but since the visiting doctor has no drugs, he cannot treat the patient on spot. He can only direct the patient to Taluka dispensary or ask him to go to the District hospital. Is this medical aid? Hence the whole problem needs study and thinking. If the noble idea behind the subsidized rural medical aid is to be realized and the suffering masses are to be honestly served, then the problem of the rural medical aid should be re-examined in the light of experience so far gained.

Rural Vs. Urban Medical Aid

Medical work in the rural areas differ from the one in towns in many respects. Village sickness is seasonal in incidence and epidemic in character. It needs a doctor who can withstand the ravages of weather. In burning heat or in pouring rain the doctor may be called upon to visit a case in a nearby village or asked to attend a case of abnormal labour. The patients also differ in their habits. They have peculiar customs and peculiar diets which need study. For example, the light diet of milk and rice does not suit one accustomed

to eat wheat or *juwar*. In short, rural medical aid needs a strong and hardy doctor possessed of service spirit, and equipment on a scale of a miniature hospital.

Inadequate and Insufficient Drugs

The attendance in the village dispensaries is generally on the increase. The confidence of the village people in scientific line of treatment is being slowly established. But alas! the grant for the purchase of drugs is systematically reduced, or is stationary. A casual inquiry from any rural dispensary will substantiate my statement. Further it is funny to note that the amount earmarked for the purchase of medicines has no relation to the prevailing prices. The prices may go up or down, but the amount remains the same. Subsidized medical practitioners are given a small sum of Rs. 300 or so to meet the requirements for the whole year. The result has been that quality has been sacrificed to meet the quantity. The preparations of the standard chemical concerns are invariably absent from our cupboards. Even the most essential drug like ergot is kept out.

The rural doctors have not only to show results with insufficient drugs but have to cure their cases with drugs of cheap quality. Some cases do turn fatal due to insufficient drugs and inadequate dose. In towns when the doctor is confronted with such a situation, he can either ask the patient to purchase the drug from the market or prescribe some patent remedy to effect an early cure. But the rural doctor has no such advantage. There are no medical stores nearby. Again, most of the patent drugs are only available in big towns. There is also the question of cost. The credit of the cultivator is limited. So also his capacity to spend. A farmer, at the most, can afford about Rs. 10/- for the whole treatment. It will be clear from the above that it is impossible to get any good drug within this small sum available. Take, for example, the well known drug M. & B. 693. In the last winter the tablet used to cost about annas five or six. Some of my patients even spent annas ten for the same. Now taking 25 tablets as the minimum requirement for a case of pneumonia, the cost will easily exceed the sum available.

Not only that, there is also the element of time. It is hardly possible to get any drug in good time even if the patient could afford it. Again, the doctor cannot be sure whether the drug suggested would be available or not. With the advent of war, the Bayer Remedies are out of question. But even May and Baker remedies are hard to obtain. The cost of Parke Davis products is prohibitive for all practical purposes. Now just imagine the plight of the poor rural doctor and his predicament! He dare not suggest a patent drug and he has no preparations with him to cure a serious case.

The Over-worked Village Doctor

But the story of our handicaps does not end with this. In many village dispensaries, the case writer, the compounder and the dresser are all combined in one person of the doctor. It is said that medical work is a team work, but here in the village the doctor is the only member of the team. On him rests all the responsibility. It means that half of his energies are wasted away in worries. Today the rural doctor is so much saddled with routine work and wanderings from village to village that he hardly finds time to recreate or relax. In such circumstances research is out of question. After a day's hard work there remains no surplus stamina to think, explore or investigate. Again in complicated cases he has no base hospital to fall back upon. The rural medical centres of today are independent of each other. They have no relation with the district hospital. Even the district hospitals are not well equipped. Very few of them have any laboratory arrangement. Even X-ray apparatus is often not provided there. Under the circumstances, the rural doctor has to carry on without any laboratory aid. The cases of fracture or dislocation are to be set and treated without any sort of X-ray help. If such facilities could be found in district hospital it would be easy for us to direct such cases to that hospital. But unfortunate it is that most of the mofussil and district hospitals of today have no such arrangements. Besides, they are miles away from the rural centres. In such circumstances the rural doctor has got to make the best out of the bad job and work with whatever little things he may have at his disposal.

The Hardships of the Patient

Further, most of the rural dispensaries have no accommodation to keep the patients under observation. There is no room or shelter where the patients coming from the adjoining villages can rest and wait. There is no arrangement for their staying even if absolutely necessary. Most of the patients come in the country carts and they have to make the return journey in the same way. It means great exertion to the devitalized patient. In the rainy season the poor villager is hit hardest. Because the roads are blocked and carts cannot move, patients weed through water for miles to get medicine from the rural dispensary. Very few have any actual idea of the hardships which the village people undergo. As there is no accommodation to stay in the dispensary, and as often the case is of serious nature, they have to search for the house of some relation or an acquaintance. If they happen to have one then it is well and good. But if not, then they have to go back in heat or rain. This difficulty can be easily solved by hiring a small house near the dispensary. Would it be costly? Certainly not. And think of the comfort! Even this little facility would go a long way to reduce the hardships.

The Cost of Medical Aid

Now let me come to the most distressing aspect of the rural medical aid. It is a painful fact that medical aid is not within the economic reach of all. The country folks are poor. In a village very few can afford to pay for the doctor's visit. Visiting fee is usually rupee one in the village. But though this may seem a small sum to a city man, it is hardly found with the villager. Again, the visiting fee for the adjoining villages vary according to the distance. I have seen some doctors charging Rs. 5/- to 10/- even for the small distance of two or three miles. But five rupees appear to be a minimum with many doctors. It must be remembered that the village doctors are not provided with any conveyance. So the patient has also to bear the expenses for the transport. In some places the doctors prefer to go by the motor bus only. In such cases the motor bus is specially hired. Now just think of the expense! It will not be less than Rs. 10/- for one visit. Further the doctor will invariably suggest glucose, some special diet, brandy and some injections. Hence the villager will have to make a provision of fifty rupees before he thinks of obtaining the doctor's aid. I request my readers to think seriously about this aspect of the rural medical aid. We must admit candidly that medical aid in the rural areas is much costly. Unless we find out some method to cheapen the same I find no prospect of success.

A New Organisation Suggested

Thus the problem resolves into providing effective and cheap medical aid on one hand and to provide some decent living conditions for the doctors concerned. As I have shown before, the medical aid of today is only in name. To make it really effective and useful, a new organisation is essential. There should be a well equipped base hospital, and all the rural centres should be attached to it. An ambulance car should also be a part of equipment of such an hospital. Such a facility would make it easy to transfer serious cases in the villages to the care of the hospital with minimum risk to the patient's life. Again a well equipped base hospital would be a great boon in complicated cases. It would be a nice thing to fall back upon it for purposes of diagnosis as well of treatment. But that is not enough. We have to weld all the medical facilities into one unit and one organisation. The dual system of District and Local Board dispensaries and Government rural dispensaries should be amalgamated into one unit. This will eliminate overlapping and useless expenditure. I put great emphasis on centralisation of this kind, as without it much progress is not possible.

Do Not Take It as a Stop-gap Appointment

I have dealt with a few of the problems only. There are other problems. They mainly concern the doctor, his equipment and to some extent the patient. I put great emphasis on the doctor, because on him depends the success or the failure of the whole effort. My experience has convinced me that the rural doctor should not only be strong and hardy, but should possess sweet, amiable and sympathetic outlook. If he is endowed with these gifts, he will make a name which even the Gods may envy. But if it is otherwise, then the silent curses of the suffering humanity will haunt him all throughout his life. Hence the doctor should think fifty times before accepting a rural job. No one should take it as a stop-gap appointment.

VAGARIES OF THE BOMBAY COLLEGE OF PHYSICIANS AND SURGEONS

Under the joint auspices of the All-India Medical Licentiates' Association, Bombay Branch, and the National Medical College Old Students' Association, a meeting of the Medical Profession of Bombay was held at National Medical College, on Saturday the 20th September to protest against raising of the L.C.P.S. course to four and a half years by the College of Physicians and Surgeons of Bombay. Dr. V. G. Joshi, M.S., presided.

A succession of distinguished speakers have exposed the pretensions and vagaries of this College, and urged for its abolition. It is neither a statutory nor a Government Body, but is composed of the cream of reactionary elements of the Bombay medical profession. It lives by some ancient public benefaction, recurring Government aid and sale of its Fellowship Awards. A M.D. of five years or a M.B. B.S. of ten years' standing can get its Fellowship, not by examination but by payment of Rs. 500/-. It is time that this gambling house of medical education is dissolved by the Government.—Ed.

Dr. U. B. Narayan Rao, Member, Bombay Medical Council and Editor, 'Medical Digest,' said in the course of his speech:

Acts in its own self-interest

"It is a sad irony of fate that the Licentiates have again to protest against the recent move of the College of Physicians and Surgeons, Bombay, in suddenly increasing the course of studies to four and a half years. Since 1930 the College has been planning some so-called reforms, the last one being in 1937. An intense agitation was then immediately set on foot by the All-India Medical Licentiates' Association, propaganda was made in the press and platform and local Medical Council. A monster petition from the medical profession was submitted to the then Health Minister, Dr. Gilder, and a deputation on behalf of our Association was arranged to meet the President and members of the Congress Parliamentary Committee at the time of the Haripura Congress with an appeal for the abolition of the caste system in the profession. But as ill-luck would have it, the political upheaval in the country which threatened at that time and the impending *en bloc* resignation of the Congress Ministry made us to hesitate to take action, and as such the deputation did not materialise. But all these propaganda had their effect on the Bombay College and the matter was then shelved, only to be raked up again at this juncture.

The college may, to all appearances, take a pride that the move is in the interests of the Licentiates. But the facts are quite the opposite.

You are aware that the two premier medical organisations in the Country—the All-India Medical Licentiates' Association and Indian Medical Association have been repeatedly appealing to the powers-that-be, to have one uniform minimum standard of medical education in the Country. In December 1937, the Congress minister of Madras, Dr. T. S. S. Rajan—who by the way abolished the licentiate class in his presidency by a stroke of the pen—convened a ministers' conference which also accepted this fundamental principle. The Medical School Education Conference convened by the Government of India in 1938 also came to a similar conclusion. The Indian Medical Council in its meeting of March 1941 has recommended that the provincial medical schools should be either abolished or raised to the University standard fixed by the Council as the minimum. In spite of all these, the College of Physicians

B

and Surgeons has revised the course of studies for the L.C.P.S., which is but six months lower than that for the M.B.B.S. I ask them, in all sincerity and seriousness—whether it is in the interest of the licentiates class—or in the interest of medical education—or in the interest of the medical profession or whether it is in its own self-interest—(to keep the College going)?

It forgot its Mission and Fostered a Ridiculous Programme

The history of the origin and development of the College makes a painful revelation of its attitude towards the Licentiates—its own alumni. General Stevenson, the originator of this scheme, said in March 1911:—

"It has been recognised *particularly since the abolition of the L.M. & S. of the Bombay University* that there is a need for a qualification in Medicine and Surgery which may be taken by those who desire to become medical practitioners but may not be able to afford the expenditure of time and money necessary to take University degree."

The L.M. & S. of the Bombay University was then considered to be a lower qualification than its M.B., B.S. The reference of the Surgeon-General, *particularly to the abolition of the L.M. & S. degree*, implied that the new course of studies proposed by him would form a substitute for that of the L.M. & S. But the new diploma of the College was not to be such a substitute, nay, the new licentiate was to be the old Sub-Assistant Surgeon—only with L.C.P. & S. feathers on his hat. Neither did his status in the profession nor his position in the Service was bettered. What was more, unnecessary and unusually severe restrictions were placed in the way of licentiates who "could afford the expenditure of time and money" to appear for the higher examinations of M.C.P. & S. or M.B., B.S.

The Committee formed in 1911 to draw up a constitution for the College unanimously resolved that the rules and bye-laws should be formed on the model of the Royal College of Surgeons of England. But it forgot its mission and fostered a ridiculous programme.

The Glaring Contrast

The Barbers' Company of London which existed since 1308 allied itself with the Guild of Surgeons in 1493 to conduct medical examinations. In 1800, a Royal Charter was granted to the Surgeons' Company which constituted itself into the Royal College of Surgeons, London. "All members of the Company on signifying their acceptance of the Charter were taken up as members of the College (M.R.C.S.)." In 1843, a new class of members, the Fellows (F.R.C.S.), was instituted and the foundation Fellows were elected *from amongst the 'Members of the College'* without examination. Thereafter, all aspirants for F.R.C.S. had to pass the examination. Honorary Fellowships were also offered, and the leading considerations were "liberal acts or distinguished labours, researches and discoveries, eminently conducive to the improvement of the natural knowledge and of the healing art."

The rules and regulations of the Royal College of London were not followed by this Committee. On the other hand, it produced a hybrid constitution, a mimicry

of regulations, which have ever since marred the progress of medical education in this province.

The reason for this is not far to seek. The promoters of the Bombay College were all University men without exception. None excepting a few officials had any connection whatsoever with the existing medical schools or with their examining bodies.

Even regarding the grant of Fellowships one finds a marked contrast when compared with that of England. Here the licentiates are completely debarred from aspiring for that honour, however able and distinguished they may be.

The Ignominious Treatment of its own Alumni

The recent amendment of this regulation by the College has but added insult to injury to the class and no self-respecting licentiate would even care to obtain the fellowship. What is more, it is the monopoly of only the University man. A M.D. of five years' standing or an M.B., B.S. of ten years' standing can get the F.C.P.S. without any examination, on payment of Rs. 500 to the College! The College Council, the examining Board and other committees are constituted from amongst such Fellows of the college from year to year even to this day.

A few further disabilities of the licentiates are also worth mentioning. For some years, the Licentiates of the College after some preliminary training were allowed to go up for the L.R.C.P., M.R.C.S. (London). This concession has been cancelled recently and only those who put in the Licentiate course in the two University-affiliated colleges of Bombay are permitted. A few licentiates tried to obtain the M.C.P.S., in spite of the difficult hurdles placed in their path. But when it was realised that even the possession of this qualification did not give them the expected status, none have cared to go in for this diploma during the last ten years. The College did not even arrange to get recognition of the I.M.C. for the very few licentiates who obtained the fellowship by examination. All these acts of omission and commission of the College have made the licentiates realise fully well, to their utter despair, that the College has failed and miserably so in the discharge of its duties to satisfy those whom it has created. And now, by fixing up a course just six months less than the M.B., B.S. it seems as if it is trying to perpetuate the caste system existing in the profession, with all its attendant evils, to ensure its own existence.

For, the future licentiates will in no way be better than the present both in their status and future prospects of higher education, but will only have a disadvantage of one year's extra studies and expenses. The half-hearted concession shown by the University for those licentiates intending to go up for the M.B., B.S. could not be availed of by those who applied this year, simply because the University-affiliated Colleges did not admit them for want of accommodation. Much less therefore will there be chances for future licentiates who would justly clamour for better facilities.

Dissolve the College

The medical profession therefore with one voice enters into an emphatic protest against this uncalled for and unwanted action of the College, and further appeals to the Government of Bombay to abolish the College forthwith.

The College is but a Society registered under the Societies' Registration Act, 1860 and having failed to justify its existence during the last 28 years, the Government should cancel the registration and dissolve the College. Till the time when the existing schools can be converted to colleges, the Government should establish a State Medical Faculty representing all interests, as existing in other provinces. The funds amounting to over three lacs at the disposal of the College will more than suffice for this purpose.

Finally we appeal to the College itself—in its own interest and that of the present students, in the interest of the licentiates and the medical profession, in the interest of the Government and the public—to wind itself and come up to the expectation of the organised medical profession to have one uniform minimum standard of education for the country."

Other Speakers

Dr. U. S. Rao in further supplementing the views of the previous speaker remarked that the College has neither justified its existence nor come to the expectations of its promoters. He said:—

"Firstly, the College failed to imitate the Royal College of Surgeons of England in framing its constitution in as much as it deliberately placed obstacles in the way of its licentiates from becoming its Members and Fellows. Conditions imposed on its Licentiates to qualify themselves for its Membership were more strict than those offered by the Royal College of Surgeons of England. Instead of providing the Licentiates with easy facilities for higher studies, the College had been placing only obstacles before them. How many Members the College can boast of today from amongst their licentiates? On the contrary, due to the facilities offered by the Royal Colleges of England, at least a few amongst the licentiates of this College are members of that body (L.R.C.P., M.R.C.S.) today and some are even Fellows (F.R.C.S.). Even the Bombay University has now given better facilities to the licentiates than this College. How can such an institution justify its existence?

Secondly, the main purpose of the College was to provide for the need of a cheap and short, yet efficient course to those who could not afford a longer and costlier course. But this object seems to have disappeared into thin air long ago. The difference between the courses originally prescribed and the course upto now in force had been very great indeed. From pre-matriculation standard, it had been brought to I.Sc. and the course of studies was throughout just a little shorter than the University course. By their recent move, they have increased it still by one year. Hence the course is now neither short nor very much cheaper than that of the University. Hence, on this ground also the College cannot justify its existence.

Dr. A. V. Baliga, L.C.P.S., F.R.C.S., detailing his personal bitter experiences said that in spite of his best efforts, he could not succeed in obtaining any facilities from this college for obtaining M.C.P.S. It was most unusual that the college which produced licentiates did not at all care for their interests—a shameful state of affairs which should not be allowed to continue any longer.

Resolutions

The following resolutions were then passed unanimously:—

This meeting of the Bombay Medical Profession views with great concern the action of the College of Physicians and Surgeons of Bombay in raising the course of studies for their License Examination from three and a half to four and a half years thus keeping it only six months shorter than the University course of studies, at a time when the Licentiate course and Medical Schools are about to be abolished. This meeting, therefore, requests the College of Physicians and Surgeons of Bombay to cancel their new regulation to allow the medical school students to appear for their examinations as heretofore till the medical schools are abolished.

(2) This meeting requests the Government of Bombay and the authorities of the National Medical

College, Bombay and of Miraj Medical School to take early steps for the conversion of the medical schools under their control to colleges and till then to stop further admission to the medical schools.

(3) This meeting regrets to have to bring to the notice of the Government that the College of Physicians and Surgeons has during the last twenty-eight years failed to justify its existence by its attitude towards medical education in general and the Licentiate class in particular and in the event of the College not complying with resolution No. 1 above, this meeting requests the Government to abolish the College and institute a representative State Medical Faculty in its stead.

(4) The meeting appoints a committee consisting of Drs. U. B. Narayan Rao, A. V. Baliga, V. K. Prabhu-desai, M. S. Sankolkar, A. D. Mastakar, U. S. Rao, and Joshi Mirajawala to do all that is necessary for the purpose of giving effect to these resolutions.

Annual Report on the Finances of the All-India Medical Licentiates' Association, 1940-1941

This report covers the period of the Association Financial Year from 1st October 1940 to 30th September 1941.

Membership

The total number of members on 30th September 1941 was 2,649, while on 30th September, 1940 it was 2,548, i.e., there was an increase of 101 members during the year under report. The following is a comparative table showing the total membership for the last three years.

1938-39	1939-40	1940-41
2,688	2,548	2,649

Total number of new members who joined the Association during the period under report was 617, while 516 left it. This compares favourably with the corresponding figures for the previous year—428 and 568 respectively.

I may take this opportunity to point out that most of the members who leave the Association do it by refusing the V.P.S. This has caused a great drain on the funds of the Association in the shape of postage and registration charges. All members who wish to discontinue their membership are requested to intimate the Hon'y. Treasurer beforehand so that this loss could be avoided.

Subscription

The total subscription realized during the period under review is Rs. 11,536-12-0.

Comparative statement showing the income by subscription during the last three years is as below:

1938-39	1939-40	1940-41
Rs. 11,711-13-6	11,275-5-0	11,536-12-0

Interest

Total interest received by the Association during the period under review is Rs. 3,112-9-1. The Association has all the Government Securities deposited in the Imperial Bank of India Ltd., Delhi. The interest on them is regularly collected by the Bank and credited to our account.

Income and Expenditure

During the period under review, the total income of the Association from all sources was Rs. 27,285-10-10. The total expenditure was Rs. 28,627. Thus there was a net deficit of Rs. 1,341-5-2. If one looks at the budget of income and expenditure for the year 1940-41, as sanctioned by the Bombay Conference, it would show that we budgetted an income of Rs. 23,025 and expenditure of Rs. 26,086 i.e., a budget with a deficit of Rs. 3,061. But fortunately our actual income was higher by Rs. 4,260 and our expenditure went up only by Rs. 2,541. The main item which showed excess of expenditure was travelling allowance. We only provided Rs. 4,000 for travelling allowance, but our actual expenditure under this head came to Rs. 7,612-4-0, i.e., Rs. 3,612-4-0 in excess of the budgetted amount. It is, however, creditable that we have been able to reduce this deficit from Rs. 3,061 to Rs. 1,341 by suitable re-appropriations, and economy in other items of expenditure. The credit for this goes to the office-bearers responsible for the financial administration of the Association.

Comparative statement of the income and expenditure for the last three years is given below:—

	1938-39	1939-40	1940-41
Income	Rs. 26,153-12-5	26,639-0-9	27,285-10-10
Expenditure	Rs. 27,076-9-0	19,968-6-0	28,627-0-0
(From all Sources)			

The cause of low expenditure in 1939-40 was due to the fact that no conference was held in that year and hence there was a saving in travelling allowance. The details of income and expenditure are given in the appended consolidated statement of accounts for the year 1940-41.

Balances

Total balance of the Association on 30-9-41 was Rs. 69,047-9-9 and £157-17-10. Out of this, the Association possesses Government Securities worth Rs. 40,800 (face value), and Post Office Cash Certificates worth

Rs. 8,000 (face value). All the Cash Certificates and the Government Securities amounting to Rs. 30,800 (face value) are deposited in the Imperial Bank of India, Delhi. Government Securities of the face value of Rs. 10,000 are in the custody of the Assistant Accountant-General of the Posts and Telegraphs, Calcutta. The details of the balances will be given in the consolidated statement of account for the month of September 1941.

Rs. 793-12-1 is still standing against Dr. S. P. Sen Gupta, ex-Manager of the *Indian Medical Journal*. A decree has been obtained at a cost of Rs. 175 and efforts are being made by our President to have it executed.

During the period under review fresh Post Office Cash Certificates to the face value of Rs. 8,000 (purchase value Rs. 7,050) were purchased through the Imperial Bank of India, Delhi and placed in its safe custody.

Bills

During this period 438 bills were received from the Finance Committee for payment and adjustment. All payments were made with utmost promptitude and correctness.

Total payments to Branches under head "Branch Expenditure" and "Propaganda" amounted to Rs. 2,648-1-3 and Rs. 608-6-0 respectively.

ANNUAL CONSOLIDATED STATEMENT OF THE ACCOUNTS OF THE ALL-INDIA MEDICAL LICENTIATES' ASSOCIATION FOR THE FINANCIAL YEAR 1940-41

RECEIPTS				PAYMENTS			
		Rs.	A. P.			Rs.	A. P.
To Subscription		11,536	12 0	By Printing, <i>I. M. J.</i>		6,015	2 0
„ Advertisement		12,618	10 9	„ Establishment		5,196	0 0
„ Interest		3,112	9 1	„ Rent		720	0 0
„ Miscellaneous		15	11 0	„ Stationery		207	15 3
„ Contribution to the Association, by Dr. Mohd. Yousaf Khan, Bareilly, U. P. ..		2	0 0	„ Travelling Allowance		7,612	4 0
Total Rs.		27,285	10 10	„ Postage		2,516	7 3
				„ Miscellaneous		887	6 11
Opening Balance on 1st Oct. 1940 ..	Rs.	70,388	14 11	„ Other Printing		447	15 6
	& £	157	17 10	„ Propaganda		608	6 0
				„ Branches		2,648	1 3
				„ Furniture		13	2 9
				„ Audit fee		60	0 0
				„ Payment to Contributors		165	0 0
				„ Subscription to Foreign Journals ..		40	5 1
				„ Scientific Section		10	6 0
				„ Omera Gold Medal		47	8 0
				„ Income Tax		194	11 0
				„ Bank Commission (Imperial Bank of India)		16	5 0
				„ Other Contingencies		35	0 0
				„ Representative Committee meeting, expenditure		150	0 0
				„ Expenditure on Bombay Conference ..		750	0 0
				„ Type-writer for Finance Secretary's Office		110	0 0
				„ Litigation Charges (case against Dr. S. P. Sengupta, Ex-Manager, <i>I. M. J.</i>) ..		175	0 0
				Total ..	Rs.	28,627	0 0
Total Expenditure	Rs.	28,627	0 0	Closing Balance on 30-9-1941 ..	Rs.	69,047	9 9
Total income (less)	Rs.	27,285	10 10		& £	157	17 10
Deficit .. Rs.	1,341	5 2		GRAND TOTAL ..	Rs.	97,674	9 9
					& £	157	17 10

(Sd.) KHAN CHAND WORHA, Hony. Treasurer.

LAHORE, 7th November, 1941 }

ASSOCIATION NOTES

(Proceedings published below refer only to the Committees and Branches of the A. I. M. L. A., unless otherwise stated).

Standing Committee : A. I. M. L. A.

Resolution No. 3 : Ref. Circulars Nos. 21 and 23, the opinions received on Circular No. 21 were 14 for Representative Committee and 5 for Standing Committee. The opinions received on Circular No. 23 were 11 for Representative Committee and 9 for the meeting of the Government representatives only. In pursuance of the majority opinion, it is resolved that a Representative Committee meeting be held at Simla on 22nd Sept. 1941 and that the General Secretary be requested to invite all the Provincial Secretaries and other important leaders in order that they may advise the invitees to the Government Conference in the matter of recruitment of Licentiates to the Emergency I.M.D. and that the Finance Committee be requested to sanction the T. A. of the Representatives other than those invited by Government, and the expenses of their boarding and lodging. (Sd.) A. D. Mukharji, President.

Resolution No. 4 : Ref. Circular No. 20. "Resolved that a sum of Rs. 4-7-0 be sanctioned in connection with the contingent bill of Bareilly Branch from 22-11-40 to 23-7-41." Votes—for 18—against nil.

Bengal Provincial Standing Committee : Meeting held on 19-10-41.

1. This meeting of the Bengal Provincial Standing Committee endorses the recommendations of the Simla Conference and thanks the Government of India for giving a hearing to the members of the All-India Medical Licentiates' Association regarding I.M.D. recruitment and hopes that the Government will give immediate effect to the recommendations.
2. Copy of representation made by Dr. K. B. L. Varma, Provincial Secretary, U.P. to the D.G., I.M.S. regarding I.M.D. recruitment was read and recorded.
3. With a view to make a strenuous attempt to increase the members of A.I.M.L.A. and making it more popular, Dr. A. N. Roy's proposal to observe November 1941 as "Membership Campaign Month" during which period each member is requested to pledge to enlist at least one member, was approved. It was resolved to request every Branch Secretary to make the Campaign a success.
4. In view of the fact that creation of public opinion is a great factor in the matter of improvement of medical education in the Medical Schools of Bengal, it was resolved that the Provincial Secretary be requested to find ways and means to influence the Press and meet the Press authorities for this purpose. It be further resolved that necessary expenses for this purpose be borne by the Association.
5. In connection with the advertisement appearing in the October 1941 issue of *Indian Medical Journal* regarding recruitment of medical men for Emergency Service in I.M.D. members were of opinion that the advertisement was wrong in respect to pay which was Rs. 75/- and not Rs. 125/- per month as was advertised. Provincial Secretary be requested to draw the attention of the General Secretary and the President of the Association to this fact.

Amraoti (C. P.) : Meeting held on 27-9-1941 with Dr. Jamdar in the chair. Following resolutions were proposed and passed unanimously :

- (1) Resolved that Dr. A. D. Mukharji of Calcutta be elected President of the next session of the A. I. M. L. A. Annual Conference to be held in Xmas week this year at Ahmedabad. *Passed unanimously.*
- (2) Resolved that the following two members be elected to the Provincial Standing Committee of the C. P. and Berar Provincial Branch for 1942 : Drs. B. J. Bansod and C. H. M. Jamdar. *Passed unanimously.*
- (3) Resolved that the C. P. Government be requested to select and nominate the name of Dr. B. J. Bansod, L.M.P., medical practitioner of Amraoti, as a representative of the licentiates on the C. P. and Berar Medical Examination Board for the next term of the Board. *Passed unanimously.*

(4) Resolved that the same office-bearers of the above Branch be elected for 1942. Drs. S. H. Kulkarni—*President*, C. H. M. Jamdar—*Vice-Chairman*, B. J. Bansod—*Secretary*, B. J. Diwanji and K. S. Pande—*Members of the Executive Committee.*

(5) Resolved that Dr. C. H. M. Jamdar be elected as a delegate of the above District Branch to the Annual Conference of the A. I. M. L. A., to be held at Ahmedabad ; in case Dr. Jamdar could not go for some reason or other Dr. K. S. Pande be elected as a substitute delegate. *Passed unanimously.*

Gauhati (Assam) : Monthly meeting held on 15-10-41. Eight members present. Dr. D. R. Sen presided.

Resolved that Dr. A. D. Mukharji be re-elected President for the ensuing A. I. M. L. A. Annual Conference to be held at Ahmedabad.

Resolved that the following members be elected as delegates for the ensuing Ahmedabad Conference : Drs. D. K. Barua and P. C. Duarah. In case of the failure of the above two delegates to go, Drs. A. Bhattacharjee and S. C. Roy were elected as substitutes.

There was a lively discussion about the Simla deputation to D. G., I.M.S.

Karachi (Sind) : Managing Committee meeting held on 12-10-1941. Five members present.

Minutes of the last meeting were read and confirmed. Accounts for September 1941 passed.

2. Annual General Body Meeting held on 12-10-41 under the Presidentship of Dr. Balwant Singh. Sixteen members present.

Minutes of the last Annual General Meeting held on 6-10-41 were read and confirmed.

Annual report for 1940-41 was read and adopted.

Following office-bearers were elected for the ensuing year : Drs. Balwant Singh Kalka Prasad—*President* ; N. V. Adalja—*Vice-President* ; Rochiram A. Amesur—*Hony. Secretary and Treasurer* ; T. K. Babur—*Hony. Jt. Secretary. Members of the Managing Committee :* Dr. Mrs. M. G. Thomas, Y. R. Kapoor, K. G. Makhijani, H. K. Kishanchand, Rup Narain, M. B. Gadre and P. P. Lalwani.

Following Budget Estimate for the year 1941-42 was passed :

Income				Rs.	A. P.
Contributions from the A. I. M. L. Association ..				340	0 0
TOTAL ..				340	0 0
Expenditure				Rs.	A. P.
Postage and telegrams				36	0 0
Miscellaneous				8	0 0
Stationery				10	0 0
Propaganda				250	0 0
Printing of Circulars, etc.				36	0 0
TOTAL ..				340	0 0

Rai Sahab Dr. L. C. Shah was elected as President for the Third Bombay Provincial Conference to be held at Ahmedabad.

Dr. R. A. Amesur was elected as President for the ensuing Conference to be held at Ahmedabad.

3. Annual Report for 1940-1941 : The Branch regrets to record the death of their President, Dr. P. L. Chablani, during the year. A condolence resolution was passed at the General Body Meeting held on 24-6-41.

At the beginning of the year there were twenty-nine members on the roll and at the close of the year thirty-three members. During the year one member died, one was transferred to Hyderabad Branch and six new members joined.

During the year under report eight General Body and five Managing Committee meetings were held.

The Hony. Secretary, Dr. R. A. Amesur, proceeded to Hyderabad (Sind) in February 1941 and opened a Branch there.

Under the joint auspices of the Karachi Branches of the A. I. M. L. A. and the I. M. A., a large series of lectures and demonstrations were organised during the year under report. There was good attendance at every meeting.

During the year under report various resolutions were passed touching on (1) Recruitment of licentiates to the Emergency I.M.D., (2) the need for elected president for the Bombay Medical Council, and (3) the granting of M.C.P.S. in the place of L.C.P.S.

It is regrettable to find that, since a number of years, the activities of the All-India Medical Licentiates' Association were not much known in Sind. With the renewal of the Karachi and Hyderabad Branches, members of licentiate class all over Sind are now awakened. But great deal is still required to be done by way of propaganda. Though Sind is separated from Bombay yet the A. I. M. L. A. keeps Sind as a part of Bombay and the Provincial Secretary at Bombay has his jurisdiction over Sind. Karachi is 1,000 miles from Bombay. How on earth can propaganda be carried from there? Under the circumstances it is but fair to have a separate Provincial Organisation in Sind. The Association rules, however, require that unless there are ten Branches, no Provincial Branch can be opened. How can then Sind be organised? My humble suggestion is that a Provincial Branch should be organised by waiving this rule and an amount of Rs. 250 be sanctioned by the Mother Association to organise more branches in Sind and to enrol more members.

Our thanks are due to the Karachi Medical Association for inviting our members to attend lectures and take part in debates.

Khulna (Bengal): Ordinary meeting held on 29-8-1941. Nine members present.

Proceedings of the last meeting were read and confirmed.

The draft resolution as forwarded by the Provincial Secretary was discussed and passed. Resolved further that a copy of the above resolution be forwarded to the Provincial Secretary for necessary action.

Resolved that Drs. Kalipada Poi and Nripendralal Sen be elected members of the Bengal Provincial Standing Committee of the A. I. M. L. A.

Discussed the letter of Dr. Benode Lal Shah, Khulna, and resolved that a sub-committee consisting of following members be formed to collect such grievances of medical officers serving under District Board to formulate ways and means, to redress the grievances: Drs. Kalipada Poi, Dharendra Nath Das, one District Board doctor and N. Sen.

Resolved that all attempts should be made to run candidates for the election of members to Local Bodies.

As it is sometimes found that patients die due to the indiscriminate use of poisonous drugs by the quacks, this Association urges the Bengal Government to stop the quacks from using such poisonous drugs.

2. Ordinary meeting held on 15-9-41. Five members present. Dr. Jagendra K. Sen Gupta was voted to the chair.

Proceedings of the last meeting were read and confirmed.

Resolved that Dr. A. D. Mukharji be nominated as the President of ensuing annual conference to be held at Ahmedabad.

Resolved that a meeting of all the registered medical practitioners be convened on 20th September 1941 to observe the Anti-Indian Medical Council Act day. It is further resolved that the Secretary be requested to inform the Hony. Secretary, Indian Medical Association, Khulna Branch, to hold a joint meeting on that day for the same purpose.

The Secretary while placing before the meeting the contingency bill for the month of August 1941, said that he had to organise a Branch here for the first time and spend a good sum for this purpose.

Resolved that the contingency bill be passed amounting to Rs. 10-10-6 only for the sanction of the General Secretary.

Dr. N. Sen Gupta read a paper on "The problems of the rural practitioner."

Mymensingh (Bengal): Meeting held on 10-10-41 with Dr. S. Bagchi in the chair. Following resolutions were passed unanimously:

Resolved that any four of the following members will represent this Branch as delegates at the All-India Conference to be held at Ahmedabad in December next: Drs. S. Bagchi, A. Talukder, D. C. Roy, B. Chaudhuri, S. C. Patranavis, M. C. Aich, H. Chakraborty and P. C. Majumdar.

Resolved that the following be sent to the General Secretary for consideration by the next Ahmedabad Conference:

(1) To urge on the Government of India to give effect to the Resolution No. 4 of the Indian Medical Council passed at its session dated 26-10-40.

(2) To request the Provincial Governments to include at least one licentiate, preferably of the independent medical profession, in the Medical School Selection Boards for admitting students to look after the best interests of the future licentiates. (These Selection Boards generally consist now of people of various walks of life except the licentiates).

(3) (a) To protest against discriminatory methods adopted by some of the well-known insurance companies in appointing licentiates to examine their Life Cases in rural areas only while refusing the same in urban areas. (This discrimination is derogatory to the prestige of the members of the Association as a whole).

(b) To depute the Editor, *Indian Medical Journal*, to negotiate with all Insurance Companies and to request him to submit a report of the results of his negotiations under three heads: viz. (i) Names of Companies which do not discriminate against licentiates (ii) Names of Companies which make such discriminations and (iii) Names of Companies which do not appoint medical licentiates as medical examiners at all, under any circumstance.

(c) To have the above report published in the *Journal* for the information and guidance of all members.

(4) To appoint a committee of seven or ten prominent members belonging to different provinces to go into the question of Conditions of Service of Licentiates employed by Municipalities and District Boards. This Branch has evidence enough to show the great difficulties which the licentiates in such services are at present undergoing.

2. Meeting held on 18-10-41. Seven members present. Dr. A. Talukder was in the chair. Following resolutions were passed unanimously:

This Branch finally selects Dr. A. D. Mukharji of Calcutta to be the President of the ensuing Conference to be held at Ahmedabad in December next.

The following is in addition to the resolution already sent to the General Secretary for consideration at the ensuing Conference:

"In order to popularise the activities of our Association and the usefulness of our *Journal*, let free specimen copies of the *Journal* be sent to the non-member licentiates from time to time, on the advice of the Branch Secretaries to the Managing Editor." (This is usually done even now.—Ed.)

The contingency bill for Rs. 22-15-3 from 1-7-41 to 30-9-41 was scrutinised and passed for payment.

Nadia (Bengal): Monthly meeting held on 6-10-41 with Dr. S. M. Bhattacharyya in the chair. Ten members present.

Minutes of the last meeting were read and confirmed.

Branch accounts were examined and passed.

Circular of Dr. K. B. L. Varma re. the present terms of recruitment of the licentiates in the Emergency Department of the I.M.D. was discussed by the members.

Circular No. 242/41 from the Provincial Secretary was discussed by the members and the Secretary has been directed to reply accordingly.

Annual Report of this Branch for the year 1940-41 was read and recorded.

Annual budget estimate was discussed by the members and passed.

The following members have been elected unanimously as delegates for the ensuing Annual Conference to be held at Ahmedabad during Xmas week: Drs. S. M. Bhattacharyya, P. C. Chakravarty, or Drs. K. R. Roy, T. P. Bagchi.

As the term of the present office-bearers have ceased, a fresh election was held with the following result: Drs. K. R. Roy—President; R. K. Sanyal—Vice-President; D. Basu—Secretary and Treasurer; J. N. Roy—Assistant Secretary; L. K. Pramanick—Auditor.

Drs. L. K. Pramanick and K. R. Roy have been unanimously elected as candidates for the ensuing municipal election of commissioners.

Rajshahi (Bengal): Annual General Meeting held on 8-10-41 with Dr. M. C. Lahiri in the chair. Six members present.

Secretary's report of the last year was read and accepted.

Office-bearers for 1941-42: Drs. M. C. Lahiri—President; A. C. Chaudhuri—Secretary; G. K. Maitra—Assistant Secretary; Members of the Managing Committee: Drs. M. C. Lahiri, A. C. Chaudhuri, G. K. Maitra, G. P. Saraswati and S. K. Banerjee.

Dr. A. C. Chaudhuri was elected as a delegate to the ensuing Conference at Ahmedabad, and Dr. M. C. Lahiri as a substitute delegate.

Following new members were admitted: Drs. B. C. Mitra and Niranjana Saha.

Budget for the coming year was placed before the meeting and passed.

Poona (Bombay) Annual Report for 1940-41: During the year under report, our Branch held twenty meetings in all, out of which eight were of the Managing Committee, five General and seven Clinical meetings. We had a clinical meeting generally on the third Tuesday of every month with tea at the end. Members had shown keen interest in the discussions during these meetings and these meetings had been of great help to them in solving many petty difficulties that arise in every-day practice.

During the year under report various resolutions asking for the redress of our grievances were moved in the meetings and sent to the proper authorities for favour of consideration and action. Following are a few of the items in those resolutions:

(1) Raising of the present standard of education of the medical schools and overhauling their present staff.

(2) Demand for the senior rank in the military services, increment in the present rates of pay and the King's Commission for the members of our class.

Our Branch observed 20th September as an All-India Anti-Indian Medical Council Day and passed a protest resolution with a view to get this Act amended.

In view of the fact that a medical dinner is held every year on behalf of all the medical bodies in Poona, our Branch has discontinued the annual dinner.

It is gratifying to note that most of the members of our Branch are taking a leading part in the medical politics of our province. A most instructive instance is the unique part played by our members this year in the working of the ensuing Sixth Maharashtra and Karnatak Medical Conference to be held in Poona in the next month (November).

We are receiving repeated requisitions from the General and Provincial Secretaries of our Association to increase the present strength of our Branch by enrolling more new members every year. We therefore take this opportunity to extend our appeal to all non-member medical licentiates and request them to enrol themselves without hesitation.

We are glad to mention that Dr. V. D. Sathaye, a member of our Branch, was invited by the Government of India to attend the I.M.D. Recruitment Conference held in Simla on the 23rd September 1941. He has very well represented the claims of our class and it is hoped that there will be a considerable improvement in the present conditions and terms of employment. We are, however, awaiting the detailed official pronouncement on the deliberations of this Conference.

Before concluding we are to thank our worthy President, Rao Bahadur Capt. N. H. Kulkarni for the *At Home* that will be given by him today.

We also offer our sincere thanks to all the office-bearers who have rendered their valuable help in carrying out the work of the Branch.

Following are the office-bearers during the year 1941: Drs. Rao Bahadur Capt. N. H. Kulkarni—President; S. V. Mone—Vice-President; P. M. Bhanagay and P. G. Oka—Secretaries; Committee Members: Drs. V. D. Sathaye, A. N. Jejuriar, M. P. Joshi, R. H. Soman, G. T. Ghaisas, V. G. Paranjpe and C. G. Dharap.

Rajkot (Bombay): Meeting held on 14-10-41. Fourteen doctors were present.

Dr. U. Sesha Rao, Provincial Secretary, who is on a propaganda tour, addressed the members. He spoke at some length on the College of Physicians and Surgeons and its recent decision of extending the course of L.C.P.S. to four and a half years, just six months short of M.B.B.S. course. He condemned this as a very retrograde measure, and suggested to the members to carry on an intensive agitation to close down the Bombay College of Physicians and Surgeons. He then narrated how Drs. Narayan Rao and Sathaye were trying their best in the Bombay Medical Council to redress the grievances of the private practitioners in the matter of counter-signature of medical certificates and allied questions. He also detailed the work done by the Provincial Branch, and the various deputations it led. Concluding, he appealed for unity and co-operation, and for strengthening the Association by enlisting more members, and by incessantly working for its cause.

3rd BOMBAY PROVINCIAL CONFERENCE, A. I. M. L. A.

Ahmedabad

PROVISIONAL PROGRAMME

21st December 1941

8-30 A.M. to 11-0 A.M.	Subjects Committee Meeting.
3-0 P.M.	Opening of the Conference.
5-0 P.M.	At Home Party.
8-0 P.M. to 10-0 P.M.	Subjects Committee Meeting.

22nd December 1941

8-30 A.M. to 10-30 A.M.	Subjects Committee Meeting.
2-0 P.M.	Conference proper.
5-0 P.M.	At Home Party.

INDEX TO THE SUPPLEMENT TO THE INDIAN MEDICAL JOURNAL

Vol. 3, 1941

	Page		Page		Page
Ahmedabad Invites you ..	100	Juri Valley ..	50	Deputation, U. P. ..	64
Association Accounts		Karachi 7, 14, 57, 81, 85, 105, 115		" Assam ..	103
October, November and December 1940 ..	58	Khulna ..	116	D. M. S. ..	63
January 1941 ..	58	Lahore ..	107	Emergency Medical Service ..	53, 94
February, March, April 1941 ..	82	Madras ..	14	Finances of the Assn. Annual Report 1940-41 ..	113
May, June, July 1941 ..	108	Madura ..	57, 107	<i>Indian Medical Journal</i> . Annual Report 1940-41 ..	101
Association Notes		Mariani ..	5, 96	I. M. C. and the Association ..	84
Amraoti ..	7, 56, 115	Mussoorie ..	8	" Working of the ..	83
Bareilly ..	8, 97	Mymensingh ..	6, 49, 77, 86, 96, 104, 116	Medical Councils :	
Bengal S. C. ..	115	Nadia ..	14, 49, 78, 104, 116	Bengal ..	10, 66
Bhagalpur ..	81	Nadiad ..	14, 56	Bombay ..	48
Bhandara ..	7	Nagpur ..	106	Indian Medical Council ..	56
Bilaspur ..	7, 81, 97	Nainital ..	6, 14, 56	Punjab ..	11
Bombay ..	7, 56, 80, 86, 96	Nasik ..	86, 96, 116	U. P. ..	66
Burdwan ..	6, 14, 50, 79, 86, 104	Nowgong ..	7, 8, 80, 86, 105	Medical Education. Recent Vagaries in ..	99
Calcutta ..	6, 48, 78, 96, 104	Poona ..	81, 97, 116	Medical Practice in the province of Madras ..	87
Chapra ..	85, 97, 107	Rangpur ..	50, 105, 116	" Relief. Planning of—A. Viswanathan ..	9, 51
Chittagong ..	79	Rajkot ..	14	Memorandum, C. P. ..	53
Dacca ..	80	Rajshahi ..	8	Provincial Conference :	
Dhubri ..	50, 77	Rohtak ..	81	Eighth Assam ..	1
Dhulia ..	105	Shahjahanpur ..	6, 50, 76, 106	Eighth Bengal ..	67
Dibrugarh ..	50, 77, 106	Sialkot ..	5, 14, 76, 96, 106	Sixteenth Punjab ..	59, 74
Etawah ..	107	24 Pargs ..	6, 49, 79, 96	Sixteenth U. P. ..	3
Family Fund ..	104	Ujjain ..	14	Sixth U. P., L.P.H. ..	43
Fyzabad ..	85	U. P. ..	85	Rural Medical Aid. Some Problems of—P. J. Bhatt ..	109
Gauhati ..	14, 50, 77, 85, 115	Property Committee ..	76	Service Notes :	
Gwalior ..	14	Standing ..	76, 115	Bengal ..	5
Hissar ..	8	Audit report 1939-40 ..	15	Punjab ..	40
Jambusar ..	105	Bombay College of Physicians and Surgeons. Vagaries of the ..	111		
Jorhat ..	14, 96	Bombay University and L.C.P.S. Conference (1940). Proceedings ..	75, 18 to 39		
Jullundur ..	57, 85				

A large number of investigations in connection with drug standardisation and therapy has been undertaken by the Laboratory. Attention was mainly devoted to problems of immediate importance to India and the Indian drug industry. Problems on the action of certain drugs, their fate and distribution in the body and their possible significance in therapeutics have also been investigated and the results published in scientific journals both in India and abroad.

Claims of P. S. M. S. Officers in U. P. for Temporary P. M. S. Charge

On reference to the I. G. C. H. by Dr. Kunj Biharilal Varma, Provincial Secretary of the Licentiate's Association, U. P., whether the Government would employ P. S. M. S. Officers in the vacancies caused in the P. M. S. consequent on the recall of a number of I. M. S. Civil Surgeons to military duty, and whether it is not desirable to encourage the P. S. M. S. Officers by such promotion in view of the fact that a good number of them have joined the military already and many more are likely to do so in future, the Inspector-General has replied as follows: "I have the honour to state that whenever there is shortage in the cadre of P. M. S. Officers, P. S. M. S. Officers are temporarily put in charge of P. M. S. stations. This is over and above the 3 per cent. limit of promotion of P. S. M. S. Officers to the P. M. S."

Indian Medical Council : October (1941) Session

The decision of the Government of Burma to amend the Burma Medical Act, 1935 so as to provide for recognition of Indian qualifications prescribed in the Indian Medical Council Act was announced by Dr. B. C. Roy, in his Presidential Address at the meeting of the Medical Council of India held on 28th October 1940. Dr. Roy devoted his speech to the explanation of the agenda before the meeting.

At the outset, Dr. Roy expressed regret at the death of Col. N. S. Sodhi, who was on the Council from 1935 to 1937 representing the Government of Burma and who ceased to be a member after the separation of Burma. Dr. Roy offered congratulations to General Sir Gordon Jolly, a Member of the Council, on conferment of Knighthood on him.

Referring to the question of discontinuing reciprocity with certain countries through the British General Medical Council, the President said that the Central Government, before taking a decision in this matter, wanted to know whether the appropriate authorities in these countries had refused to settle schemes of direct reciprocity. The Executive did not consider it necessary to address these countries again on this subject. As for mutual recognition of qualifications between India and Japan, Dr. Roy said that the Government of India had written to the Council enquiring if it would be prepared to enter into schemes of reciprocity. He informed the meeting that the Government of India had made a reference to the Secretary of State for India in connection with the Council's proposal for setting up a General Reciprocity Board.

Dealing with the question of providing an All-India Medical Register, the President said that the Central Government had asked for the views of Provincial Governments. Dr. Roy went on to point out that the reports of Inspectors appointed by the British General

Medical Council had revealed serious defects in many of the examining bodies in England. The Indian Medical Council had made repeated enquiries regarding these defects and wanted to know to what extent they had been removed, but the replies were so far evasive or there were no replies. The Executive Committee of the Council had therefore decided to recommend to the Council to withdraw recognition of two examining bodies in London and Dublin.

The Council then took up the resolutions. Col. P. B. Bharucha was re-elected member representing Universities to the Executive Committee of the Council.

The Council noted the resolution of the Executive Committee regarding direct reciprocity of recognition of medical qualifications with Japan that consideration of this matter be deferred *sine die*.

By another resolution, the Council resolved to include M. D. (Doctor of Medicine) and M. S. (Master of Surgery) degrees of Andhra University in the schedule to the Indian Medical Council Act from April 1, 1940.

The Council decided to approach the Central Government with a request to exclude qualifications granted by (1) Apothecaries Hall of Ireland and (2) the Society of Apothecaries of London, from the Second Schedule to the Indian Medical Council Act.

The Council noted the Burma Government's communication received through the Central Government deciding to amend the Burma Medical Act so as to provide for recognition of Indian qualifications.

In regard to the question of providing recruits for the war, the Council did not approve for the present that the period of training of medical education should be cut short or the standard of examinations lowered but it considered that the Universities may be informed that, if a member of the House Staff joins the Army, his work may be carried out by the senior students provided suitable instruction continues to be arranged for them.

The next meeting of the Council will be held on March 24, 1942, at New Delhi.

Indian Medical Service

Mr. Govind Deshmukh asked (Central Assembly Session, 29-10-41) if any distinctions are even now made between Indian and European members of the I.M.S., holding permanent commissions and the reasons for doing so.

Sir Gurunath Bewoor, Additional Secretary, Defence Department, said there were no distinctions except such as arose from the fact that certain allowances were paid in rupees to Indian officers and in sterling to Europeans and that there were slight differences in leave and passage concessions.

"Approximately 58 per cent. of the officers serving in the Civil Branch of the I.M.S. had been recalled to military duty," said Sir Gurunath in reply to a further question from the same member. Of the remaining 42 per cent. about two-thirds were holding residuary posts and did not form part of the War Reserve, and about one-third were officers, whom it was considered desirable to retain in their present posts either because they were employed on work directly connected with the war or because their services were of more value in their present posts than in the armed forces. The latter figure included officers, who were at present unfit for military duty.

I. M. A. President Resigns from the Provincial War Committee (Medical)

Dr. Kumud Shankar Ray, President of the Indian Medical Association, has issued the following statement to the Press:

"I regret to say that, as the Government have not accepted most of the important recommendations of the Indian Medical Association as passed by its Central Council last July and in view of the fact that, in the selection of non-official personnel of the various Central and Provincial Committees to advise on emergency commissions in the Indian Medical Service, the Indian Medical Association has not been consulted, I am sending my resignation of the membership of the Bengal Provincial Committee, as I find that I will not be able to serve any useful purpose."

Our Bombay Letter

The President of the College of Physicians and Surgeons, Bombay, speaks

Since my last letter was written on this subject interesting events have further developed. The College President, who at first gave a point blank refusal to meet the first year students of the National Medical College had perforce—due to the publicity given to the refusal in the lay papers—to give an interview. But what a statement he had made! He was reported to have said that the increase of course was in the interest of the students and was demanded by the Licentiates themselves in 1919, and the profession! My hats off to Sir Mangaldas and his College! The Licentiates are grateful to both for having condescended to offer them in this year of grace of 1941 a small part of the demands they have been clamouring for since 1919. May I ask him when their request of 1936-38 will be considered? Probably, after both the Licentiate Class and the College are dead and forgotten! The President of the Licentiates' Association, Bombay Branch, Dr. U. B. Narayanrao has, however, given a crushing rejoinder to Sir Mangaldas' statement. **Quoting resolutions passed at various Conferences, Dr. Rao proved to the hilt that what the Licentiates and the profession asked for was a course for five years after I.Sc. and not 4½ years as the College has fixed.** It is high time that persons occupying high positions stop making such incorrect and irresponsible statements.

It is very difficult to know the stand taken by the Indian Medical Association members of this Council. It is, therefore, in the fitness of things that these members should at least publicly dissociate themselves from the College decisions or, as the *Medical Digest* suggests, to resign in a body, and thus prove their allegiance to the I. M. A. to which they have the honour to belong.

Maharashtra Conference, Poona

The Sixth Maharashtra and Karnatak Provincial Medical Conference was held at Poona early this month. Dr. B. V. Mulay presided and Dr. K. S. Ray of Calcutta inaugurated the Conference. The Chairman of the Reception Committee, Dr. Naidu, as well as the President, strongly criticised the action of the College of Physicians and Surgeons in keeping a standard just six months shorter than the M.B., B.S. The Conference also passed resolutions, amongst others, urging Government to abolish the Licentiate's course and to convert the existing schools to colleges.

EPITOME

Ind. Med. Gaz., Sept. 1941	Page
Unusual Rhinosporidial infection in man— <i>Dharyagude</i> ..	513
Bullous emphysema of the lung— <i>Raman</i> ..	515
Pancreatic calculi— <i>Shah</i> ..	516
(1) Practical aspects of general anasarca— <i>Heilig</i> ..	519
(2) Hydrotherapy in typhoid fever— <i>McRobert</i> ..	523
Intrapartum Uterine Haemorrhage— <i>Waters</i> ..	523
Hidden sepsis in the palatine tonsils— <i>Whyte</i> ..	526
Incidence of porphyria— <i>Joseph</i> ..	529
Leucoderma— <i>Panja</i> ..	530
(1) Heilig writes that general anasarca in our hospital cases is due to heart failure, nephritis, or ankylostomiasis. The heart failure is mostly a consequence of valvular lesions of essential hypertension, a condition remarkably frequent among Brahmans, living for many centuries on strictest vegetarian food. The nephritis, either an acute or subacute glomerulo-nephritis, is frequently so closely connected with malarial infection that many of the cases seem to belong to the interesting clinical entity, 'malarial nephritis'. By far the largest number of anasarca cases are due to hook-worm infection. Regarding treatment, the heart failure cases respond very well to digitalis and mercurial diuretics; the malarial nephritis to milk diet and rest in bed, and if water retention still persists, quinine is the best diuretic; ascites and oedema due to hook-worm respond best to ammonium chloride and urea.	

(2) McRoberts is of the definite view that, particularly in enteric fever, it is important to maintain the fluid intake at a high level. The author has been using for the last two years continuous rectal drip saline in toxic and semi-conscious enteric fever cases, and he is satisfied that this measure helps in reducing toxemia and in ensuring a continuous supply of fluid which could not be guaranteed by any other nursing method. There seems to be no advantage, however, in adding glucose to the rectal saline.

Jr. of I. M. A., Sept. 1941	Page
A study on leptospirosis— <i>De</i> ..	467
(3) Vitex therapy in B. W. Fever— <i>Roy</i> ..	475
Treatment of hyper-uric acidemia with hippuric acid— <i>Roy and others</i> ..	482
Flourine cure for exposed dentine and atrophy of alveolous— <i>Lukomsky</i> ..	483
Scleroma— <i>Bose and Dutt</i> ..	491
(3) Dr. B. C. Roy writes: The plant <i>Vitex peduncularis</i> grows in abundance in Assam and in parts of North Bengal. The leaves should be harvested before becoming quite ripe. They should be kept in a dry place, otherwise they will deteriorate. The chemical composition was analysed in the laboratory and its chief constituents were found as follows:—a greenish amorphous glucoside, $C_{24}H_{36}O_8$ with very slight trace of alkaloids, gluten, colouring matter, calcium oxalate and ash. Ghosh (1924) of Tropical School, Calcutta, found traces of alkaloid on chemical analysis of dried leaves of <i>Vitex peduncularis</i> , the specimens were obtained from the Bihar Government in the latter part of 1922.	

From the year 1937 considerable experimental work has been carried out on the chemical, physiological and pharmacological reactions of the drug, *Vitex peduncularis*. Since then the drug was given a fair trial by us in a series of cases of blackwater fever and the following is a report of cases which were treated in the Carmichael Medical College Hospital, Calcutta, where the detailed investigation was carried out in Sir Nilratan Sircar Research Institute.

Vitex therapy.—To start with an initial intra-muscular injection of 2 to 3 c.c. of *Vitex peduncularis* ampoule was given followed by the Tincture *Vitex peduncularis* 10 to 15 minims, thrice daily. Depending on the severity of a case, the injection of the ampoule was repeated twice a day or continued as one injection daily for two to three successive days. Thus in an individual case 1 to 3 ampoules were necessary. After the cessation of haemoglobinuria the tincture was continued for a further period of three to four days.

Accessory treatment.—(a) To combat shock and fluid loss: (i) subcutaneous saline, (ii) intravenous or intramuscular glucose, (iii) intravenous or intramuscular calcium.

(b) For anaemia: administration of iron, intramuscular injection of whole blood and preparation of liver extract.

Use of Anti-malarial drugs.—In cases where malarial parasites are found in the peripheral blood anti-malaria drugs like quinine and atabrin may be used along with vitex. Mesham (1940) in his series of eleven cases gave one or two doses of quinine or atabrin as an additional treatment prior to infusion of *Vitex peduncularis* in five cases and a full course of atabrin in one case without any bad effect on haemoglobinuria. In the present series of cases intramuscular injection of quinine bihydrochloride was given in 10 grs. doses for six days with vitex resulting in cure.

Cal. Med. Jr., Sept. 1941

The treatment of kala-azar by the intra-muscular injection of a new antimony compound— <i>Neostibine</i> — <i>Brahmachari</i> ..	453
Treatment of fracture of femoral neck— <i>Das</i> ..	457
Common infectious diseases of childhood in Bengal— <i>Rasu</i> ..	461
Treatment of bronchial asthma— <i>Rasu</i> ..	477

ABSTRACTS

THE USE OF HYPERTONIC SALINE IN SURGICAL PRACTICE. Harold Dodd, Post-Graduate Medical Journal, May 1941, p. 81.

Hypertonic saline, injected intravenously in 30 per cent. solutions in amounts of 20 to 40 c.c. is a valuable remedy to the surgeon. The purpose of this note is to sketch some indications for it and to give illustrative cases.

1. Spinal anaesthesia. The disadvantages to be overcome with nearly all spinal anaesthetics is that of the prevention or restoration of the serious fall in blood pressure which occurs in almost every case. Dr. Joan Walker (1936), of Leicester, pointed out the great value of an intravenous injection of 40 c.c. of hypertonic saline for the restoration of blood pressure. It is given immediately an operation under a spinal anaesthetic has begun. It raises and maintains the blood pressure around normal limits. The writer's experience is in accord with Dr. Walker's statements.

2. Post-operative spinal headache. Since 1934 hypertonic saline has been used with consistent success for post-operative spinal headaches. The dose is 20 c.c.; it should be given as soon as the patient complains of the cephalgia. Delay in its administration in the hope that it will pass off or that giving tablets of A. P. C. or ephedrin orally will give relief is waste of time, and the patient continues with discomfort, some degree of mental confusion and "muddle-headedness." The injection is made promptly and repeated if necessary once or twice, but this is not often required. An ache at the back of the neck or in the occipital region is also a post-spinal ache and is treated in the same way. This point of the post-operative headache was explored further in a personal communication with Dr. Walker; the enquiry being, was the incidence of post-operative spinal headaches less after the injection of hypertonic saline during operation than in those patients who did not have it? The reply was decisively, "Yes." Fortunately, notes had been kept and these showed that the headaches after saline injection were 5 to 10 per cent. as against 25 per cent. in cases without it.

3. Blood pressure falls at major operations. At operations performed under all type of anaesthesia other than spinal, considerable falls of blood pressure have been recorded, especially towards the end of long procedures, such as resections of the stomach and colon. The hypertonic saline injection has again proved to be dependable as well as improving the patient's colour.

Antiseptic, Sept. 1941

Special features of diabetes in India— <i>Manohar Lal</i> ..	635
(4) Diagnosis and treatment of amoebiasis— <i>Ganguly</i> ..	639
External otitis— <i>Bail</i> ..	647
Tuberculosis of lungs— <i>Sreenivasan</i> ..	650
Caries of the teeth— <i>Gupta</i> ..	654

(4) Ganguly gives his experience of treating acute and chronic amoebic dysentery with enterozol, and records that all his cases were relieved of 50 per cent. of their symptoms with one course of treatment. Even after disappearance of cysts from the stools, the author recommends a long course of enterozol and other tonics for improving digestion. The action of enterozol may not be so magical like emetine, he writes, but the ultimate curative action is far greater than that of the latter.

Med. Digest, Sept. 1941

Calcium metabolism and teeth— <i>Desai</i> ..	253
A note on sulphanilamide preparations— <i>Roy</i> ..	256
Surgery in the Diabetic— <i>Viswanathan</i> ..	259

Med. Bulletin, 20th Sept. & Oct. 1941

Some causes of unsatisfactory weight in children— <i>Coelho</i> ..	553
Hormones— <i>Purohit</i> ..	559
Dyspnoea in cardiac diseases— <i>Karmally</i> ..	577
Foreign bodies in trachea and bronchi— <i>Patel</i> ..	588

4. In head injuries. Head injuries have been treated by hypertonic saline when the following symptoms have presented:—(a) continued cerebral irritation after four days of the injury. The hypertonic saline is repeated intravenously daily and with ultimate complete relief, but it may take a week or two.

Case I. A coroner's officer was excitable and irritable for a month after a severe fracture of the skull. With the hypertonic salines and a bromide mixture he ultimately emerged and returned to duty. Since then he has been the friend and guide of the residents at this hospital.

Case II. An army sergeant fractured his skull in a motor-cycle accident. His headache, mental confusion and a mild irritability continued for six weeks. The hypertonic injections were supplemented by postural position, that of lying for 30 to 60 minutes daily in the full Trendelenberg position. He recovered and returned to full duty. This postural remedy of the Trendelenberg position has been occasionally used in conjunction with the hypertonic injections, particularly in obstinate post-operative spinal headaches; success has been invariable.

Case III. A patient after a head injury reported at outpatient's a month after his discharge. He was complaining of tingling and weakness in his arms, pain in the back of his neck, and constant headache. He had returned to work but had given it up after a day on account of this disability and his inability to concentrate. An injection of 20 c.c. of 30 per cent. hypertonic saline gave immediate relief and started resolution of the tingling and weakness. He began work a week later.

5. Mental confusion. "Muddle-headedness," inability to read for long, to concentrate or fix the interest, are sometimes met after head injuries and spinal anaesthesia. Hypertonic salines will clear this.

6. After lumbar punctures. Over a period of years it has been the writer's experience to see a few patients complaining of persistent headache after simple lumbar punctures for routine medical diagnostic purposes. They have been referred to the surgical department when the usual remedies have failed. All those symptoms have disappeared on the injection of 20 c.c. of 30 per cent. hypertonic saline.

7. At cerebral operations. At intra-cranial operations the intra-cranial pressure may be so great as to cause bulging of the brain and prevent the operation proceeding. This obstruction can be overcome sometimes by an injection of hypertonic saline.

8. For a case of post-operative encephalitis. A man aged 38 was given a low spinal anaesthetic for the radical cure of an inguinal hernia. The anaesthetic was administered by the writer. The practice of boiling the syringe, needles, ampoule of anaesthetic and the file in distilled water was followed. The technique of administration was carefully performed.

Four days after the operation he complained of indigestion. He had suffered from duodenal ulcer dyspepsia for several years; suitable treatment and diet were prescribed. For a few days he improved, but then in the following three weeks a deterioration set in, he began to vomit, developed double vision, became completely unconscious, paralysed and incontinent of urine and faeces. A lumbar puncture showed a small increase in the number of cells in the S. C. F. His care was undertaken by physician colleagues, and after a week at a joint consultation the diagnosis of encephalitis was pronounced and a hopeless prognosis given, three to four days only being estimated. Further treatment was discouraged as useless.

From then onwards a regime of daily injections of 20 c.c. of hypertonic saline was begun together with intravenous injections of T. A. B. vaccine every fifth day, beginning with 50 million and subsequent doses increasing by double, i.e., 100, 200, 400, 800. Improvement began slowly. He was occasionally conscious, then continually so, continence returned and control of his limbs. In three weeks he was discharged and two months later he returned to work.

9. For paralytic ileus and pulmonary oedema. Prof. Flint (1939) writes that hypertonic saline has a beneficial effect on these conditions. In early post-operative gross oedema of the lungs the results have occasionally been dramatic. He has recorded that in some patients with ileus the blood pressure is low and the relationship of the diastolic and systolic pressure seriously altered. It may be that the increase in blood pressure which follows the administration of the saline and the exchange of tissue and venous fluids which it causes contributes to the improvement. Again chlorides are always depleted in intestinal obstruction and emesis.

Difficulties. The only difficulty experienced in the use of the hypertonic saline is that of finding a vein, which is a technical item and disappears with experience and resolution. Occasionally pain has been reported from a thrombophlebitis in the vessel which has been used, but this is rare. When it is given for headache patients are warned that for 20 to 30 minutes their discomfort or other symptoms will be aggravated and then the improvement will follow. One patient said she was unable to read the paper after the operation until after her injection of saline.

Rationale. The effect of the saline is to attract fluid from the tissue spaces in order to dilute the 30 per cent. saline to normal saline strength in the blood. If this is regarded as 1 per cent. (actually it is less than this), then 20 c.c. of 30 per cent. saline is equal to 600 c.c. of 1 per cent. saline, so that the tissues must find 580 c.c. of fluid. This raises the blood pressure partly by filling the blood vessels. It also relieves congestion, especially in areas with traumatic and chronic inflammatory oedema, and by so doing the results support the supposition that it initiates resolution; especially in head injuries, for there is no space in the skull cavity for swelling. In some patients the chlorides are beneficial, whilst in others the increase in blood pressure improves the circulation and starts the process of return to normal.

CANCER OF THE PENIS. M. Lederman, Post-Graduate Medical Journal, June 1941, p. 97.

(1) Cancer of the penis is largely a preventable disease. Universal circumcision in infancy would probably reduce its incidence to a negligible quantity.

(2) The commonest site of cancer of the penis is the distal end of the organ and the commonest histological type of growth is a well-differentiated squamous-cell carcinoma.

(3) Palpable inguinal lymph nodes (often bilateral) are found in 75 per cent. of cases; but the nodes are the site of metastases in only one-third to one-half of this number—i.e., in over half the cases the lymph nodes are inflammatory in origin.

(4) The curative treatment of cancer of the penis requires consideration of two separate problems—one presented by the treatment of the primary disease of the penis and the other by the presence, or possible presence, of inguinal lymph node metastases. If metastases to the intra-pelvic lymph nodes or distant organs has occurred any treatment given can only be of a palliative nature.

(5) For the primary disease the advantages of radiotherapeutic treatment are such that it should be given preference whenever possible, due regard being given to certain definite contra-indications. Radium is the commonest radiotherapeutic

agent employed and can be used in the form of a surface applicator or interstitially. Recently teleradium (radium "bomb") treatment has been employed with promising results.

(6) Inguinal lymph node metastases, if inoperable, should be treated radiotherapeutically; but there is no general agreement on the best method of treatment of operable lymph nodes or the course to be followed when there are no clinically palpable nodes.

The following would appear to be a rational way of dealing with these cases:

(a) If palpable and operable nodes are present, radiotherapeutic treatment should be tried first with surgical dissection kept as a "second line of defence." High voltage X-ray therapy is the commonest form of radiotherapeutic treatment employed, but teleradium treatment, if available, should be used for preference.

(b) No palpable nodes present—no treatment, the patient being examined regularly and carefully, is justifiable when the patient is elderly or the tumour small (less than 2 cms. in diameter) and histologically a well differentiated and keratinizing squamous-cell carcinoma. In all other cases treatment should be given following the principles indicated for palpable and operable nodes—the assumption being that microscopic metastases are present.

(7) The results of treatment indicate that in early cases, where the primary disease is localised and no palpable inguinal lymph nodes are detectable, the outlook is good—50 to 60 per cent. of five-year survivals can be anticipated with confidence; 85 per cent. of five-year survivals representing the best result obtained. The primary disease is curable by radiotherapy or surgery if the lesion is reasonably early, but correct radiotherapeutic treatment offers the patient cure without mutilation or gross impairment of function of the organ. It is difficult to assess at an exact figure the results obtained once lymph nodes metastases are definitely present. It is certain, however, that if the nodes are fixed and inoperable the patient is doomed, although radiotherapy can do much to ease his lot. It is equally certain that even when nodes are operable the chances of the patient's survival for five years are much diminished.

(8) Finally it should be stressed that no one method of treatment is likely to prove satisfactory for all cases. Surgery and radiotherapy should be regarded as complementary agents, as in this way only are the best results likely to be obtained.

SULFAPYRIDINE IN GONORRHOEA. Robert E. Bruner, United States Naval Medical Bulletin, July 1941, p. 376.

1. Sulfapyridine clears the urine and stops discharge quickly in majority of cases of gonorrhoea treated regardless of stage of disease.

2. No local treatment is needed in conjunction with those cases that show a marked response to this type of treatment.

3. Complications noted in order of frequency are: nausea and vomiting, anorexia, cyanosis, leucopenia, neutropenia, and hematuria.

4. The more physical labour done by the patient while under treatment, the more marked the nausea, the vomiting, and malaise.

5. Extension of the infection with resulting prostatitis, epididymitis, arthritis, or other such complications has been practically nil.

6. It is believed that while slightly smaller beginning doses than those given in this series will effect the same decrease in symptoms with less nausea, nevertheless, the rather large dose of the drug used throughout this series is possibly responsible for the favourable results obtained.

7. Blood concentration level determinations of the drug are not of great importance.

8. This drug should be given only to patients who can be well controlled as careful blood counts and urine examinations should be made daily or every other day throughout the treatment.

9. Forcing of fluids is probably of value during this treatment.

10. All factors considered, sulfapyridine has been the most satisfactory drug we have yet used in treatment of acute and chronic gonococcus infection of the urethra.

INDEX TO THE INDIAN MEDICAL JOURNAL (Journal of the All-India Medical Licentiates' Association)

Vol. 35, 1941

Addresses and Articles	Page	Addresses & Articles—(Contd.)	Page	Clinical Notes—(Contd.)	Page
Agranulocytosis—Khan Chand Wohra	213	Oxygen therapy. Pharmacological basis for—A. N. Bose	159	Thymus in Infants. Enlarged—A. V. S. Sarma	301
Anæsthesia and their treatment. Emergencies in—D. M. Thergaonkar	113	Post-partum hæmorrhage—R. G. Petkar	234	Vaginal Hysterectomy—Kamala K. Tare	302
Anæsthesia. Some aspects of modern—Sunil Krishna Basu	116	atonic—K. S. S. Krishnan and K. S. Sreenivasan	232	Current Comments	
Ascariasis—H. C. Das	34	Quinoline compound. Treatment of amœbic dysentery with a new—S. K. Gosh	209	Capillary fragility	14
Bile as a drug—U. P. Basu	141	Rabies in Animals and Men—C. S. Bura Thokey	270	Circumcision—a new technique	14
Blood Pressure. Mechanism of—T. A. G. Rao	273	Ray therapy. Historical survey of—P. M. Mehta	144	Criticism. Lack of	100
Blood transfusion and its indications. Technique of—S. A. Subedar	162	Rickets. Clinical observations on—A. V. S. Sarma	179	Diabetic peripheral neuritis	100
Cardiac therapy and digitalis—T. A. G. Rao	10	Renal—A. V. S. Sarma	6	Diets. Nutritional value of	100
Coma, its differential diagnosis and treatment—S. N. Malhotra	157	Radiological Observations on—A. V. S. Sarma	268	Dry labour. Newer concepts of	36
Diarrhoea. Choleraic—S. C. Dutta Dietetics. The foundations of—A. Sreenivasan	171	Saline transfusion and its indications. Technique of—D. N. Basak	161	Eosinophilia in tuberculosis	36
Diseases transferable from animals to men—S. E. Hussain	28	Skin and radiation. Human—P. M. Mehta	210	Gastric syphilis	37
Eclampsia. Management of—M. S. Arunachalam	240	Shock and collapse—A. Viswanathan	156	Glossitis	100
Ectopic gestation—T. A. G. Rao Electricity in the treatment of diseases—P. K. Guha	247	Snake bite and its treatment—S. K. Ganguli	164	Histamine in the treatment of allergic disorders	15
Electrocution—G. V. Joglekar	287	venom in therapeutics—S. A. Subedar	94	Insulin in phthisis	100
Food. The best use of—A. Sreenivasan	177	Sulphonamide in gonococcal infection—D. P. Pal	8	Pulmonary embolism and infraction. Clinical diagnosis of	37
Forceps delivery in obstetrics—K. S. Sreenivasan	242	Tarsetomy in Trachoma—M. K. Gupta	263	Stilbestrol	15
Glaucoma: Non-surgical treatment of—R. S. Agarwal	33	Tuberculosis in India—R. S. Agarwal	204	Editorial	
Haemorrhages in liver diseases—B. C. Bose	181	The assessment of progress in pulmonary—Shri Nath Singh	91	Blood transfusion	35
Hernia. Injection treatment of—M. L. Saxena	30	The place of drugs in the treatment of—A. C. Karmakar	182	Cursetji apologises	123
Impotence: Its aetiology and treatment—M. L. Saxena	265	Urinary Calculus. Etiology and Prevention of—S. A. Subedar	272	Electrical Accidents	305
Infantile biliary cirrhosis. (5) The role of castor oil—S. Bala-sundaram	89	Uterine inertia—B. G. Modak	249	Good news	155
Diagnosis and treatment—A. V. S. Sarma	297	Vitamin A deficiency. Observations on—S. C. Dutta	118	Hexamine as a biliary antiseptic	187
Leprosy in Fyzabad district—P. J. Chandy	27	Clinical Notes		Infantile Biliary Cirrhosis	305
Malaria in Assam—H. C. Dass	269	Cases. Four rare and interesting—P. S. Varma	97	I. M. D. recruitment to the Emergency	231
Malaria: Cerebral—H. C. Das	170	Clinical interest. Two cases of—J. Dhairyam	12	Medical Emergencies	155
Chemotherapy of—G. V. Joglekar	1, 25	Hepatitis with cholecystitis—L. K. Barman	98	Medicine and the Muse	230
Treatment of cerebral and algid—S. C. Dutta	169	Magnesium sulphate. Uses of—J. Dhairyam	122	Midwifery and the general practitioner	229
Treatment of uncomplicated cases of—B. N. Chowdhuri	184	M. & B. 693. Delayed toxic action of—S. K. Chowdhury	11	Nineteen hundred and forty-one	13
Male sex hormone—Kishore Chand Methylene blue in leprosy lesions—O. D. L. Pereira	212	Malarial Aphasia. A case of—M. N. Paladhi	302	Physical fitness of our nation	99
Nutrition. Agricultural and economic aspects of—A. Sreenivasan Obstetric emergencies. Some common and rare—A. Viswanathan	201	Pregnancy Hydremia—M. N. Paladhi	302	Pneumococcal peritonitis	147
	245	Rauwolfia Serpentina—J. Dhairyam	275	Population and food supply	148
		Salpingitis. Treatment of—B. L. Kapur	98	Sulphanilamide Therapy. Toxic Complications of	277
		Sugandha—M. K. Rahman	276	United voice	49
				Vitamin K. therapy	215

Extracts—(Contd.)	Page	Extracts—(Contd.)	Page	Medical News—(Contd.)	Page
Cholera. Role of interstitial fluid in the renal failure of ..	261	Sulphapyridine ..	133	Madras University and medical licentiates (I) ..	221
Chronic cervicitis. Treatment of ..	135	Sulphathiazole in bacterial and virus infection ..	133	Malaria among drug addicts (F) ..	40
Coccydynia. The treatment of ..	199	T. A. B. Vaccine ..	283	" in America. Treatment of (F) ..	40
Cod-liver oil as Local Treatment for Tuberculous Lesions ..	286	Tuberculosis. Abdominal ..	226	" Institute of India (I) ..	282
Cow's milk as infant food ..	111	" cavities. The pathology of clinically healed ..	112	Medical Council, Hyderabad (I) ..	106
Delayed labour ..	251	" in man. Incidence of ..	21	" inspection of schools in Orissa (I) ..	259
Diamidino stilbene in kala-azar ..	46	" Bovine type of ..	48	" personal. Recruitment of (I) ..	43
Dysenteries and diarrhoeas. Simple treatment of ..	46	" of knee joint ..	196	Neurosyphilis (F) ..	258
Endometriosis ..	133	" of the female genital tract ..	133	Nutrition Committee, Bengal (I) ..	20
Enteric fever. Intestinal hæmorrhage in ..	154	" Value of guinea-pig inoculation in the diagnosis of ..	196	Pharmacy Bill. All-India (I) ..	221
" " Vi agglutination test in ..	46	Thyroid drugging in Grave's disease ..	133	Public Health in Madras (I) ..	20
" fevers. Some observations on ..	225	Typhoid fever. Hydrotherapy in ..	314	Quinine stocks from Java (I) ..	44
Enterotoxin ..	154	Ulcerative colitis with sulphanilamide. Treatment of ..	24	Sulphanilamide (F) ..	281
Epidemic dropsy and mustard oil ..	47	Uterus. Functional bleeding of ..	154	Synthetic drugs in India (I) ..	107
" Some observation on the ætiology of ..	21	Uterine bleeding induced by progesterone ..	48	Tuberculosis Association (I) ..	131
Epilepsy. A new remedy for ..	134	Uterine inertia ..	256	" Vaccination against (F) ..	41
Femoral hernia ..	46	" and pituitary extract ..	197	Wounds and war (F) ..	41, 130
Fever in children. Obscure ..	175	Vitamin B complex ..	47	Yellow fever in Brazil (F) ..	257
Filariasis. Surgical complication of ..	261	" C Absorption of ..	23		
Foreign bodies in the stomach ..	254	" Nutrition in peptic ulcer ..	134		
Frank breech presentation ..	48	" " rheumatic disease ..	176		
Gonadotropic hormones ..	198	" deficiencies. Early recognition of ..	109		
Gonadotropins ..	198	" K and clotting time ..	200		
Gonorrhœa. Artificial fever therapy in ..	154	" K and its clinical uses ..	286		
" Intravenous methylene blue in the treatment of ..	154	Vitex Peduncularis in B. W. F. ..	314		
" and Sulphapyridine ..	316				
Heart disease in Bombay ..	225				
Hook-worm anemia ..	109				
Hypertonic Saline in Surgical Practice ..	315				
Infantile cirrhosis of liver. Treatment of ..	47				
Infected wounds. Treatment of ..	112				
Intravenous alcohol ..	47				
Kala-azar. Vitamin C nutrition in ..	261				
Labour. Induction of ..	255				
Lepromin test ..	196				
" Studies of the ..	21				
Leucorrhœa ..	284				
Lung. Non-specific inflammation of the ..	154				
Lymphogranuloma inguinale ..	227				
Malaria in children ..	21				
Male sex hormone therapy in the females ..	21				
Mastoiditis. Chronic ..	261				
Pediatrics. Recent advances in ..	225				
Peptic ulcers ..	111				
Pituitary preparations ..	256				
Pituitrin shock ..	198				
Placenta. Manual removal of ..	256				
Plasma prothrombin values ..	198				
Pneumococcal peritonitis. Primary ..	196				
Pregnancy. A skin test for the diagnosis of ..	197				
" Renal function in late toxemia of ..	197				
Pre-operative medication ..	22				
Pyrexia during the puerperium ..	253				
Sarcoma of the stomach. Primary ..	109				
Scorpion sting ..	136				
Sedative agents. The use of ..	46				
Small-pox and sulphanilamide ..	22				
Spinal anesthesia ..	22				
Sulphanilamide derivatives. Dosage of ..	135, 285				
" in obstetrics and gynecology ..	48				
" The local use of ..	200				
" therapy. Toxic complications of ..	261				
" and ordinary diets ..	283				

* (F) = Foreign (I) = Indian.

31ST CONFERENCE AND SCIENTIFIC EXHIBITION

of the

ALL-INDIA MEDICAL LICENTIATES' ASSOCIATION

The 31st Annual Conference will be held this year at Ahmedabad on 23rd, 24th and 25th December, 1941.

The Conference will be opened by General Sir G. G. Jolly, C.I.E., V.H.S., I.M.S., Director-General of Indian Medical Service, on 23rd December 1941.

Dr. A. D. Mukharji has been elected as President of the Conference.

PROVISIONAL PROGRAMME

23rd December, 1941

- 8-30 A.M. Subjects Committee Meeting
- 2-30 P.M. Inaugural Ceremony of the Conference
- 4-30 P.M. Inaugural Ceremony of the Exhibition
- 5-0 P.M. At Home Party
- 8-30 P.M. Subjects Committee Meeting

24th December, 1941

- 8-30 A.M. Reading of the Scientific papers (Medical)
- 2-0 P.M. Reading of the Scientific Papers (Surgical)
- 7-0 P.M. Dinner to the Medical Profession
- 8-30 P.M. Subjects Committee Meeting

25th December, 1941

- 8-30 A.M. Sightseeing and other visits to various well-known places
- 2-0 P.M. Open Conference
- At night Visit to Baroda Alembic Works

DIRECTIONS TO THE DELEGATES

Delegates may start from their respective places at such a time as to reach Ahmedabad Station either on the night of the 22nd or latest on the morning of the 23rd December 1941.

Volunteers with their badges will be posted near the 2nd class gate on the platform, who will escort the delegates to the camp. The delegates are requested to bring warm clothings and beddings as the weather will be very cold. Special arrangements for lady delegates and visitors have been made. Those who want special accommodation should, however, write to the undersigned at least 10 days before the Conference. Special family arrangements also will be made if informed in due time.

All delegates and visitors are requested to inform the undersigned the day and the time of their arrival at Ahmedabad Station, at least a week before the Conference, so that they may be received and attended to without any inconvenience.

Further information will be gladly supplied on request.

K. J. BHATT,

General Secretary,

235, Ghashiram's Pole, Ahmedabad

War Surgery in the Old World—
W. Schweishemer .. 307

FOR DOCTOR'S ATTENTION

Quality and Dependable Products Tried all over India

PULMONARY

THEOCADIUM 'A' OLEOSUM

and

Suspensorium in Glucose and Calcium Solution.

An excellent substitute for gold Therapy in Pulmonary Tuberculosis. (Vide 100 cases-reports in the 'Indian Medical Gazette,' April 1941 issue).

T
.
B
.

AUROGANOL 'B' OLEOSUM

Di-Sodium Salts of Auro-mercapto-Benzol.

An exact substitute for SOLGANOL 'B' OLEOSUM in Tuberculosis.

GLANDULAR CASES

GEOFLAVINE

1 cc.

Intra-Glandular Injection. Good and Rapid results obtained when given in conjunction with Graduated Doses of Tuberculin and Ultra-Violet Irradiation.

LUNGS TONIC

PNEUMO-VITOL

Combination of Five Hypo-phosphites with Vit. A & D in Palatable medium.

ARKODIOL

Indian Fish Liver Oil, Substitute for Cod-Liver Oil, containing Vit. A & D. Certified by Government Laboratory. Combined with Orange Juices.

NOVO-CAMPOL

Liver Extract Injection Intra-muscular.

HEPATOZYME

Liver Extract, Iron, Copper and Nicotinic Acid. For Primary and Secondary Anemia, etc.

DIGESTIVE TONIC

NEUROZYME

&

SUTIKAN

for Loss of Appetite Indigestion and Anemia after delivery.

A RADICAL CURE FOR THREAD WORMS

VERONA-HELMINTHIA

Elixir

PENTA-BROMIDES

For Sleeplessness, Epilepsy, etc.

PENTA VALERIAN

for Hysteria, all reflex neurosis, Neurasthenia, etc.

←Sedatives→

SERPENTINA HYPOTONA

(Liquid & Tablet)

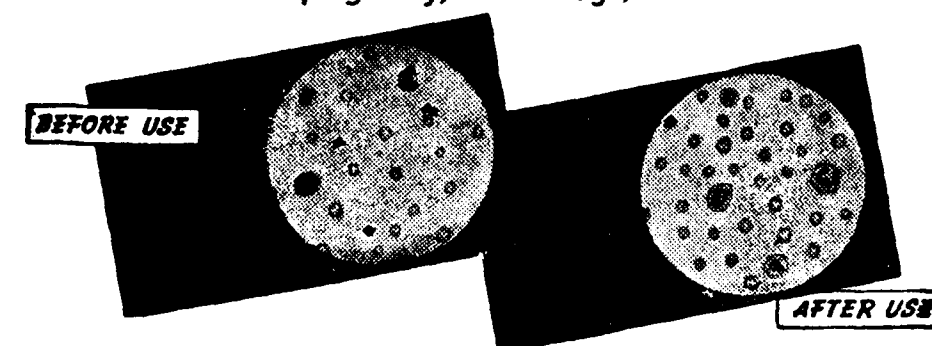
for Reduction of High Blood Pressure.

ORIENTAL CHEMICAL WORKS, LIMITED

8/2, Bejoy Basu Road, Bhowanipur, CALCUTTA

Ideal HAEMOGLOBIN THERAPY IN ANÆMIA-

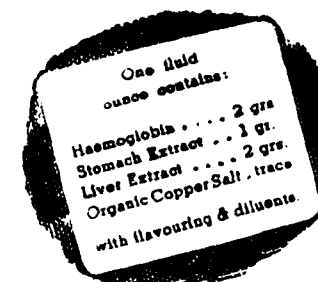
of any origin—due to protozoal infections like Malaria, Kalaazar etc., deficiency diseases like Sprue, Rickets, Beri-Beri etc., or in cases of pregnancy, haemorrhage, etc.



Alembic ELIXIR HÆMO-GLOBIN

WITH LIVER AND STOMACH EXTRACTS

definitely and rapidly increases the number of red blood cells and percentage of haemoglobin.



In all cases of severe primary secondary Anaemias where the haemoglobin content of the red cells is deficient, there is nothing that restores the normal balance, followed by a numerical strength in red blood cells, so quickly and effectively as Alembic Elixir Haemoglobin with Liver and Stomach Extracts. Widely prescribed by thousands of Physicians everywhere in preference to other anti-anaemics and alteratives.

(Also available plain).

ALEMBIC CHEMICAL WORKS COMPANY LIMITED, BARODA

HORLICKS

is prescribed

not only in acute illnesses, but also during convalescence. A combination of milk and the nutritive elements of wheat and malted barley, it forms a partially predigested, easily assimilated diet which places no strain on the digestive powers of the patient.

Horlicks contains protein and protein-sparers in well balanced proportions: it is energising and body building, and is well suited for inclusion in the diet of those who are likely to be easily tired and fatigued, and for whom frequent feeding may be desirable.



DOCTORS Wanted!

In this grim struggle for freedom, you as a doctor have an important role. You relieve the sufferings of the sick and the wounded, save thousands of lives and bring hope and courage to the fighting forces.

MEDICAL LICENTIATES REQUIRED FOR THE EMERGENCY BRANCH OF THE INDIAN MEDICAL DEPARTMENT (INDIAN CADRE)

AGE LIMIT:

35 years' age limit has now been raised to 50 years.

RATES OF PAY:

Jemadar—Rs. 125 to Rs. 195 p.m. Subadar—Rs. 210 to Rs. 225 p.m. Sub-charge pay when holding sub-charge of a military hospital from Rs. 15 to Rs. 40 p.m. Free accommodation and rations or compensation in lieu, free water and lighting. Free accommodation for families except during training period and also free water and lighting when the officer is on field service.

ADDITIONAL CONCESSIONS:

Preferential treatment in connection with recruitment to Civil Medical Departments after the war, reservation of a certain percentage of appointments in Civil Departments for those who have served in the army. In case of Government servants, grant of lien in Civil, confirmation in a civil appointment on the occurrence of a suitable permanent vacancy,

period spent on military duty to count in full towards pay, promotion and pension in Civil Department and also for accumulation of leave under Civil rules. Similar concessions for employees of local bodies who volunteer for army service are under consideration.

DISABILITY AND FAMILY PENSIONS:

An assistant Surgeon who is pronounced permanently unfit for general service owing to a disability attributable to field service and assessed at 100 per cent may, at the termination of his service on account of such disability, be granted a total pension of Rs. 60/- per mensem if he is a Jemadar, and Rs. 85/- if he is a Subedar.

The heir of an Assistant Surgeon who is killed in action or dies of wounds received in action is eligible for the grant of a monthly pension of Rs. 50/- if the Assistant Surgeon was a Subedar and Rs. 28/- if Jemadar. In addition, the heir of a Subedar is eligible for the grant of a gratuity of Rs. 1,200/-

**YOUR OWN COUNTRYMEN, GALLANTLY
FIGHTING ON EVERY FRONT NEED YOUR HELP.**

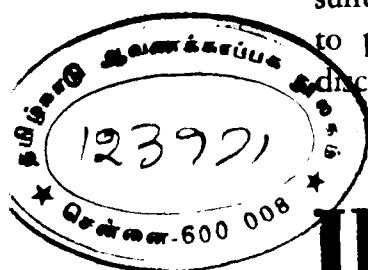
Enlist Now.

Detailed particulars can be obtained from:

PROVINCIAL ADMINISTRATIVE MEDICAL OFFICERS or THE DIRECTOR-GENERAL,
INDIAN MEDICAL SERVICE, SIMLA / NEW DELHI.

Doctors are human!

The lay public seldom show much consideration for medical men, that is, in the exercise of their profession. Calls at all hours of the night and refusal to accept errors in diagnosis are all too common. Patients even make no allowance for the doctor's natural enthusiasm when new methods of relieving suffering comes to his notice. And yet how easy it is sometimes to pass over the old and tried prescriptions when the new discoveries are favourably reported on!



HALL'S WINE



This tonic restorative is compounded from an original formula of an English doctor; it is based on a sound red wine, of full character, extra rich in iron salts, with added medicaments which greatly increase its calorific value. This tonic is assimilated without digestive activity, it improves the general metabolism and rapidly increases the haemoglobin content of the blood. A prescription of Hall's Wine has thus a dual effect:

* *physically*, it assists a weakened digestion, provides energy and tone and improves the circulation of the blood while enabling it to elaborate fresh haemoglobin.

* *in treating nervous cases*, the stimulus provided by Hall's Wine and its pleasant taste help to convince the patient of his powers of rapid recovery.

Distributors: J. HALLEY & CO., LTD.

P. O. Box 133,
Calcutta

P. O. Box 84,
Lahore

P. O. Box 34,
Karachi

P. O. Box 466,
Bombay

B.W. 1719

Guaranteed Harmless Treatment LEUCODERMA & LEPROSY

The suffering public know this full well—so also the Medical world about our success.

Dr. I. Sreeramulu, M. B., F. R. S. (Cho.),
Representative to the All-India Leprosy Association:—Did good results where other remedies failed.

Dr. B. Gopal Rao, B. Sc., M. B., Bangalore:—
We have found very efficacious.

45 days' internal and external Specifics including those for fumigation and bath Rs. 10 per full set.

30 days' internal and external Specifics for Leucoderma (white patches) Rs. 7-8-0 for full set.

V. P. Charges Extra.

BEHAR CHEMICAL WORKS

BHAGALPUR

Madras Agents:

Messrs. DADAH & CO., and APPAH & CO.

**THE SOUTH INDIAN EYE LABORATORY,
CHODAVARAM (S. India)**

PRICE LIST

EYE OINTMENTS	1 oz. Collapsible Tubes	Glass Bottle with W. M. Screw Top	1 oz. Phial
	Rs. A.	Rs. A.	Rs. A.
Atropine ..	2 4	2 2	2 0
Atropine and Dionine ..	2 8	2 6	2 4
Bichloride of Mercury ..	2 4	2 2	2 0
Copper Citrate ..	2 4	2 2	2 0
Argento Cuprum ..	2 4	2 2	2 0
Dionine ..	2 8	2 6	2 4
Mercurio Chrome & Atropine ..	2 4	2 2	2 0
Neroform ..	2 4	2 2	2 0
Yellow Oxide of Mercury 1%, 2%, 3% ..	2 4	2 2	2 0
Copper Citrate cum Atropine ..	2 4	2 2	2 0
Yellow Oxide of Mercury cum Atro. ..	2 4	2 2	2 0
Dionine cum Atropine ..	2 4	2 2	2 0
Anti-Leucoma ..	2 8	2 6	2 4
Anti-Bacterial ..	2 4	2 2	2 0
Sulphanilamide cum Atropine ..	2 4	2 2	2 0
" " Dionine ..	2 8	2 6	2 4
" " Zinc ..	2 4	2 2	2 0
" " Copper ..	2 6	2 4	2 2
" " Argentum ..	2 6	2 4	2 2
Sulphapyridine ..	2 4	2 2	2 0
Sulphathiazole ..	2 4	2 2	2 0
Anti-Corneal ulcer ..	2 2	2 6	2 4
Anti-Conjunctivitis ..	2 6	2 4	2 2
Anti-Keratitis and Pannus ..	2 8	2 6	2 4
Potargol ..	2 8	2 6	2 4

ABSOLUTE DEPENDABILITY

We have much pleasure to announce that only Bengal Immunity SERA, being found upto the standard in accordance with the Therapeutic Substances Act, are being purchased by the Government of India.

Besides SERA other products of Bengal Immunity—namely:

Pituitary,
Quinine Bi-Hydrochloride,
Bi-Hyperbismuth,
Bi-Phlogiston,
Gum Saline, &c., &c.,

have also been found up to the standard by all tests and are being used by the Government of India.

BENGAL IMMUNITY SERUM AND VACCINES

stand for

CORRECT POTENCY, RELIABILITY
and
HIGH STANDARD

Extract from Reports on

**BENGAL IMMUNITY
TETANUS ANTITOXIN**

* * *

The unitage of the Serum as estimated is
7,000 Int. units per c.c.

* * *

Extract from Reports on

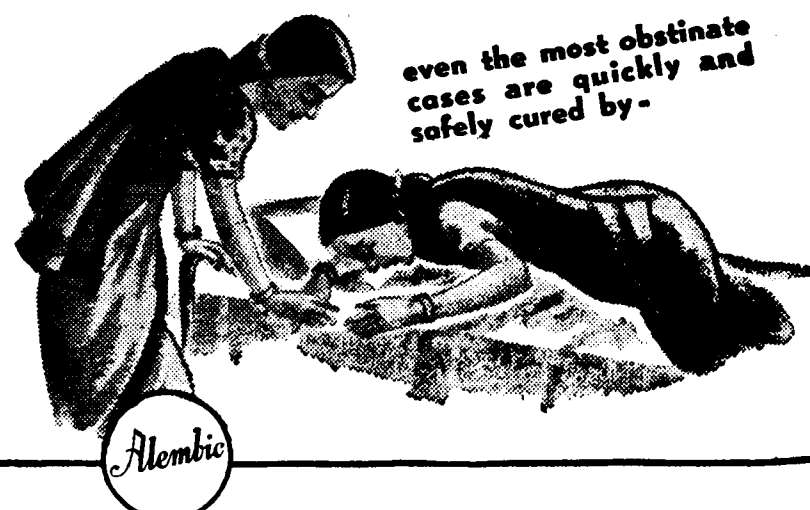
**BENGAL IMMUNITY
CHOLERA VACCINE**

* * *

The Results indicate that the Vaccine was prepared from suitable strains of Cholera Vibrios, that the bacterial content is appropriate and that the vaccine is sterile.

The result may therefore be considered as satisfactory.

FUNCTIONAL DISORDERS in WOMEN



even the most obstinate cases are quickly and safely cured by -

ALETRIS ELIXIR

A powerful uterine tonic and sedative anodyne for Ovarian and Climateric disorders.

Marked success attends the use of ALETRIS ELIXIR, a uterine tonic of highest therapeutic value in the treatment of ovarian and climateric disorders. Combining as it does, the potent action of vegetable principles, haemostatics, vasoconstrictors, sedatives and general tonics, it 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 represents:		
Ext. Aletris Liq.	7.2	Minims.
.. Shatevari Liq.	6.0	"
.. Ashoka Liq.	6.0	"
.. Ashwagandha Liq.	6.0	"
.. Glycyrrhiza Liq.	3.0	"
.. Viburni Prunifolia Liq.	7.2	"
.. Hydrastis Liq.	3.0	"
Tinct. Cannabis Indica	3.6	"
Potash Bromide	4.5	Grains.

ALEMBIC CHEMICAL WORKS COMPANY, LIMITED, BARODA.