

Telegrams: "DASGOWD"

Telephone: 100

N. Dasai Gownder & Co.,

**CHEMISTS & DRUGGISTS, PROVISION & GENERAL MERCHANTS,
COIMBATORE.**

◆

Agents for: Meridian Watches, Tissot World Famous Anti Magnetic
Watches & Omega Watches.

Stockists of: Favre Leuba's Watches, Clocks & Time-pieces.

Suppliers to HOSPITALS, ESTATES, SANATORIA
AND NURSING HOMES.

Direct Importers, Wholesale & Retail Stockists of:

Drugs and Chemicals, Patent Medicines, Vaccines,
Sera and Biologicals,
Veterinary Products, Surgical Instruments,
Hospital Requisites,
Surgical Dressings, Rubber Goods,
Infants' & Invalids' Foods and practically
all requirements of Medical Profession.

Special Rates for Medical Profession

Prompt Execution of Mofussil Orders

'NOVARSENOBILLON'

TRADE MARK

BRAND

Neoarsphenamine

'NOVARSENOBILLON' brand neoarsphenamine is the drug of choice in primary and secondary syphilis. It is of value also in later stages of the disease after preliminary treatment by bismuth or mercury. 'NOVARSENOBILLON' is specific in the treatment of yaws and rat-bite fever.

SUPPLIES

In evacuated ampoules of :

0.15 gm.	0.45 gm.	0.75 gm.
0.30 gm.	0.60 gm.	0.90 gm.



MAY & BAKER LTD. Dagenham
Distributed by MAY & BAKER (INDIA) LTD.

In Entamoebiasis
ALBERT DAVID'S
SIDO-ENTERIN

5:7 Di-iodo-8-hydroxyquinoline
containing about 64% of iodine.

The di-iodo derivate of 8-hydroxyquinoline has been accepted by the Council of the American Association as a remedy in intestinal infections, and included in N. R. R. 1945, p. 270, as "an antiprotozoan agent for use in amoebic dysentery and in the treatment of trichomonas hominis (intestinalis) infections".

Indications:

All stages of amoebic dysentery,
acute and chronic;
balantidial infections,
lambliasis, colitis,
summer diarrhoeas.

ALBERT DAVID LTD.
15, CHITTARANJAN AVENUE CALCUTTA

BOMBAY:
POST BOX 1104.

MADRAS:
2/27, BROADWAY. 128, DAKSHINAMURTHY ROAD, MAHAL.

NAGPUR:

Control of Hypertension

Successfully achieved with

RALFEN

B. C. P. W. BRAND

STANDARDIZED EXTRACT OF RAUWOLFIA SERPENTINA

- REDUCES HIGH BLOOD-PRESSURE
- ACTS AS A SEDATIVE TO NERVOUS SYSTEM
- USEFUL IN INSOMNIA, EPILEPSY Etc.
- INDICATED IN MENTAL DISORDERS OF MANIACAL TYPE

Supplies: Liquid Extract : In one ounce phials.
Tablets of 5 grs.: In bottles of fifty.

In Anaemia and Debility

B. C. P. W.

HEPACIMA

THE "LIVER AND IRON" TONIC

Reinforced with

COPPER, MANGANESE, VITAMIN B₁ AND NICOTINIC ACID

●
RESTORES HEALTH AND STRENGTH
THROUGH REGENERATION OF BLOOD

●
AN ANTIANAEMIC RECUPERATIVE
BASED ON RATIONAL THERAPY

●
Literature on Request

BENGAL CHEMICAL & PHARMACEUTICAL WORKS, LIMITED.,
CALCUTTA :: BOMBAY

Agents: N. DASAI GOWNDER & CO., Bunder Street, MADRAS.



PHENASCODIN

Composition: Each tablet of Phenascodin contains acid acetyl-salicylic 4 grs., codeine phosphate 1/6 gr., and phenacetin 4 grs.

Indications: Headache, toothache, neuralgia and all kinds of pains, influenza and cold.

Detailed literature and free medical sample on request.

CIPLA, BYCULLA, BOMBAY.

ALL YOUR PATIENTS

WILL READILY
ACCEPT & ENJOY

HEMOBRON

(Oral Liver Extract)

HEMOBRON with B Complex

(Liver Extract Injectables)

SHATAVARI CORDIAL

with Calcium & Vitamin D (Uterine Tonic)

ELIXIR NEO CODEINAL

CALCIROL Ampoules & Tablets

Etc., Etc.

Manufactured by:

Dr. KULKARNI'S LABORATORIES,
BOMBAY 12,

MANUFACTURERS OF PHARMACEUTICAL SPECIALITIES SINCE 1918



Enquiries to: . . .

DISTRIBUTORS:

THE PHARMACEUTICAL CORPORATION,

GAJANANA BUILDINGS,

SULTANPET — BANGALORE CITY.



Be on the lookout. Something might be wrong with its Liver—possibly an enlarged condition.

RECOGNISE THESE SYMPTOMS EARLY
Occasional rise in temperature, constipation or diarrhoea or vomiting, loss of appetite, abdominal distension, general dullness and peevishness.

PROMPT ATTENTION SAVES
At the first signs of trouble, give JAMMI'S LIVER-CURE. It saves anxiety, trouble and expense and will remove the risk of the case getting too far advanced.



JAMMI'S LIVER CURE

For Infantile Liver and Spleen Enlargements
Sold Everywhere

CONSULT:
JAMMI VENKATARAMANAYYA & SONS
Livercure Clinic & Office, Mylapore, Madras or
Big Street, Kumbakonam or Teppakulam, Trichinopoly, or
Arcot Srinivasachary St, Bangalore City

Traco's LIVER EXTRACT

A concentrated oral liver preparation
Containing IRON & VITAMIN B COMPLEX
For General Debility, Pernicious & Secondary Anaemias,
Loss of Appetite, Sprue Etc., Etc.

ASTHMINIDINE

Will be found to be of great value in case of
BRONCHIAL ASTHMA & ALLIED CONDITIONS.

We Also Manufacture All Standard Injections.

TRACOBAR PHARMACEUTICALS LIMITED,
MANUFACTURING CHEMISTS,
COIMBATORE.

COIMBATORE CHEMICALS & PHARMACEUTICALS LTD.,

Registered Office: R. S. PURAM POST, COIMBATORE.

TELE { PHONE: 244.
GRAMS: "VEDA".



BRANCHES: { R. S. PURAM
GANDHIPURAM
COIMBATORE CITY

Wholesale Stockists & Retail Dealers of:

All Medicines, Chemicals,

Pharmaceutical Specialities and Allied Products.

DISPENSARY OPEN 8 A. M. TO 8 P. M. (DAILY)

PRICES CHEAP, COMPETITIVE AND CONTROLLED.

Trial Orders Solicited.

TELEGRAMS: "DASGOWD"

TELEPHONE No. 100

N. DASAI GOWNDER & CO.,

DISPENSING CHEMISTS & DRUGGISTS, PROVISION & GENERAL MERCHANTS,
COIMBATORE.



MANUFACTURERS:
QUALITY AERATED WATERS

AGENTS FOR:
MERIDIAN WATCHES, TISSOT WORLD FAMOUS
ANTI-MAGNETIC WATCHES & OMEGA WATCHES

STOCKISTS OF:
FAVRE-LEUBA'S WATCHES, CLOCKS & TIMEPIECES

Wholesale and Retail Stockists of:

PRODUCTS OF

BENGAL CHEMICAL AND
PHARMACEUTICAL WORKS LTD.
BURROUGHS WELCOME & CO.
ABBOT'S LABORATORIES
G. W. CARNICK
ALLEN AND HANBURY'S LTD.
CROOKE'S LABORATORIES
UPJOHN COMPANY
BRITISH DRUG HOUSES LTD.
EVAN SONS LESCHER & WEBB LTD.
CONTINENTAL DRUG CO.

*And Various Other Reputed and Standard
Indian and Foreign Manufacturers.*

TEL. ADDRESS: KASINATHCO.

KASINATH & CO.

CHEMISTS & DRUGGISTS

OPP: MUNICIPAL OFFICE

COIMBATORE

Dealers in:

- DRUGS
- PATENTS
- SURGICAL INSTRUMENTS
- TOILET REQUISITES Etc.

Special Rates for Medical Profession

TRIVEDI PHARMACY,

CHEMISTS, DRUGGISTS AND GENERAL MERCHANTS,
ST. MICHAEL'S EMPORIUM, COIMBATORE.

The cheapest and most dependable
house for all Drugs, Chemicals,
Patent Medicines, Medical requisites,
Surgical appliances, Children's and
Invalid's Diets — Rubber goods,
Toilets etc.

*

All Sera and Vaccines are well stocked

*

Special Rates for Medical Profession

SERVICE IS OUR MOTTO

For Calcium Deficiency

CALCIFERRO
BEST TONIC FOR CHILDREN



BLOOD-IN-DRAKSHA

ENRICHES BLOOD AND RESTORES ENERGY

A BOON TO EXPECTANT & NURSING MOTHERS.

Manufacturers:

BLOOD-IN-DRAKSHA LABORATORIES,
KOTTAYAM.

Stockists: KASINATH & CO., COIMBATORE.

OPTICIAN BY APPOINTMENT



TO
H. H. THE MAHARAJA OF COCHIN

AND

TO

HIS EXCELLENCY
THE BISHOP OF COIMBATORE

TO

HIS EXCELLENCY
THE BISHOP OF MYSORE

VERGIS KETTICARAN

V. KETTICARAN & CO.,

OPHTHALMIC OPTICIANS,

ERNAKULAM, CANTT., TRICHINOPOLY & BIG BAZAAR STREET, COIMBATORE.

THE PIONEER OPTICAL HOUSE FOR GENUINE AND LATEST
STYLE OF OPTICAL GOODS AT MODERATE PRICES.

Concession Rates to Doctors, Students & Missionaries.



Coramine
REGISTERED TRADE MARK

Large doses at the critical moment
Small doses for prolonged treatment

"An effective stimulant or analeptic for emergency use and for assistance in maintaining the circulation in conditions of stress in acute infection is constantly needed.....Coramine seems to be a valuable drug in this connection. I have used it extensively and am convinced of its value on clinical grounds in conditions of circulatory failure in pneumonia with fall of blood pressure, in cases of shock and in some cases of coma."

Lancet, 1934, ii, 760.

 **CIBA (INDIA) LIMITED**
Pharmaceutical Department
P. O. BOX 479 BOMBAY

The Coimbatore District Medical Association

ANNUAL - 1946



CONTENTS.

	PAGE
I Health Protection of the Public by Rao Bahadur Dr. T. S. Tirumurti, B. A., M. B. & C. M., D. T. M. & H. ...	1
II Gastric Carcinoma - A Plea for its Earlier Diagnosis by Dr. U. Mohan Rau, M. S., F. R. C. S., (Eng.) ...	5
III Chronic Abdominal Pain by Dr. R. Subramaniam, B. Sc., M. D. (Madras), M. R. C. P. (London) ...	17
IV Recent Advances in Tropical Medicine by Dr. V. Iravatham, D. L. Sc. (Madras), D. T. M. (Calcutta) ...	27
V Eye Diseases and the General Practitioner by Dr. D. Sundareswaran, M. B., B. S., L. O. ...	37
VI Extracts from Current Medical Journals ...	47
VII Laugh a Bit - If you like ...	55
VIII Reflections and Aphorisms ...	57
IX Editorial ...	59
X Annual Report ...	61
XI List of Members of the Association ...	70
XII List of Medical Practitioners attached to Medical Institutions in the District ...	74
XIII List of Medical Practitioners in the Coimbatore District ...	79



The Coimbatore District Medical Association

ANNUAL - 1946



LIST OF ADVERTISERS.

1. May & Baker Limited, Bombay.
2. N. Dasai Gownder & Co., Coimbatore.
3. May & Baker Limited, Bombay.
4. Albert David Limited, Calcutta.
5. Bengal Chemical & Pharmaceutical Works, Ltd., Calcutta.
6. Cipla, Bombay.
7. Pharmaceutical Corporation, Bangalore.
8. Jammi Venkataramanayya & Sons, Madras.
9. Tracobar Pharmaceuticals Ltd., Coimbatore.
10. Coimbatore Chemicals & Pharmaceuticals Ltd., Coimbatore.
11. N. Dasai Gownder & Co., Coimbatore.
12. Kasinath & Co., Coimbatore.
13. Trivedi Pharmacy, Coimbatore.
14. Blood-in-Draksha Laboratories, Kottayam.
15. V. Ketticaran & Co., Coimbatore.
16. CIBA (India) Limited, Bombay.
17. E. P. B. Manian, R. S. Puram, Coimbatore.
18. D. S. V. & Sons, Coimbatore.
19. Dr. Muthu's X-Rays, Coimbatore.
20. Indo-Pharma Pharmaceutical Works, Bombay.
21. The Pathological Laboratory, Coimbatore.
22. A. Nanjappa & Co., Coimbatore.
23. Wilfred Pereira Limited, Madras.
24. Ram Raj Bros., Coimbatore.
25. Liverites Company, Tanuku.
26. Bengal Immunity Co., Ltd., Calcutta.
27. Clinical Laboratory, Coimbatore.
28. Tracobar Pharmaceuticals, Coimbatore.
29. Murugan Pharmacy, Coimbatore.
30. Krishnaswami & Co., Coimbatore.
31. The Paramount Drug Stores, Coimbatore.
32. Union Drug Co., Ltd., Calcutta.
33. Teddington Chemical Factory, Ltd., Bombay.
34. CIBA (India) Limited, Bombay.

Health Protection of the Public

By

RAO BAHADUR DR. T. S. TIRUMURTI, B. A., M. B., & C. M., D. T. M. & H.,
Retired Principal, Stanley Medical College.

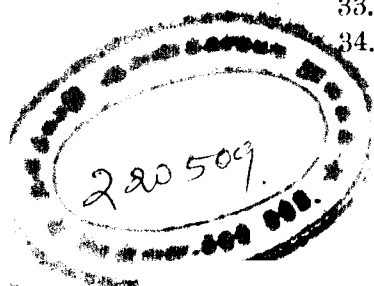
Measures for Health Protection can be classed under three main divisions:— (1) Preventive medicine including health education, health propaganda, medical inspection of schools etc., (2) Curative medicine — provision of dispensaries, hospitals, sanatoria, convalescent centres, diagnostic clinics etc., and (3) Protection of public from Quacks and Secret remedies. Medical education of ancillary medical staff have been undertaken by the Universities and governments and private managements with government aid. But as yet, no attempt has been made (a) to suppress quackery in the medical profession or (b) to penalise the assumption of titles which mislead the public to believe that they have been granted by recognised public bodies or institutions and that they represent genuine or bonafide medical decrees or (c) to bring under cognizable offences the advertisement or sale of secret remedies or patent medicines with a view to exploit the ignorant public into believing that such medicinal preparations have really the compositions and the effects attributed to them.

The following resolution passed unanimously by the All India Medical Conference held recently at Madura is with a view to supply the required personal to bring the provisions of the Drugs Act of 1940 into effect, when the Act is put into force:—

“Whereas the Drugs Act of 1940 will have to be implimented soon by such provinces as have adopted the Act, and whereas there is a shortage of Pharmacists and Public Analysts, competent and qualified, to carry out the rules under the said Act, this conference reiterated its previous resolution on the subject of the establishment of at least one College of Pharmacy in every province at an early date”.

But the Drugs Act gives no protection to the public from the advertisers and sellers of secret medicinal preparations.

The Indian Medical Degrees Act of 1916 has not been successful in preventing the grant of medical degrees, titles, diplomas and certificates by unauthorised and unrecognised bodies or assumption by persons of such titles etc., to dupe the public into believing that they are genuine. Colourable



imitations of genuine or bonafide medical degrees and diplomas are being assumed without let or hindrance. The general public do not know which titles, degrees etc., are genuine and which are not genuine. Various devices are in operation to make the false ones appear to be apparently genuine ones. Therefore, the annual conference of the Indian Medical Association passed unanimously the following resolution requesting the Government of India to amend the Indian Medical Degrees Act of 1916:—

“This conference requests the Government of India to amend the Indian Medical Degrees Act of 1916 in such a manner as to make it unlawful for unqualified persons to use any combination of words or letters, as prefix or suffix to their names, which are intended to make the public believe, in a direct or indirect way that they represent genuine or bonafide medical degrees or diplomas included in the schedules of this Act, and this conference further requests all Provincial Governments to take suitable steps to give effect to the idea underlying this resolution by making such practices cognizable offences”.

The existing Provincial Medical Acts have been designed to register (1) qualified medical practitioners of the Allopathic system and (2) qualified practitioners of the Indigenous systems under certain conditions and (3) in Bengal Homeopathic practitioners, qualified in recognised institutions or otherwise under certain conditions. The above Acts have for their object the regulation of qualifications and registration of the practitioners of the system of medicine contemplated by the respective Act, the encouragement of the study and spread of such system of medical practice, and to regulate the relationships among themselves of the practitioners of the system, and their relationship with the government and the public, who come under their treatment. But none of the existing Provincial Medical Acts can prevent unqualified persons from continuing to be in practice or from entering the profession in the future. The Acts have been framed more in the interests of the practitioners of the respective systems and not with a view to protect the public from the quacks of the profession. Quacks continue to thrive, and bogus Homeopathic, Bio-chemic, Naturopathic, and Indigenous Medicine Institutions — Schools and Colleges — and Dental Colleges are being advertised in increasing numbers.

What is the use of Medical Practitioners' Acts, if unqualified persons continue to flood the profession in increasing numbers as they do at present? Unqualified Legal Practitioners cannot practise. Why should it be different in the case of Medical Practitioners?

There are persons, though very few, among the public who doubt the possibility of eradicating quacks of every system of medical practice by legislative measures. To such doubting Thomases I wish to state that the Travancore Government have set an example by the placing on the Statute Book and the Travancore Medical Practitioners' Act of 1943. It is a composite Act to regulate the practice of the practitioners of all the systems of medicine, including Dentistry, and to prevent any further addition to the present number of unqualified practitioners of those systems. In the course of ten years the number of unqualified practitioners in the State of Travancore will be negligible and by the efflux of time, such practitioners will cease to exist. The day is not far off when Travancore can legitimately boast of having got rid in the state of quacks who can play, consciously or unconsciously, ducks and drakes with lives of people. Travancore has led the way. Will the rest of India follow?

The fruit of the Travancore Medical Practitioners' Act will be enjoyed by the public in increasing measure year after year and by the Medical Practitioners as well, because the Act provides for only qualified medical practitioners, whatever system of medicine they may adopt, being permitted to practice in the State of Travancore in future. The Travancore legislature realising the necessity and urgency of such an Act did not take much time in accepting and passing the bill for enactment.

It is the duty of Governments to enact measures for the preservation of high standards in medical educations and practice and to prevent Charlatanism and fraud of all kinds. Travancore has succeeded in the difficult and delicate task of bringing into a composite Act and into a common programme the practitioners of many different systems of medicine.

I wish to draw the notice of the public, members of the legislature and members of the medical profession to the following remarks made regarding the different systems of medicine by Sachivothama Sir C. P. Ramaswami Aiyar, Dewan of Travancore, at the time when he inaugurated the Travancore Medical Council:—

“Such systems have got profound divergences, both of doctrine and of practice, but the idea underlying the minds of the legislators and certainly the mind of the Government was that, however different may be the sources of inspiration for these systems of medicine, and however much they may differ in their methods and conceptions, yet, every system is vitally concerned in

seeing that those practising that system use the best methods they can within the limits set by that system and in accordance with the principles and doctrines of that system, so that it might be open to the practitioners of any system to claim that he is not there as a fraud or a Charlatan but that steps have been taken to ensure that the doctrine which he wishes to bring into operation are those well recognised by a body of qualified experts”.

In my opinion the prevention of quackery in any system of medical practice does not brook of any delay in this country. Steps should be taken immediately to devise ways and means by which quackery can be penalised and provision is made for increasing the facilities for the medical training and education in the systems of medical practice — Allopathic and Indigenous and Homeopathic. In providing such facilities it is hoped that the ultimate goal of an integrated system of medical practice in our country will be kept in view and that no attempt will be made to perpetuate or widen the existing castes in the medical practice of the different systems.

Among the various resolutions passed at the last Annual Conference of the Indian Medical Association at Madura, I consider that in the existing condition of medical practice in our country, the resolution on the suppression of quackery is the most important. It runs as follows:—

“In order to prevent Quackery in any system of medical practice, in the country, this conference urges on the Central and Provincial Governments to prevent any person from practising any system of medicine, unless he possess the requisite qualification, recognised by the respective governments and is registered in the respective medical register or registers and to make it penal for unqualified and unregistered practitioners to practise medicine”.

Human life is sacred. It should not be played with by ignorant persons in the guise of medical advice and help. Let us not be callous to the exploitation of the ignorant public by the uninformed, uneducated, untrained, unqualified quack — “VIDHILEKA VAIDHYUDU” — a person who has taken up to the medical profession because he cannot play on the credulity of the public in any other profession or trade.

From a financial point of view the Government can effect this legislation without any expenditure on their part. I plead that in the programme of the Health Protection of the Public first place is given to the legislation for suppression of Quackery.

Gastric Carcinoma - A Plea for its Earlier Diagnosis *

By

U. MOHAN RAU, M. S., F. R. C. S., (Eng.),
Madras.

We the members of the Medical Profession in general, and the Surgeons in particular, may find cause for satisfaction in the general advance of surgery during the last two decades, but upon this subject of cancer of the stomach, we can look only with gloom. It is one of the *commonest* of all gastro-intestinal carcinomata and though its incidence varies in different countries, it nevertheless occupies this unenviable predominance. Though the commonest, the diagnosis is delayed to such an extent that the *operability* in cases of patients presenting themselves with symptoms, *is lower than with any other growth*. Because of this delay in diagnosis, the *operative mortality is still one of the highest* of any major abdominal operations and the *cure-rate*, among that survive the ordeal, *is one of the lowest in cancer surgery*. Yet, some of us who are entrusted with the relief of this depressing and almost hopeless state of affairs, find an appalling lack of interest and enthusiasm on the part of the public and the profession, in the early diagnosis of this condition — a condition in which early diagnosis alone will salvage many of these victims of an otherwise dire disease.

Within the period that is allotted to me this evening, I do not propose to go into the aetiology, symptomatology, diagnosis and treatment of this disease. In the beginning, I shall briefly enumerate the well-known symptoms and signs of gastric carcinoma. Then, I shall display the prognosis of gastric carcinoma, as it was till very recently. Before I finish, I shall endeavour to place before you a plan of action for the really early diagnosis of cancer of the stomach.

Symptoms and signs: The so-called *classical symptoms* and signs are only too well-known. A carcinoma subject will have epigastric pain. This is slight at first, but gradually increases in intensity. The pain is characterised by its constant presence all through the waking hours and it does not generally have any definite relation to food, though occasionally the pain is aggravated by the ingestion of food. Later on, there is loss of appetite and loss of weight and, some time later, vomiting of foul-smelling coffee-ground material, severe anaemia, and even a palpable epigastric mass.

*A paper read before the Annual Meeting of the Coimbatore District Medical Association on 14th April 1946.

To these general symptoms and signs certain special ones may be added, depending mainly on the situation of the growth in the stomach. Cancers situated at the inlet and the outlet of the stomach declare themselves moderately early by producing obstructive symptoms and a great deal of disturbance, whereas growths in the body of the stomach may be clinically silent and symptomless to the end or may be marked only by vague symptoms until a very late stage in the disease has been reached.

The four main clinical types are:—

- I. The pyloric obstruction type -- due to growths near the pylorus;
- II. The cardiac orifice type — due to growths near the cardia;
- III. The insidious type of cancer — due to growths in the body of the stomach; and
- IV. The “ulcer-cancer” type — due to a chronic gastric ulcer becoming malignant.

I. **The pyloric obstruction type:** Is characterised by:—

- (1) A *short and rapidly progressive* history of dyspepsia, indigestion and continuous epigastric pain;
- (2) Epigastric pain becomes more severe after food;
- (3) At first there is vomiting of small quantity, but later, larger quantities of decomposing food may be ejected out. Due to the presence of altered blood, the vomiting may be coffee-ground in appearance;
- (4) Due to the presence of the obstruction the stomach hypertrophies and dilates; examination of the abdomen may then reveal visible gastric peristalsis, a gastric succussion splash and some times a hard epigastric lump to the right of mid-line.

II. **The cardiac orifice type:** In this comparatively rare condition, the patient complains of epigastric pain particularly in the region of the Xiphisternum in front and interscapular pain in the back, immediately after food is taken, and there may be a sensation of food remaining lodged in the lower portion of the gullet. While at first solids can be swallowed with difficulty, as the disease advances and the stricture tightens, only liquids go through and, later, even this becomes an impossibility and vomiting may be present. Loss of weight sets in fairly early and is very marked. Owing to the similarity of all the signs and symptoms it is often impossible clinically to distinguish this type of carcinoma from a malignant growth of the lower end of the œsophagus.

III. **The insidious type:** The growth being situated in the body, the symptoms are very vague and the patient may complain of lassitude, dislike for food, epigastric discomfort, or heart burn, etc. Later on, anorexia, emaciation, anæmia etc., set in or the insidious disease may manifest itself suddenly and dramatically with acute hæmatemesis or mælæna, or even an acute gastric perforation.

IV. **The ulcer-cancer type:** This, as I have said already, is a carcinoma that develops from a chronic gastric ulcer. In a patient known to be suffering from a chronic gastric ulcer of some years duration, the following symptoms would indicate or at least suggest the possibility that the ulcer has become malignant:—

1. *Loss of periodicity:* Periodicity, *i. e.*, pain for a few weeks and no pain for a few more weeks and then pain again, is found in almost all chronic gastric ulcers. If there is a loss of this periodicity, then suspect a malignant change.
2. *The pain of gastric ulcer* is not continuously present throughout the day and it has a definite relation to food. If there is a loss of this regularity, if the pain becomes more or less continuous and has no definite relation to food as before, then suspect a malignant change.
3. *Anorexia:* Which may be present in the later stages of a chronic gastric ulcer, usually increases when a carcinoma becomes grafted on to an innocent ulcer.
4. *Vomiting:* Which had previously given relief from pain in a benign gastric ulcer, now no longer produces relief in an ulcer cancer.
5. *Loss of weight:* Which was slight before, now increases as the malignant change advances.

Aids to diagnosis: Having thus briefly dealt with the “classical symptoms and signs” of carcinoma of the stomach, let me now pass on to the other accessory aids to clinical diagnosis upon which we used to base the diagnosis of this malignant disease of the stomach.

The first among these will be the Fractional Test Meal. This is characterised by:— (1) *Achlorhydria* — *i. e.*, absence of free acid in the gastric contents; (2) *Increase of total acids* due to stasis and bacterial decomposition of food; (3) *Presence of blood* in almost every specimen syphoned out from stomach, due to continuous oozing of blood from a malignant ulcer; and (4) *Excess of mucus and starch* in the gastric contents.



Fig. I.
Carcinoma Cardia
— Courtesy of Dr. P. R. Rau.

(a) From the region of the cardiac orifice extending on to the oesophagus; (Fig. I).

(b) From the pylorus, with a moderately dilated stomach, behind the growth; (Fig. II) *vide page 9*.

(c) From the body (greater curvature) of the stomach; (Fig. III) *vide page 10*.

The third test is a blood picture. In advanced cases, severe anaemia, generally of the secondary type, but sometimes of the primary type, may be present.

Treatment: What has the surgeon to offer by way of relief, to these cases which have been diagnosed by the clinician who has been helped by his colleagues the Biochemist, the Radiologist and the Clinical Pathologist?

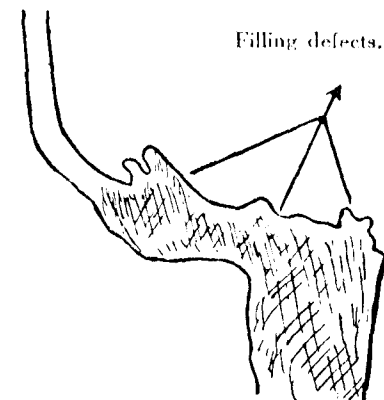


Fig. I - a.

The second test that is very commonly employed is the Barium meal investigation and a "filling defect" is said to be diagnostic of a malignant growth, probably carcinoma. Here are a few pictures showing "filling defects".

The surgeon can cure the patient of his disease, if it is early, and please remember, surgery is the only cure for these patients. If the disease is too far advanced for the surgeon to a cure, he can give good palliation and relieve the patient of a lot of his sufferings.

In carcinoma of the pyloric region, the curative treatment will be a radical gastrectomy which consists in removing the diseased area of the stomach and a good bit of the stomach on the either side of the growth,

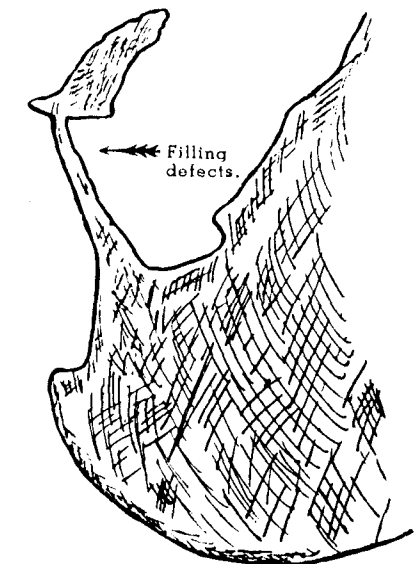


Fig II - a.

Fig. II. Carcinoma — Pyloric region.

together with the lesser and greater omenta. The palliative procedure in an advanced pyloric growth will be to carry out a gastro-jejunostomy, so as to provide nourishment for the patient and relieve him of his vomiting etc. This prolongs life by 6—18 months.

In a growth of the body of the stomach and in an ulcer carcinoma, the curative treatment is again a radical subtotal gastrectomy. In quite a few instances of fairly advanced carcinoma of this type, instead of a subtotal, a

total gastrectomy has been successfully carried out, the continuity of the alimentary tract being restored by an oesophago-jejunostomy (*i. e.*, anastomosis between the oesophagus and the jejunum). The palliative procedure for this type of growth (*i. e.*, where a subtotal or total gastrectomy is not possible) will be a jejunostomy — *i. e.*, feeding the patient through a tub put into his jejunum. This does not prolong life for more than 3—4 months.

In a growth of the cardiac region, the curative procedure will be a total gastrectomy and the palliative procedure will be a gastrostomy.

A question commonly asked is the place of Radium and Deep X-rays in treating this condition. Though a few radio-therapists have claimed occasional good results, the consensus of opinion is that it is a useless form of therapy.

Prognosis: In addition to the treatment of carcinoma of the stomach, I have so far dealt briefly with the symptoms and signs that we, you and I, have been taught to look for in a carcinoma of the stomach and without which, the large majority of us would have hesitated to diagnose carcinoma. It is these symptoms and signs that are still described in the majority of text-books of surgery that the medical students study. What is the result of this teaching? What is the prognosis of this carcinoma, if these are the criteria of diagnosis? I have here the results of three surveys, two extensive surveys from very big teaching hospitals outside India and one from a small series of cases from one unit at the General Hospital, Madras.



Fig. III. Carcinoma — Body of the stomach.
— Courtesy of Dr. P. R. Rau.

CHART I — is a survey of 200 cases of gastric carcinoma (*Fig. IV vide page 11*) by OGILVIE of Guy's Hospital, London. From his survey, you find that out of 200 cases of gastric cancer, that sought admission into the hospital, only 100 were clinically operable. Out of this 100, in only 40, were curative gastrectomies carried out; and only 10 out of this, *i. e.*, 10 out of the original 200 cases, live for 5 years or more.

CHART II — is a survey of 264 cases (*Fig. V — Vide page 12*) by COOPER from New York Hospital; 223 were too advanced for any hope of surgical cure and were doomed to die. In only 41 were curative gastric resections carried out. Out of these 41 cases, only 25 were alive at the end of 3—5 years!

At the General Hospital, Madras, in one Unit, out of 20 cases admitted and diagnosed as carcinoma, a radical operation was possible in only two, and even in these, the local disease was so advanced that I am sure that not one would have been alive at the end of five years!

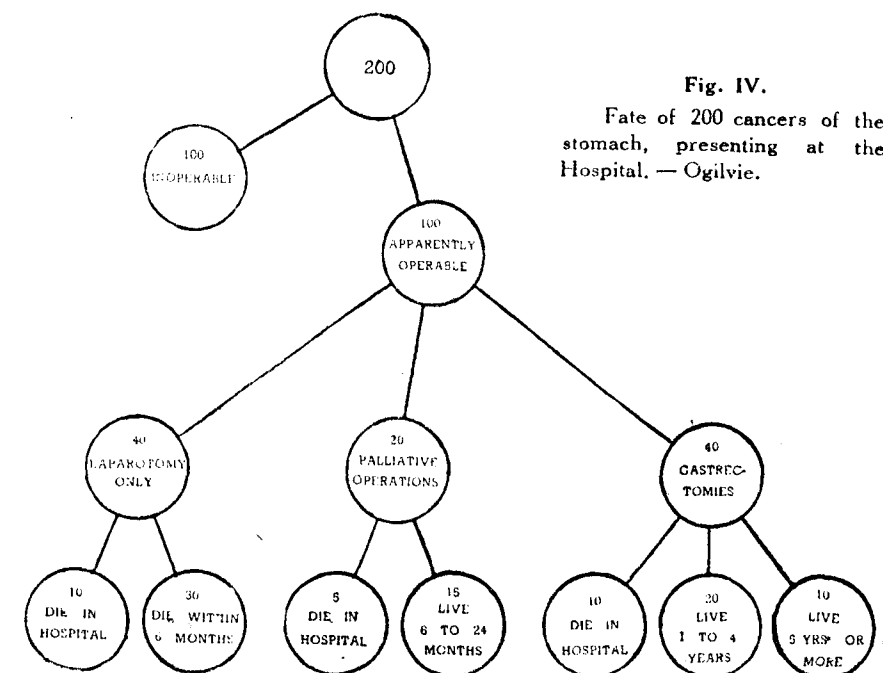


Fig. IV.
Fate of 200 cancers of the stomach, presenting at the Hospital. — Ogilvie.

You will agree with me that this is a tragedy — this gastric carcinoma; that this, what I have depicted here, is an appalling state of affairs; to say the least, a most horrible and sorry plight, in the midst of such happiness and gaiety that is ours to-day in Allopathic medicine.

Who is to be blamed for this shocking state of affairs?

The blame is partly to be borne by the patient and partly, I must confess, by the members of our profession. The *patient* is to be blamed because, in spite of symptoms referable to the stomach being present at some time or other in the majority of patients with carcinoma of the stomach, the patient does not consult his physician for this early enough. This is because there are few organs in the body which the patient feels so well-qualified to treat as his own stomach. In this he is encouraged by the advertisements of stomach remedies which abound around him and by the temporary relief which may come from these even in malignant disease; yes, unfortunately even in malignant disease.

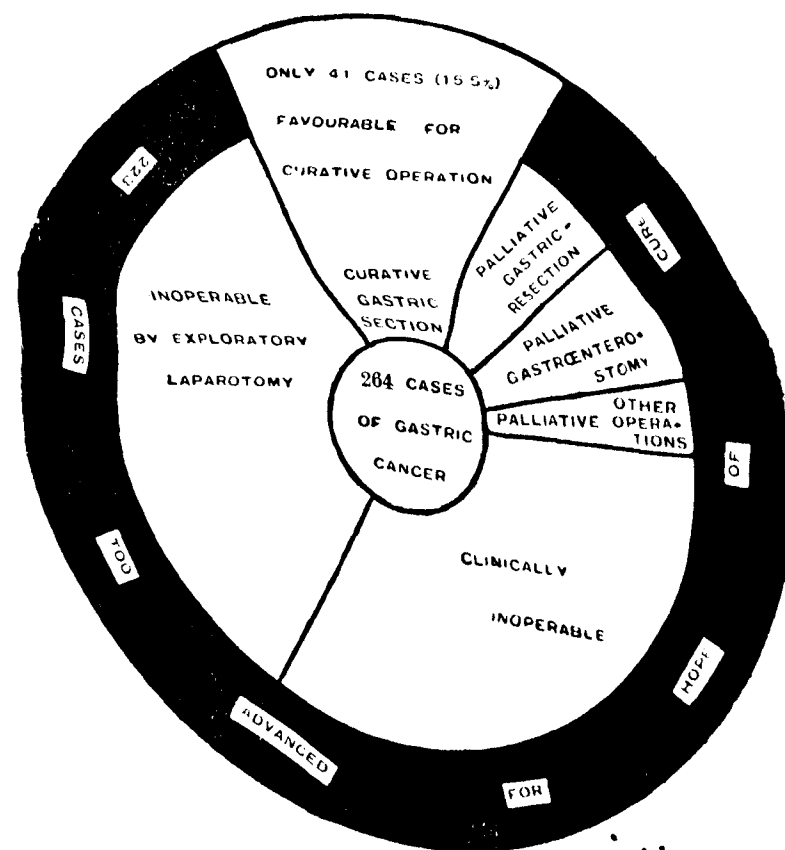


Fig. V.
Observations on 264 cases of gastric cancer. — Cooper.

The medical adviser is to be blamed, in as much as he is thrown off his guard, when the patient first comes to him: (1) because of the vague and

protean nature of many of the early symptoms of gastric carcinoma and (ii) because, unfortunately, he has been taught that carcinoma of the stomach means, constant epigastric pain, loss of weight, anaemia, achlorhydria and a filling defect. The picture of the emaciated, ashen-faced, sunken-eyed old man, who had been exhibited to him as a typical case of gastric cancer is still so vivid in his memory that he, the doctor, does not dare to diagnose carcinoma easily, unless these appearances are present!

What is the remedy for the woeful state? The outlook, generally, speaking, would be vastly better, if certain circumstances could be brought to pass. The problem would be largely solved if every person, at least over the age of 35—40 years, could be induced to submit to routine physical examination and X-ray examination of the stomach, once every 3 to 6 months; the problem would be easier of solution if gastroscopy (*i. e.*, examination of the inside of the stomach with an optical instrument) could be employed as a routine to demonstrate and observe the progress of certain pre-cancerous conditions like atrophic gastritis, chronic gastric ulcer and polyposis of the stomach. These objectives, however, are Utopian and it is merely wishful thinking to believe that they can ever be achieved.

Therefore, we will have to turn to less Utopian and more practical measures. These measures can be grouped under the headings of (A) For the patient and (B) For the Clinician.

(A) **The Patient:** It is a fact that most members of the lay public who are past middle age, consider a mild degree of gastric discomfort to be a part of the normal process of growing older and the words "indigestion" and "dyspepsia" to most minds signify an uncomfortable, but entirely benign process. Yet, in these two words — indigestion and dyspepsia — is the whole story of early gastric cancer symptomatology. The public should be impressed with the dangerous significance of symptoms of indigestion and dyspepsia and they should be asked to report to the doctor at once, particularly, if any one beyond 35—40 years of age.

(1) has an abrupt onset of dyspepsia, when his previous state of health was good;

(2) is losing the sense of well-being following a meal, that was once his and its place is being taken by consciousness of having eaten;

(3) is losing the appetite, or more important, has developed a change in the food desire (*e. g.*, the patient who used to like a particular dish all his life suddenly develops an aversion to it.);

(4) is developing a smaller capacity for food or a sensation of continued warmth and fulness in the epigastric region;

(5) suddenly develops fatigue and depression which continue to progress fast; and

(6) loses interest in his work and in his hobby and is physically unable to carry on without great effort.

All these are particularly ominous if there is a family history of cancer.

(B) The Clinician: To the clinician who has no specific laboratory data, chemical, serological or microscopical — on which reliance can be placed for an early diagnosis, I would strongly commend the following plan of action.

To regard as cancer any indigestion with or without symptoms, which appears after middle life, acutely or insidiously, in a previously well person.

To regard as cancer, acute digestive disturbances within this age period (*i.e.*, after middle life) which are super imposed upon previously existing chronic digestive disturbances and which do not respond promptly (*i.e.*, within two weeks) and permanently to routine measures which have heretofore been successful.

To regard as cancer or highly suspicious of it, such vague symptoms as fatigue, malaise, mental indifference, loss of weight, etc., even though associated gastric disturbances are entirely lacking.

Having thus suspected the dangerous possibilities suggested by the patient's history, the attending doctor should make a tentative diagnosis of carcinoma and proceed at once to prove or disprove it with all the methods at his command.

He should next carry out a thorough physical examination, which will probably do no more than fail to reveal any other cause for the patient's symptoms.

A Fractional Test Meal is then done, keeping in mind its diagnostic limitations. He must remember that though there may be a low or absent free hydrochloric acid in 70 to 80% of early carcinoma, in nearly 20% to 30% the free hydrochloric acid is normal or there may be even hyperchlorhydria.

I would request him to attach great importance to the presence of occult blood in every specimen of the Fractional Test meal as according to our Professor of Biochemistry, this is very strong evidence in favour of malignancy.

The clinician still pursuing his objective, must seek the aid of the Roentgenologist, who in his turn must be very pains-taking and persistent. Instead of waiting for the filling defect to appear, the radiologist must report as malignant, any one of the following conditions:—

(1) Minor, but persistent defects in gastric peristalsis; (2) Lack of pliability of the stomach wall over any area; (3) Obliteration of the rugæ and changes in the normal mucosal pattern.

In addition, the roentgenologist should view with suspicion *all lesions of the greater curvature and the distal 1/3 of the lesser curvature.*

I must stress here that the patient should not be lulled into a feeling of security by a single negative roentgenographic report. The examination must be properly made, *must be repeated at frequent intervals*, and interpreted each time by the same expert radiologist. This method is so accurate that lesions as small as 1 to 1.5 c. m. have been detected by competent radiologists.

To the suspicious clinician, who has sought the help of the bio-chemist and the roentgenologist in his attempts to spot an early cancer, another valuable aid has come during recent years, *viz.*, the gastroscopy. This is a harmless procedure and can be done under local anaesthesia. With this instrument, the greater portion of the interior of the stomach can be viewed with ease and any early lesion can be detected.

It is only by adopting the routine that I have outlined, that we will be able to detect early neoplasms of the stomach and thus improve our operability rate, lower our operative mortality and increase the 5 year and 10 year cures. That I am not idly dreaming is shown by the fact that already in many American and European countries the operability has been increased very much and so has the ultimate survival rate. PACK and LIVINGSTONE have recently shown that by these methods and in cases which were detected and treated when the carcinomatous process was still restricted to the stomach, more than 50% of all patients were alive and well 5 years later. What a contrast to the state of affairs till recently and in our country, even to-day!

I have finished. I hope, I have succeeded in creating in you an appreciation of the dangers of mild digestive symptoms especially after 40 years of age. No really early diagnosis of carcinoma of the stomach is possible until the exact diagnosis of indigestion and dyspepsia is taken up seriously both by the patient and his doctor. In the War against this dread

and sinister disease it may be that our efforts are simply skirmishes on the margin of the battle; but even so, they must be fought with every means at our command and they call for our utmost vigilance and our most persistent effort. It has been remarked that gastric clinicians are of two classes — (1) *Those who are eternally suspicious of gastric cancer and never find it;* and (2) *Those who are never suspicious of it and eternally miss it.*

If during these few minutes of your time that I have taken I have already set in motion, a shift of the majority of your inclinations from the latter category to the category of suspicious clinicians, I shall feel extremely gratified that those few minutes have been well and usefully spent.

References :

1. Boyce — Gastric Carcinoma, J. A. M. A., 1941.
2. Maes — Types of Gastric Cancer, Ann. of Surgery, 1933.
3. Maingot — Carcinoma of the Stomach, Post-Graduate Surgery, 1935.
4. Mullen, T. F. — Cancer of the Stomach, S. G. O., 1941.
5. Ogilvie, W. H. — Cancer of the Stomach, S. G. O., 1939.
6. Payne — Carcinoma of the Stomach, B. J. S., 1935.



CHRONIC ABDOMINAL PAIN*

By

R. SUBRAMANIAM, B. SC., M. D. (MADRAS), M. R. C. P. (LONDON).

I am thankful to you for having asked me to speak to you this evening. The subject of this evening's lecture is a common complaint in any general out-patient clinic. Chronic abdominal pain is essentially a medical problem just as an acute abdominal pain is a surgical problem.

The object of my choosing this particular subject is because one needs very little of external laboratory aids in a large majority of cases and yet I have seen, due to faulty, and more often due to a hastily and imperfectly taken history, needless tests are done and at the end of the investigations, the patient and the clinician are none the better or wiser.

It is worth spending a few minutes to find out whether it is really pain that the patient is complaining of. Some times a burning sensation or a feeling of discomfort may be referred to by the patient as pain. It is also worth noting the expression that the patient uses so that we will not think of organic lesion when the patient uses such expressions as pulling, kicking, crawling etc., which suggests a neurosis. Rarely a burning sensation is described by gastric ulcer patients.

Next it is worth asking the patient whether the pain is inside the abdomen or on the abdominal wall. In the latter case there will be superficial tenderness and soreness. It is not a rare thing for a patient suffering from an extra-abdominal pain to be drugged with alkalies and even needless laparotomies done.

The first thing to be elicited is the duration of the pain. If the pain has lasted for several years it is likely to be a benign condition, more so when it has not caused any loss of weight and the patient has been attending to his work inspite of the pain. The next important thing is the site of the pain. It is always helpful to ask the patient to point with one finger only, the site of the pain. Because of the very large number of peptic ulcer patients that are seen in the out-patients departments, as soon as a patient complains of pain in the abdomen, he is dismissed as a case of peptic ulcer with an alkaline

* Paper read at the monthly meeting of the Coimbatore District Medical Association on 25-5-1946.

belladonna mixture. If only he is asked to show the site of the pain it will be surprising to see how many times the pointing finger points to the left of the abdomen; sometimes it is umbilicus, and at other times it is even the hypogastric region. Surely even a novice in medicine will not be for diagnosing peptic-ulcer when the pain is in the hypogastric region. Apart from the help we get in a gross way, the site of the pain is also helpful in localising the disease.

It is helpful to decide in a case as to how the pain started originally, since at the start the pain is more likely to be typical. If a man says that to start with the pain started 2 to 3 hours after food and was relieved by taking food but afterwards had no relation to food, it easily suggests that one is dealing with an ulcer complication as perigastric adhesion or ulcer turning malignant. Or supposing a man with typical ulcer history says that he had hæmatemesis and subsequently was free from ulcer pain, then the chances are that the hæmatemesis has cured the man of his ulcer and the present symptoms of epigastric distress may not be due to ulcer.

In deciding as to what importance should be attached to the pain, I always ask the patient whether his sleep is disturbed. If pain is sufficiently severe to make a man get up from his sleep night after night, it is not likely to be neurosis and should be considered as organic in origin. These cases are best kept in bed and treated with a strict ulcer diet.

Radiation of the pain as you know gives a clue to the diagnosis, for instance if a patient were to say he has pain the right hypo-chondrium, and pain or discomfort in the right shoulder, the chances are that we are dealing with a case of cholecystitis. At this stage I would like to emphasize that radiation of the pain is due to the nerve distribution. So when a spinal segment is involved due to other causes also, a similar condition with pain at one site with radiation of pain is likely to occur. I would now recall a case to illustrate this point. A rather obese type of woman with pain in the liver area and hectic temperature ranging between 100°F to 103°F was also complaining of pain in the right shoulder. Physical examination showed a just palpable liver and no other abnormality. She did not give any history of dysentery at any time. No history of jaundice either. X-ray of the gall-bladder region failed to show any stones. Bile culture was sterile. Urine was normal. X-ray of the chest on admission was normal. Blood showed moderate leucocytosis with polymorphs predominating. Tentatively hepatitis was diagnosed and the patient was put on emetine 1 grain I. M. daily for

6 days with no benefit. She was then tried on large doses of hexamine and alkalies with no benefit. Then in view of the leucocytosis and the pain in the right hypochondrium we thought of the possibility of pyelitis. This view seemed more reasonable because the nurse brought to our notice that the patient had hæmaturia that morning. It was a very unfortunate event because the woman had her periods four days later and this was only a pilot bleeding. Anyway when a patient with pain, fever and hæmaturia was presented, in spite of the urine culture being sterile, pyelitis was thought of and the patient was put on Sulphadiazine with no benefit. Then blood was tested for agglutination against *Brucella melitensis*, Typhoid, para-typhoid and for Typhus group with negative results. The fever had lasted nearly for 2 months by now and at this stage auscultation of the chest showed broncho-vesicular breath-sounds with fine rales over the left hilar region. This was the 3rd time the patient was being X-rayed and for the first time showed a positive finding, namely an active left hilar flare. Even then it did not explain the pain over the liver area and pain over the right shoulder. We took a skiagram of the spine again and this time it showed a narrowing of the interspaces between the 6th and 7th and 7th and 8th dorsal vertebrae. Apparently the shoulder pain was an unconnected thing which occurs in tuberculous subjects, and caused some confusion in this case by occurring over the right shoulder, for the pain in the right shoulder disappeared spontaneously. With strict bed rest and a few calcium chloride injections I. V., the temperature settled down promptly. She was also put in plaster jacket and in a few days pain over the liver area also lessened greatly. Unfortunately in this case we could not recover the tubercle bacilli from the sputum even after the X-ray chest showed an active lesion. This case amply serves to illustrate the need for the clinician to be on guard and not to be carried away by just one or two symptoms or signs.

Symptoms accompanying the pain are worth noting. For instance nausea, vomiting and jaundice accompanies gall stone colic. Sometimes a gall stone patient complains of pain or rawness when he puts on his belt or in the case of a woman on tying the saree tightly. Sometimes a journey in a country cart makes the symptoms worse in gall stone colic and in renal lithiasis. Pain relieved by vomiting suggests gastric or duodenal ulcer. At this juncture it is useful to ascertain what relieves the pain, and what remedies have been tried and with what result. This is of value in coming to a conclusion about the nature of the disease, as also as to what remedies to avoid. Nothing seems to take away the confidence of the patient as to

prescribe a drug which he has tried without benefit. If morphine is the only drug which will give relief then the trouble is likely to be organic and if of a colicky nature it is likely to be a gall stone or renal stone. Gall stone colic it is said, is more agonising than the labour pain, by those who have experienced both. Pain that is relieved by an enema is likely to be in the colon. I know a gentleman who used to get an agonising pain in the left iliac fossa periodically at intervals of a few days to a few months. The shortest interval being as short as ten days and the longest interval of 3 months. The pain had no relation to food. Neither was it made worse by eating, nor relieved by starving. Soap and water enema with a very good result, did not give any relief either. Patient always got relief 2 or 3 hours after taking a mild purgative like Magsulph or Kruschen salt which caused him to have 2 or 3 liquid motions. The pain was not in the stomach or duodenum as it had no relationship to the intake of food, nor in the colon as it was not related to bowel movement by enema but in the intermediate portion namely the coils of the small intestines. This gentleman had suffered from this kind of pain for the last 20 years. The only positive history I could get was that the patient had a very severe type of dysentery, probably bacillary as judged from the symptoms. A roentgenogram with barium meal series showed coiled up appearance of the small intestines in the left iliac fossa. Adhesions as you know is not likely to cause pain, but is likely to cause symptoms of intestinal obstruction. So I had the barium meal series repeated and screened the patient; and during screening I found a definite annular constriction in a portion of the small intestines in the left iliac fossa and around it adherent, a circular loop of the gut. Evidently this was a portion of the gut which got periodically inflamed and caused pain. This also explained how purgatives relieved him of his pain. After seeing this annular constriction I prescribed for him bellodonna and castor oil emulsion with some relief but not as much as he used to get from a saline purge. Then I changed to Neuro-trasentin (Ciba) with very good results. The other less powerful anti-spasmodics like progtigmin, Spasmindon and Bellergal did not give any relief. The ideal thing in this case was to do a resection of the constricted area of the gut and anastomose the rest of the intestines. This I would have advised at a younger age but this patient being past seventy, I did not feel justified in advising a major operation. This very same patient came to me with severe burning sensation in the epigastrium. Even on repeatedly asking whether there was pain he denied any type of pain. Thinking of the possibility of hyperchlorhydria I put him on alkalis with no benefit. Then a fractional test meal was done which showed plenty of mucus and absolutely no free acid. Then I put him

on sodabcarb one teaspoonful in a cup of warm water first thing in the morning and acid hydrochlor dil with syrup aurantii after the principal meals and a bland diet. This as the patient himself put it to me gave complete control over his new symptom but left untouched his old symptom. This case shows that we have to be on the watch for any fresh development in a patient under our care and not just dismiss him as a neurotic.

When the pain arises from the digestive tract it must bear some relationship with the intake of the food or the digestion or the evacuation of the bowels. If a pain has no relation what-so-ever with these processes the cause for the pain must be from outside the digestive tract. When pain comes once in a way, apparently when the patient is quite healthy the probability of allergy is worth bearing in mind. This pain due to allergy may be sufficiently severe to make the patient take to bed, or so light, as to be only of a nuisance value. The allergy may be due to such common articles of food as milk, eggs, vegetable oils, onion and wheat. The common food stuffs to which I have found a large group of persons are allergic are prawns, crabs, and oysters. Fortunately not common articles of Indian diet. Quite a number of persons are allergic to bitter-gourds. When puzzled about a case of allergy, the history of a near relative suffering from Asthma, Eczema or Urticaria is of confirmatory value. The symptoms in these cases come on half to three hours after taking the food and lasts for one or two hours. The treatment in these cases is to avoid the foods to which the patient is sensitive. If a person says he can take fried egg but not the boiled egg it is not a question of sensitiveness so much as likes and dislikes, and this patient will not come to grief by taking eggs. Whereas a truly allergic person gets symptoms of gastric upset on taking eggs in any form and even when concealed as in custard powder, cake etc. To identify the food to which the patient is sensitive a simple diet can be given to start with and a diary maintained as additions are permitted. If a particular food upsets, then it is withheld for a few days and repeated at intervals of a fortnight. If he is really allergic then when each time that food is introduced he gets gastric upset. This repetition of the experiment is very essential in order to eliminate neurosis and psychological factors.

Now we will take up for consideration pains which are due to extra-abdominal factors causing abdominal pain. Broadbent's dictum "When a patient complains of abdominal pain examine the heart and when he complains of precordial pain examine the abdomen", should be remembered by every clinician. A few years ago I saw a case in which a boy of 12 years of age

complained of pain in the abdomen and was prescribed round-worm treatment. The boy came again and the treatment was repeated twice. When I saw the patient after a few days the pain still persisted. He had an enlarged tender liver, nearly three fingers breadth below the costal margin and further examination showed markedly dilated heart with a pre-systolic murmur in the mitral area. On another occasion I saw a young man admitted as left lobe liver abscess. He had enlargement of the left lobe mainly, nearly five fingers breadth below the costal margin and it was tender. He was also running a temperature of 102° F. Further examination showed a very wide heart boundary, feeble heart sounds and effusion in the left plural cavity. Pericardial effusion was thought of in this case, and when a needle was put into the pericardium nearly 30 ozs. of clear, straw coloured fluid was aspirated. This fluid on guinea pig inoculation showed tubercles. Many cases more could be cited and I am sure every one of you would have come across similar ones.

Pain in the abdomen due to systemic infections should be borne in mind. It is only very recently that I saw a gentleman complaining of pain in the epi-gastrium with complete loss of appetite. He was only 36 years of age, and so the possibility of carcinoma did not arise. On examination he had a very big spleen extending upto the umbilicus and liver four fingers breadth below the costal margin. Blood smear showed typical appearance of chronic myeloid leukaemia. It is unfortunate that text-books do not mention this symptom of complete lack of appetite in chronic myeloid leukaemia. This symptom has been observed in nearly all the cases of chronic myeloid leukaemia at the Bernard Institute of Radiology. It clears up after 3 or 4 deep X-ray exposures. Probably pain was produced in this case by peri-splenitis. Talking about peri-splenitis, it occurs in Kala-azar and rarely in Malaria. In these fevers peri-hepatitis occurs also. During April to June in the year 1942 when a large number of Burma evacuees with Malignant-tertian infection were in the Government General Hospital, a common complaint was pain in the right hypochondrium. Only in a very small percentage of them the liver was enlarged. Spondylitis meningo-vascular syphilis and chord tumors may occasionally be the cause of pain in the abdomen. One patient was being treated for nearly three months for duodenal ulcer, when over-night he developed paraplegia with incontinence of urine. C. S. F. in this case showed typical Froin's syndrome. Lipiodol was put in by cisternal puncture and showed extensive meningeal adhesions extending from the 4th dorsal vertebra to the very end, as shown by the lipiodol by being held at various places right along.

I do not propose to go in detail about the multifarious causes of pain in various regions, but will mention only a few of them and cite a few puzzling cases. Hamilton Bailey's dictum "The abdomen is a temple of surprise" is a common experience. When there is a pain in the epigastric region the probable cause may be extra-abdominal such as spinal caries, pleurisy, intercostal neuralgia or a small epi-gastric hernia at onset, or intra-abdominal due to lesions of stomach, or duodenum or gall-bladder or liver. The extra abdominal factors are common to all the other regions of the abdomen. The gastric disorders likely to cause pain are gastritis, gastric ulcer, or rarely gastric carcinoma. In gastritis the pain may bear no relationship to food, but history may show dietetic indiscretion. "Not knowing when to eat, what to eat, and how to eat" are the causes of gastritis. Rarely alcohol and excessive smoking or chewing of tobacco may be a cause. In gastric ulcer the typical story of food, pain, relief, gives away the diagnosis provided there are no complications as malignancy setting in or adhesions outside the ulcer with neighbouring viscera when the pain becomes continuous. With adhesions to neighbouring viscera, the clinical symptoms become difficult to follow as they get modified by the organ to which the stomach has become adherent. I saw a man with a history of excruciating pain in the epigastrium occurring particularly in the early hours of the afternoon and in the night, though at no time was he completely free from pain. When the pain was excruciating, he used to sweat all over the body. With vomiting there was relief from pain and sweating. Barium meal did not reveal any abnormality. F. T. M. showed acid within normal limits. In view of the profuse sweating, gastric ulcer, with adhesions to some sympathetic plexus was diagnosed. When the abdomen was opened it showed a gastric ulcer adherent to the head of the pancreas. Partial gastrectomy was done and now for a period of four years there is complete relief from pain as well as from sweating.

Gastric carcinoma are of two types. The one in which ulceration occurs, causes pain and discomfort and is likely to attract clinical attention and the other type is the schirrous type as though it has come on suddenly when symptoms of obstruction, or extreme emaciation with a lump in the abdomen is the presenting feature. In gastric carcinoma, causing pyloric constriction, loss of appetite is a marked feature, and the visible peristalsis is very poorly marked, even while Barium meal screening shows nearly $\frac{3}{4}$ ths retention at the end of 24 hours.

I wish to mention at this stage gastric crisis in tabetics. Tabes is not so rare as we are made to believe, and should be borne in mind, so that it will

not be missed when we come across one. This is attended with severe epigastric pain and may occur before other classical symptoms of *Tuberculosis* as ataxia and loss of deep reflexes occur. The characteristic features are sudden onset of pain, attended by urgent vomiting. There is no rise in temperature and the blood-pressure is raised. Barring lead colic in no other acute abdominal pain is the blood-pressure raised. History of syphilis is constant.

Duodenal ulcer with adhesion is likely to cause pain in the epigastric region. Gastric and duodenal ulcers are benefitted by bed rest and modified Sippy's diet. If on ulcer diet there is no benefit, then we are not dealing with a simple duodenal ulcer or gastric ulcer but we are dealing with an ulcer with adhesions outside, in which case medical treatment is of no avail. In ulcer with peri-gastric adhesions, barium meal series and screening at different angles show persistent deformity in the stomach or duodenal outline, whereas in ulcer with spasm the irregularity disappears.

Talking about gastric disorders I wish to quote William J. Mayo's saying "The stomach is often like the fire-box, reporting trouble when the fire is elsewhere in the body", and Sir Moynihan's saying "The stomach is so sensitive an organ, that it cannot refrain from weeping when its neighbours are in trouble and its voice is sometimes so loud as to drown the voice of the real sufferer". So we must look for trouble elsewhere even when symptoms are suggestive of a gastric disorder.

Liver and gall-bladder affections may cause pain in the epigastrium, particularly cholecystitis and left lobe abscess liver. We are so much impressed about liver abscess occurring in the right upper quadrant, that when the abscess occurs once in a way in the left lobe, we miss the possibility of the liver abscess. One patient came to the out-patient complaining of severe and excruciating pain in the epigastrium with cold sweat and in a state of shock. On examination he had a just palpable liver and the abdomen was soft and freely moving with respiration. There was no history of dysentery. All the same I put a provisional diagnosis of hepatitis and admitted him for observation. A few hours later he recovered from the state of shock, was ambulant and free from pain. On further questioning he gave a history of pain, felt in the epigastrium which was made worse 2 to 3½ hours after taking food. In view of the history of pain in relation to food we had a barium meal series done to visualise the duodenal ulcer, but found duodenal cap was normal and no ulcer in the stomach either. Fractional

test meal showed low acid. A few days later the patient went into a state of shock and physical examination failed to reveal anything abnormal excepting a feeble thready pulse and weak heart sounds, both of which could be explained by shock. The patient recovered from this attack also. We asked our consulting surgeon to open him as a case of peri-gastric adhesion. In view of the slight enlargement of the liver and tenderness of the same he wanted the patient to have course of emetine. Patient was given emetine 1 grain I. M. daily and on the third night the patient went into a state of shock and died. Post-mortem was done in this case and it revealed an abscess in the left lobe which had burst into the peri-cardium. Probably there was a mild leak into the peri-cardium on the first two occasions and on the third occasion it must have been massive thereby causing the death of the patient. A thorough examination failed to show ulcer in the stomach or duodenum. Probably the pain periodicity was due to pyloroduodenal region filling up and pressing on the abscess. Jaundice though not mentioned as a symptom in abscess liver occurs fairly frequently.

Sometimes liver may enlarge first before symptoms referable to the heart are evident, particularly is this the case with adherent pericardium and tuberculous pericarditis. I know a case with a big liver which was tender, in a girl of about 15 and was for some time a puzzle. Every investigation was a blank for some time. At the end of two months a second X-ray chest showed a markedly dilated heart with effusion. On going back and re-assaying we found two features which could have helped us earlier. (1) A history of undue breathlessness on exertion, though patient was not breathless either at rest or while walking in the wards and (2) History of contact with an open case of pulmonary tuberculosis. This girl's sputum was positive for tubercle bacilli at the end of two months.

Other causes are pancreatic calculi, chronic pancreatitis, abdominal aortic aneurysm and rarely round-worm infection in children.

Some of these organs cause pain in other regions as well. Pain in the hypochondrium, on the right side, is mainly due to duodenal ulcer and less often due to gall stones and liver disorders. In the left hypochondrium may be a perisplenitis. In the umbilical region Tuberculous peritonitis, carcinoma of the pylorus or colon, and umbilical hernia are the common causes; while in the lumbar region a renal stone or pyelitis or tuberculous kidney are frequently responsible.

In the iliac region, on the right side, appendicitis and affections of the caecum with tuberculosis, amebiasis or actinomyces are the common causes. On the left side chronic ulcerative colitis, chronic bacillary dysentery, anorectal syndrome, cancer colon and filarial adenitis are worth bearing in mind.

Before concluding I should like to stress the very important condition psychoneurosis which is becoming more and more prevalent with the modern conditions of undue strain, stress and frustration. When a lady comes with pain in the pit of the abdomen and goes into elaborate detail about the pain, no useful purpose will be served by any amount of sedatives while the real trouble is an unhappy situation at home causing her all the annoyance from which she finds no solution except to fall sick. A few minutes talk spent in unravelling the misery may mean much saving of needless tests and waste of money. Once when I was talking to an educated lady, I asked her what was causing her mental anxiety. She said she had nothing to worry. She was happy with her loving husband and her fine children. Further talk revealed that her husband was a subject of effort angina and her doctor had told her that any attack may prove fatal. No amount of sedatives is going to be of avail in this case. Explain to her as to what is causing the trouble after a thorough physical examination, and refuse to yield to the temptation of putting her on a placebo. Neurosis is getting more and more common and has to be treated as a psychological problem and not with drugs which will only fix the neurosis firmly in the mind of the patient.

With these few words I conclude my brief talk touching only the fringe of a vast subject. Once again, I thank you for the opportunity you have given me to talk to you all.

VISIT

E. P. B. MANIAN,

GENERAL MERCHANT,

R. S. PURAM, COIMBATORE.

*

(The House for Quality Goods at Rock Bottom Prices)

For Your Requirements of:

PATENT MEDICINES

Tinned Provisions

Toilet Requisites

Stationery and

Office Equipments

Biscuits & Confectionery

Fancy Goods

Etc., Etc., Etc.

A Trial is Earnestly Solicited.

ESTD. 1923



TELE: "DEUSVYSONS"

PHONE: 106

D. S. V. & SONS.

GENEAL & GENERAL MERCHANTS

327, AVANASHI ROAD, :: COIMBATORE.

At your service for all your requirements of:

- ★ **DRUGS & CHEMICALS B. P.**
- ★ **MEDICINAL SPECIALITIES**
- ★ **SERUMS & VACCINES**
- ★ **SURGICAL INSTRUMENTS & SUNDRIES**
- ★ **& ALL LATEST PREPARATIONS**
- LIKE PENICILLIN Etc., Etc., Etc.**

Special Rates for Doctors, Hospitals & Institutions.

Your Patronage Solicited.

BUSINESS HOURS: 8-30 A. M. TO 7-30 P. M. DAILY EXCEPT SUNDAYS.

Recent Advances in Tropical Medicine*

By

V. IRAVATHAM, D. L. SC. (MADRAS), D. T. M. (CALCUTTA).
Trichinopoly.

History :— Tropical medicine is a young, rather self-conscious branch of medical science.

Epidemiology :— The diseases of Aberdeen are much the same as those of London, or even of New York, Berlin, or Vienna. Diseases in the tropics however show marked variations from place to place and from season to season. Therefore it is necessary to know as much about the epidemiology as possible, and at least roughly the geographical and seasonal distribution of each disease, so that one knows how, and when to expect to encounter the disease, and does not lightly diagnose kala-azar in Central Africa, sleeping sickness in India, plague in the Punjab in July, or sand-fly fever anywhere in the northern hemisphere in January.

Aetiology and prevention :— The bulk of the diseases that one encounters in temperate climates are degenerative or chronic inflammatory diseases, the prevention of which is outside the scope or even the thoughts of the average practitioners, so that he has no further worry on this score, and, even when he does encounter an infectious disease, whether it is measles, influenza, or just a common cold, there is seldom much mystery about the mode of infection, which in any case is by direct contact and or droplet infection; he has only the household, or, in the case of an institution the other inmates to consider and after that the most he need do will be to notify the local medical officer of health.

Signs and symptoms versus laboratory findings :— The populations with which one has to deal in temperate countries are usually relatively homogeneous, but in the tropics they are often heterogeneous, in racial type, in economic status and nutrition, and in their previous experience of diseases; consequently their response to infection will be equally varied. When the Cumberland miner gets pneumonia, the disease will run very much the same

* Paper read at the monthly meeting of the Coimbatore District Medical Association on 25-1-1947.

course as it would in a London banker, and it is possible to give a clinical description that will cover both cases. But it is not so with the vast majority of tropical infections; a patient may react to malarial infection in a hundred different ways. Again in temperate climates, although there are a few diseases in which one seeks confirmation from the bacteriologist, the average practitioner's clinical laboratory work begins and ends with urine analysis; whereas the vast majority of tropical diseases are protozoal or metazoal in origin, and these diseases lend themselves to easy and accurate parasitological diagnosis, so that, once more, emphasis is thrown on laboratory findings.

On the other hand, very great care must be taken that one's clinical judgement is not out weighed by laboratory findings. For example, it is not uncommon to find microfilariae in the blood, and hookworm ova and *Entamoeba histolytica*-cysts in the stools of a patient in whom kala-azar is eventually diagnosed by sternal puncture. Although each finding might be significant in other circumstances, there may in the particular case be no signs or symptoms attributable to these infections, and although in most instances one would attempt to free the patient from his hookworm infection during his convalescence. After treatment for kala-azar, return to normal health may be possible without the eradication of any of these infections.

Specific treatment:— Finally, in the matter of treatment tropical medicine undoubtedly stole a march on the mother science. We had specifics for malaria, kala-azar sleeping sickness, and certain helminthic infections, not to mention the tropical spirochaetal infections; when temperate medicine could claim only salvarsan, unless one includes anti-venine and diphtheria anti-toxin, one for each side. Although the sulphonamides, penicillin and newer chemotherapeutic substances have gone some way to even up matters, case for case, specific treatment is far more important in tropical than in the temperate medicine. Moreover, in tropical practice conditions are often such that specific treatment is the only treatment that can be considered, and it is therefore given emphasis, often to the detriment of general and symptomatic treatment which in many circumstances is almost if not quite as important.

I here attempt to outline briefly some of the advances made during the last few years. The matter is discussed mainly from the stand-point of the clinician with chief emphasis on clinical manifestations, diagnosis, and treatment. A few remarks on epidemiology, aetiology, and transmission will be touched.

Malaria.

No attempt is made here to deal with epidemiology, transmission, vectors etc. One subject giving rise to much interest is the Exo-erythrocytic forms of the malarial parasite. The importance of this subject is not merely academic, for it may have a great bearing on the treatment.

Schaudin and others stated that the sporozoites introduced into the body by the infected mosquito directly enter the red cells. Others postulated in the past that the sporozoites undergo a preliminary phase of development in the tissue cells or endothelium before they reach the red cells.

Recently it has been demonstrated by various workers the Exo-erythrocytic form of *P-Gallinaceum* in birds etc.

It is now being realized that the classical malaria with intermittent fever and the 48 hours periodicity and so on is not seen in the primary attack of non-immune person or in partly immune person. The classical malaria is really relapsing malaria.

Rapid methods of demonstrating malaria are Field's stain of *Thin and thick films*

Treatment:— Quinine and synthetic drugs. Atebrine, Mepacrine and Quinacrine are names used for the same drug. It has been shown that for treatment of ordinary case of malaria mepacrine can entirely replace quinine.

The main disadvantage of mepacrine is the relative slowness of action. A four day treatment of 0.6, 0.4, 0.2, 0.1 gramme would be effective.

Toxic effects:— Mepacrine has a phase of exaltation, like alcoholic intoxication, due to cumulative effect. Toxic effects of quinine are less common but more serious. Quinine is a heart depressant. Amblyopia may occur with moderate doses.

Army treatment:— 2525, meaning 2 days (gr. 10) quinine, 5 days atebrin (0.1 gr. t. d. s) 2 days rest 5 days plasmochin.

One great advantage of mepacrine is its long continued action. In fulminant attacks of malaria quinine intravenously has the advantage of rapidity of action. Dosage 6 grains given very slowly at the rate of 1 grain per minute, repeated 6 hourly.

Now comes the new drug Paludrine by I. C. I. In the first place it acts as prophylactic in falciparum infections.

Mosquitoes become non-infective as the parasites are destroyed at the E. E. P. In controlling an attack it is extremely effective.

Paludrine.

Introduction :— In the chemotherapy of malaria there are two major problems one concerning the radical cure of vivax infection and the other its prevention in persons who are exposed to the bite of infected mosquitoes properties which neither quinine nor mepacrine possess. Until recently not much progress was made and this may have been due in part at least, to a wrong conception of the pathogenesis. We have accepted as an established fact Schaudinn's observation that the Sporozoites which transmit malarial infection from the mosquito to the vertebrate host penetrate red blood cells directly and grow and multiply there, although there is a period of days or weeks following the mosquito bite and when no parasites can be demonstrated in the blood; we did not bother about the immediate fate of the sporozoites, and we were satisfied as long as we could quickly rid the blood of the parasite. But it is now known that at least in bird malaria, the parasite undergoes a period of development in the tissues of the vertebrate — before the red blood cells are invaded, when of course the clinical symptoms appear. Although not yet satisfactorily demonstrated, there is circumstantial evidence that a similar cycle occurs, as first suggested by James and Tate, in all species of malarial parasites. So, there are at least three stages in their life cycle, viz., the sporozoites, the tissue phase and the blood phase. These "E. E." forms serve as a reservoir for the release of blood forms, but they appear to be transient in the certain infections such as *Plasmodium Falciparum* and persistent in others, such as *P. Vivax*. They are very refractory to quinine and mepacrine, and are the root causes of relapses. It thus follows that this hitherto hidden aspect of plasmodium which links the sporozoites and the later forms in the blood is of paramount importance in any consideration of chemotherapy, a point stressed by S. P. James for some years, and offers most reasonable explanation of the present problems in the treatment of malaria.

Kala-azar.

In the diagnosis of K. A. Sternal-puncture has replaced the splenic puncture. A complement fixation test using the W. K. K. antigen has been worked out which gives positive results in K. A. much earlier than the old aldehyde and antimony test.

In the treatment, the main advance is the introduction of Urea-stibamine, Neo-stibosan, stibitin, and Aromatic diamidine M. B. 744 (Stibamidine).

Dysenteries.

The microscopic characters of the cellular exudate in the stool in amœbic dysentery :— The total cellular exudate is usually scanty. A few polymorphonuclear leucocytes, some coarsely granular eosinophil leucocytes and clumps of red corpuscles comprise the picture. *E. Histolytica* secretes a powerful proteolytic ferment and this results in semi digestion of cellular elements. Destruction of the cells commences at the periphery, the nucleus remaining intact until practically the entire cytoplasm has been destroyed. These masses of nuclear chromatin occur abundantly in the stools of amœbic dysentery and are called 'pyknotic' residues.

In amœbic dysentery the red blood corpuscles tend to agglomerate together in masses, and to have a reddish brown colour owing to their hæmoglobin being changed to acid hæmatin.

The microscopic characters of the cellular exudate in the stool in bacillary dysentery :— These present all entirely different picture. The whole microscopic field is full of cells. Of these some 90% are polymorphonuclear Leucocytes. Intestinal epithelial cells are fairly numerous. Macrophages are present forming about 2% of differential count according to Anderson. The red blood corpuscles are unaltered; they show up as isolated cells or in normal rouleaux and the tendency to adhesion and agglomeration seen in the amœbic stools is absent. 'Ghost' cells are a prominent feature of the exudate; i. e. cells which have lost all structure, but not their outline. The water ways between the cells show a very scanty bacterial content.

Anderson sums up the cellular characters of the bacillary stool as being preponderance of polymorphonuclear leucocytes, absence of eosinophile leucocytes, the presence of prominent macrophages, and absence of pyknotic residues. To these characters we add an absence of any change in the red blood corpuscles, which show their normal dichromatic yellow-green colour.

Liver Abscess and other complications of Amoebiasis.

Abscess of the liver is one of the most frequent and serious complications of amoebiasis. The condition has been known since ancient times and Hippocrates reported its surgical treatment. Galen observed its

association with dysentery. Koch, 10 years after Loesch (1875) had reported amoebiasis as the cause of dysentery in man, found the organism in the pus from a patient dying with tropical abscess of the liver. Kartulis also, in 1887 noted the presence of amoebae in a liver abscess pus and Osler in 1890, found amoebae in a liver abscess and in the faeces of a case of dysentery in the United States. Its incidence varies in different localities. Councilman and Imflexur who analysed 1429 cases of amoebic dysentery, found 21% complicated by abscess of the liver. However, Kartulis encountered 55% of 500 fatal cases in Egypt, with amoebic abscess of the liver. Strong and Musgrave in the Phillippine Islands, in 100 autopsies, largely upon Americans, found abscess of the liver in 23%. Brown and Hodgson (1938) emphasize that it is rare in the north temperate zone. Tao (1931) in China, in 1,000 cases of amoebic dysentery found only 1.8% with liver abscess and Craig (1934) in 745 cases, found 5% with liver abscess.

Pathology.

The most common seat of the abscess is the upper and posterior portion of the right lobe. Ordinarily only such abscess is found, but in at least one third of the cases the abscesses are multiplex—2-3 or more large cavities being present. Rarely several hundred small abscesses may occur. It seems to be clear that the amoebae usually invade the liver through the portal vein, and are carried by way of the upward current into the liver. The parasites are frequently found lying in the veins of the submucosa and in the portal capillaries and veins. It has been suggested that another method of transmission may occur and that direct infection of the anterior surface of the liver may sometimes take place, the amoebae passing from the deep-seated ulcer in the hepatic flexure through the peritoneum and anterior surface of the liver. In a few instances abscesses have been found on the anterior surface of the liver suggesting such an origin. It has been also suggested that the amoebae might possibly gain entrance by way of the bile duct. However, bile is toxic to amoebae and it is not probable that amoebae would be present in the small intestines in the locality of the duct.

In many instances, before suppurative lesions have occurred there may be a general congestion and enlargement of the liver. This may be confined to one lobe or even to part of a lobe. In cases which have succumbed from the accompanying dysentery, nodular areas measuring from one to several centimeters and greyish in colour may be detected. They represent early areas of necrosis. In other instances the necrosis is more advanced and in

the centre reddish gummy or liquid pus is present. The larger abscesses are formed by massive necrosis of portions of the wall and partly by the formation of softening of additional foci in the neighbourhood, and subsequent breaking down of the intervening septum. The Character of the pus changes, becoming more liquid during the evolution of the abscess.

Amoebicidal Drugs :—

1. Ipecacacuhna and its is alkaloid Emetine.
2. Hydroxy quinoline compounds.
3. Arsenicals and its compounds.

Emetine is a local irritant on gastro-intestinal tract and inhibits the action of ptyaline.

It is a depressing action on the heart like, chloroform & causes Auricular and Ventricular fibrillation. Heart stops in diastole. Fall of blood pressure.

Absorption or Excretion :— Emetine given deep-subcutaneously or intra muscularly is absorbed and eliminated by gastro-intestinal tract and kidneys. Emetine is a cumulative drug.

In acute amoebic dysentery and in amoebic livers the drug works wonder. It is given in one grain doses intra muscularly once a day for 6 to 8 days. Emetine must be used for the purpose of controlling diarrhoea and dysentery symptoms for which it is unexcelled, but often unsatisfactory for the elimination of the cysts and treatment of the carriers in more chronic cases. On account of the toxicity of the drug and its cumulative action rest period of ten days to two weeks before repeating the course of Emetine treatment is essential.

E. B. I. :— It contains double Iodide of Emetine and bismuth. It is given in Gelatine Capsules. Nausea and vomiting may follow its administration. It should be preceded by one grain of Phenobarbitone.

E. P. I. :— Emetine per Iodide is less Toxic than E. B. I.

Hydroxy Quinoline Compounds :

Chinioform :— (Iodoxy Quinoline-Sulphonic Acid), (Yatren). 3 to 4 pills 3 times a days for 8 to 10 days. **Retention Enema :—** 8 oz. of 2.5% solution of Yatren. One hour before the retention enema a Bowelwash with a pint of a 2% Soda Bicarb solution should be given.

Vioform :— (Iodo-Chlor-Hydroxy Quinoline) Contains 37-41% Iodine (One Tablet 25 grs. three times a day). It is more effective amoebicide than other quinoline derivatives. Dose: One three times a day.

Another latest quinoline compound is *Dio-doquin*, where Sodium Sulphonate radicle of Chinioform is replaced with second Iodine atom. Dose 7 to 10 tablets per day.

Arsenical Compounds:

- (a) Acetarson (Stovarsol).
- (b) Carbarsone.

Carbarsone is less Toxic and more actively amoebicidal. Dosage 25 grs. twice a day for ten days.

Toxicity: On Liver and on skin. (Exfoliative dermatitis).

Death after Carbarsone (2 cases) have been reported.

(Lancet-27th April 1946 I. M. G. Oct. 1946).

Other methods of treatment :—

Sulphaguandine for 5 to 6 days, and than Carbarsone 10 days.

Carriers :— Amoebic infection is often not associated with symptoms and the 'carrier' state is present. The carrier may be a convalescent from amoebic dysentery, or he may be a 'contact carrier' — one who has become infected with the amoeba, but does not show active symptoms, and passes the cysts in his faeces. It is extremely doubtful whether the term 'contact carrier' is quite justifiable, since a very large percentage of such cases, although not showing the classical symptoms of the disease exhibit a wide range of slight divergences for the normal.

Among symptoms presented by the carrier we may note :—

(1) Irregularity of bowels. (2) Pain, or often, vague abdominal discomfort some time after a meal. (3) A low grade fever of erratic type. Many cases are met with in practice in India with low grade fever, where nothing can be established in the way of diagnosis, where cysts of *E. Histolytica* are found in the stools, and in which amoebicidal drugs cure the febrile condition. (4) Finally, absorption of poisonous pressor bases may occur from the ulcerated gut and cause such varying allergic conditions as asthma, giant urticaria, etc.

Cholera.

The main subject of work has been the evaluation of sulphonamides. Administered as 0.1 g. per kilo of body wt. immediately, and followed by 0.05 g. every four hours, gives excellent results.

In the cholera wards of the Campbell hospital in Calcutta the procedure of Saline administration have been modified.

(a) Hypertonic saline :—	Sod. Chloride	140 grs.
	(Pyrogen free) Dist. Water	1 pint.
(b) Alkaline Saline :—	Sod. Chloride	90 grs.
	Sod. Bicarb.	180 grs.
(c) Alkaline Hypotonic Saline :—	(Pyrogen free) Dist. Water	1 pint.
	Sod. Chloride	60 grs.
(d) Bicarbonate sol. (5%) :—	Sod. Bicarb	180 grs.
	(Pyrogen free) Dist. Water	1 pint.
	Sod. Bicarb	440 grs.
	(Pyrogen free) Dist. Water	1 pint.

As dehydration and depletion of chlorides are the first pathological processes to be encountered, hypertonic and alkaline saline should be given in the proportion of 2 to 1 within the first 24 hrs. of onset. Later acidosis develops, during the next 24 hrs. that is 24 to 48 hrs. from the onset. Then the proportion should be reversed to 1 part saline with 2 parts alkaline solution. If however the Spgr. of blood is not much increased but never the less the Pt. is suffering from acidosis the bicarbonate solution only is required and about half a pint is given.

Plague.

Sulphadiazine and sulfathiazole have given very good results and possibly the first is the best. Early administration and massive doses seem to be the criterion in successful treatment.

Penicillin in Tropical Diseases.

Rat-bite fever :— In vivo experiments in animals show that penicillin is completely effective in sterilising the blood and protecting against the infection. Such few clinical reports as have so far been published seem to confirm laboratory work, and suggest that penicillin may prove an effective remedy in this condition.

Weil's Disease :— (*L. ictero hemorrhagica*) Experimental work indicates that penicillin should be effective in treatment, and a few clinical reports confirm this supposition.

Relapsing Fevers :— (*Borrelia novyi* and *S. recurrentis*) Penicillin is effective in the treatment of experimental infections in laboratory animals

Yaws :— In treatment of primary and secondary forms of Yaws (frambesia) penicillin has proved to have a therapeutic effect. Doses advocated are about 2,000,000 units over a period of 10 to 12 days. In the cases treated the lesions resolved rapidly under penicillin treatment and the Khan reaction became negative by the sixth week.

Nagasure :— (*Ulcus Tropicum*) also responds to penicillin.

References.

- Tropical Medicine, Manson-Bahr's.
- Tropical Medicine, Stitt's.
- Protozoology, Knowles and Das Gupta.
- Indian Medical Gazette, Dr. J. Lowe.
- Indian Medical Gazette, Dr. R. N. Chowdry.
- Notes by Dr. J. C. Gupta, M. D.



EYE DISEASES AND THE GENERAL PRACTITIONER

By

DR. D. SUNDARESWARAN, M. B., B. S., L. O.,
Hony. Asst. Surgeon, Ophthalmic Department, Govt. Hd. Qr. Hospital, Coimbatore.

I wish to address you this evening on the intimate relation between the eye specialist and the general practitioner. Far from being combined to strict boundaries both the eye and the general practitioner have to know each other's grounds and very often tread over to the opposite side for a better understanding of the disease. Specialisation is an essential of progress of medicine but it must at the same time be clear that there is no sharp line of demarcation between the specialist and the general practitioner. The one merges closely into the other and a harmonious discussion between the two alone can pave the way for a better understanding of the disease and efficient treatment of the patient.

I propose dealing with some of the diseases which always present themselves to the general practitioner, even in rural parts. I shall deal with the Fundus diseases in the latter part of my paper.

Take for example the common "stye." I may warn you right in the beginning that sometimes it may assume alarming proportions. The ideal treatment is to give frequent hot fomentations and to adopt otherwise an attitude of masterly inactivity. Seldom should we meddle with the condition surgically. At the most pull off the offending hair lash from the follicle. The danger of infecting the Cavernous Sinus through the connecting vein from the angular or through the inferior orbital veins must always be borne in mind. There were two such cases, after interference from outside. One was a case of Cavernous Sinus thrombosis which went on to the usual doom. The other was a case of orbital cellulitis which responded to sulphanamides and incision. Times have changed. We have now in Penicillin an ideal therapeutic agent even in these conditions which goes a long way in providing us with a powerful armament.

It is not uncommon for the general practitioner to meet with cases of "Phlyctenular conjunctivitis". The condition is very easily recognisable by the presence of one or more nodules at the limbal margin surrounded by an area of redness. It has been said that this is a common accompaniment of a

tuberculous diathesis and that it is a manifestation of allergy. The patients are normally slender ones with a pale face and palpable glands in the neck. There is a history of frequent colds and cough. It is necessary also to attend to the general condition by the way of cod-liver oil, Syrup Ferri Iodide, Adexolin, Collodial calcium with Vit. D, and treat Helminthiasis. This condition goes on to Phlyctenular Kerato conjunctivitis or Conjunctivitis Eczematosa in children and very energetic treatment alone does good. Sometimes it may be mixed with mucopurulent conjunctivitis also. Ultra violet therapy for the body and local ultra violet treatment for the eyes are very useful.

Nowadays it is quite usual to come across cases of "Vit. A deficiency". We find the presence of triangular Xerotic spot (BITOT'S SPOT) on either side of the cornea and a lustreless cornea. They most often come with a history of night blindness. It is common even in little children. The associated general symptoms are diarrhoea, fever, cough, loss of appetite and a dry skin studded with Lichen pilaris. Whenever the general practitioner comes across cases with such a history he should refer them to the specialist for confirming it as Vit. A deficiency or Keratomalacia and combined treatment for the body and eyes must be adopted to save the life of the child and its eyes. Incidentally I may remind you of a detailed article of mine on the subject which has been published in the Coimbatore District Medical Association Annual, 1942. Since writing the same I have been following up many of these cases and have been noticing that administration of liver extract injections and U. V. therapy go a great extent towards combating the disease in addition to the therapeutic armamentoria for this condition. May I at this juncture appeal in particular to the sisters in the profession to do some propaganda for requesting patients to feed newly borne children on mother's milk, a factor particularly neglected due to the progress of civilisation.

Next I pass on to "gonococcal conjunctivitis" which may again be divided into, (1) that in adults and (2) ophthalmia neonatorum. Whenever a case of gonorrhoe of the genitals is seen by the general practitioner they could make the patient clearly understand the danger of infecting their eyes with their own discharge from the genitals and in cases of gonorrhoeal conjunctivitis treatment of the eye condition and the general must be combined. Thanks to the stride of Sulphanamides and more so of penicillin our success is unrivalled.

Regarding "Ophthalmia neonatorum" I cannot but too often remind the Obstetricians and gynecologists the necessity of Crede's method of prophylaxis being instituted in the cases of newborn children, a factor which has greatly contributed to the saving of many eyes. Again I may remind you that Parenteral Penicillin and topical application of the same in 1/10 of the usual dilution for injections have proved very efficacious. Topical application must be practised hourly or once in two hours at least.

"Sore eyes" in children is a condition sometimes frightening because of the enormous thickening of the lids and conjunctiva. The moment an attempt is made to open the eyes and examine, the lids get everted and we are prevented from seeing the cornea at all. It is criminal to treat the condition without having a look at the cornea and seeing if it is clear. Resort should be had to a hook to elevate the lid and view the cornea. In experienced attempts at examining the cornea have led to the rupture of the cornea, and extrusion of the contents of the eyeball in cases of corneal ulceration. The hook should be gently applied and lifted up and the lower lid should be pinched with the fingers and held up.

Occasionally though rarely, a membranous conjunctivitis is seen associated with the formation of membrane in the nose, throat or larynx causes by the Kleb Loeffler bacillus.

In exanthemata we find lesions of the cornea which are best treated in the earliest stage possible. In short I may say that whenever the eyes are stuck up and the lids and the conjunctiva swollen in any disease, it is wise to have a look at the cornea and in cases of doubt refer it to the specialist for treatment.

"Trachoma" is a condition which is very commonly met with especially in Malabar. The condition can be very easily recognised by the drooping or cicatricial lids, pannus and corneal opacities. It is sometimes mistaken for acute catarrhal conjunctivitis and treated as such for a long time. No doubt acute catarrhal conjunctivitis can be treated by every general practitioner but whenever the condition is resistant to treatment it is always advisable to evert the lids and examine the lids and cornea carefully and refer to specialist.

"Spring catarrh" is another condition commonly confused with Trachoma and Follicular conjunctivitis. It is a manifestation of allergy and as such is associated with the other manifestations of it as Eczema, Asthma etc. The intense itching the bluish white appearance of the follicles, conjunctival

eosinophilia and seasonable exacerbations identify the condition. There are two types again. (1) The palpebral (2) The limbal which may be confused with a phlyctenular one. The fornix is free from implication and it is interesting to note that the Ph. is on the alkaline side and hence treatment with dil acetic acid to change the Ph. is successful.

Correction of errors of refraction, attention to the general condition, in addition to local therapy are indicated. Nicotinic acid in massive doses has been tried recently. Incidentally I may tell you that radium application has been giving a satisfactory result for this condition.

"Follicular conjunctivitis" is again confused with Trachoma. The preponderance of follicles in the lower lids, its being limited to the ends in the upper lids, the absence of corneal manifestations and the associated lymphadenopathy is sufficient to recognise the condition. The follicles are never present in the plica semilunaris or the bulbar conjunctiva. The condition disappears as adolescence is reached and drastic methods of treatment are far from indicated. Frequent observations, attention to the general health by way of particularly cod liver oil, weak astringents, correction of errors of refraction are only desirable.

"Interstitial Keratitis" due to congenital syphilis is very often met with in children and is almost always bilateral sooner or later. The association of the Keratitis with the other stigmata of congenital syphilis as deafness, sunken bridge of the nose, high arched palate, rhagades round the mouth, Hutchinson's teeth, enlargement of the epitrochlears and posterior cervicals, sabre shaped tibia is quite enough to stamp the disease. Treatment again must be combined for the body and eye. A word of warning about Penicillin in this condition—that a Hexheimer reaction-is inevitable unless you are very careful in the dosage.

"Hypopyon ulcer" as the name implies is a corneal ulcer associated with the presence of a hypopyon, or pus in the anterior chamber. It is most often accompanied by an infected lacrymal sac and is particularly rife in the harvesting season, when the ryots get injury of the cornea with the husk of the corn while reaping. These cases of hypopyon ulcers when seen must be immediately sent to a specialist. Even when seen early and that even by the specialist the results sometimes are very disappointing. Caution, Paracentesis milk and iodine injections, Sulphanamides, Saemisch's section have all their place. Sulphanamide injections accompanied by the injection of penicillin into the anterior chamber seem to promise better results.

A condition called "amaurotic cats eye" seen in children is one of which every practitioner should be wary. The pupil is dilated and there is a greenish reflex in the pupillary area. This is diagnostic of glioma in children a condition which at a later stage leads to the death of the child due to extension of the tumour and metastasis. The result even after early recognition and high enucleation are not satisfactory as a few of the malignant cells have already started extending via the optic nerve and chiasma to the opposite side and into the brain. Juvenile cataract is sometimes confused with this condition.

Let me cite two instances. One was a case of a boy from Dharapuram with a large growth in the left eye. Exenteration of the orbit was performed with subsequent radium implantation but the boy developed tumor in the right eye and died six months later.

A boy aged three years, from Tiruppur came just with an amaurotic cats eye. High enucleation was done and the pathological report was Glioma. The right eye was examined Ophthalmoscopically. No evidence of tumor was seen but subsequently the boy developed Glioma and came here when the growth was bursting through the other eye ball.

"Headache" is a common enough symptom and a headache caused by the eyes is equally so. It must be remembered that small errors of refraction particularly astigmatism are more frequently the cause of Eye strain and consequent headache. This is the result of overaction of the ciliary muscle in trying to overcome the error of refraction by its own contraction and continuous spasm. Higher errors cannot be corrected by overaction of ciliary muscle and so they do not give rise to headache or discomfort so often. Headache may also be due to sinusitis in which case the specialist has his say. Supra orbital neuralgia and headache as the premonitory Symptom of an oncoming herpes Ophthalmicus has to be remembered.

A common complaint especially among old people is growing defective vision. The practitioner on examining the eyes will find that there is a greyish reflex emanating from the pupillary area suggestive of incipient cataract. It is always prudent to go more into the details of the case, to take a careful history of headache, or haloes round lights or floating specks before the eyes to examine the re-action of the pupil on both sides, to take the tension of the eyeball and note whether it is more or less.

Never diagnose in a patient, cataract by the greyish reflex but always confirm the same ophthalmoscopically. Incipient glaucoma or commencing optic atrophy is very often missed with the result that the patient is told to wait for his eyes to grow dim, and the cataract to grow ripe for extraction. All the time the patient is having quiet glaucoma or increasing optic atrophy with deterioration of vision and finally when he comes to the specialist he is most often beyond recovery.

"Spontaneous sub-conjunctival hæmorrhage" in children is almost always due to whooping cough.

An attack of diphtheria is very often followed by paralysis of accommodation paralysis of the external rectus muscle. Neuritis may also be seen. Paralysis of the ocular muscles due to syphilis, gout, rheumatism must be thought of. Hysteria may also produce a similar condition.

An aneurysm of the aorta can cause in the initial stages mydriasis, enlarged palpebral aperture and exophthalmos due to irritation of the cervical sympathetic and later cause myosis, slight ptosis and enophthalmos due to paralysis of the same.

I must now pass on to a few of the "fundus conditions". When a case is referred to the specialist for headache it occasionally chances that he is able to see signs of general disease depicted in the eyes. It will be remembered that the eye is the only part of the anatomy of the body where we distinctly see the nerves and vessels and their diseased processes. I cannot do anything better than quote Maitl and Ramsay's article. The ophthalmoscope enables us to see the nerves and vascular structure of the fundus oculi and to study physiology and pathology during life. For our immediate purpose we may liken the interior of the living eye to a fully equipped biochemical laboratory in which nature herself performs all experiments. With the help of the pupil and watch nature at work, and as nature's work throughout the body are every where consistent we are justified in concluding that what we can see in the eye is an index of what is taking place hidden from view in other regions of the body. The fundus oculi therefore affords a unique opportunity for the clinical study of vital processes and is a convenient place for the clinician to meet the pathologist.

We may only feel the pulse and vessels and say there is sclerosis of the vessels but in the fundus we have the ideal opportunity of seeing the condition

of the vessels, the obliteration of the lumen, perivasculitis, hæmorrhages, exudates and retinitis, in short all things suggestive of a disease of the vascular or nervous system. If we find a star figure in the macula and signs of sclerosis of the vessels, it is an indication that the patient's general condition and that of the vascular system is bad. If we take the blood pressure we find it is some where over 200 mm. systolic and 120 to 140 mm. diastolic. The prognosis in these cases is very bad. The Sclerosis affects all the vital arteries, the cerebral and coronary. Sometimes neither his doctor nor the patient may have been aware of such a condition except for constant headache and such of these patients beyond taking Aspirin or Saridon for their headache have never taken any more notice.

Now I must recall some cases in particular of a series of cases I have seen.

1. A lady was having constant headache. Age 30. She was referred to me by her doctor for prescription of glasses to mitigate her headache. Examination revealed no refractory error but a typical albuminuric neuroretinitis. Blood pressure 230/130 mm. Hg. I informed her doctor and her nearest relative of the gravity of the condition. Neither the doctor nor the patient was aware before that anything was wrong with her blood pressure. She died two months later.

2. A clerk aged 40 was having headache off and on. He came to me for presbyopic correction. In the course of a routine examination I saw a picture of albuminuric neuroretinitis. BP. 200/140 mm. Hg. I told his doctor the actual condition and advised the patient rest. Some factors prevented his availing of leave and he died in harness, three months later.

3. An Advocate came to me with a history of headache coming off and on. He sought my advice as his vision grew dim suddenly. I examined his eyes and found a picture of albuminuric neuroretinitis. BP. 200/140 Hg. I informed his immediate relatives about his actual condition. The patient died three weeks later suddenly.

4. A clerk from Pollachi fortyfive years came to me with dim vision in one eye. Examination revealed again an albuminuric neuroretinitis, blood pressure 220/140 mm. Hg. I informed his superior officer of his condition and advised him to grant leave for his subordinate. He was granted leave but he died before he could get a substitute.

5. A lady aged 35 years; vision growing dim B.P. 220/140 mm. Hg; Examination of fundus revealed a typically albuminuric neuroretinitis. She was going to see her father who was having high B.P. But she died three weeks later.

I have only narrated the above cases to impress upon you the necessity for investigating every case of headache especially in persons over thirty years thoroughly. The ophthalmoscopic examination not only reveals the general condition but also indicates the prognosis, extent and progress of the disease.

Retinitic spots at the macula should lead us to examine the urine for sugar and albumin. Retinal Hæmorrhages are seen in cerebrospinal meningitis malaria, pernicious anæmia, Purpura, hæmophilia and tuberculosis.

Punctate hæmorrhages are deeply placed and are most often diabetic in origin. Striate or flame shaped hæmorrhages are superficial and due to vascular lesions. Leukæmic retinitis presents a very typical picture.

Again retinitis may be associated with pallor of the discs, narrowing of the vessels, hazy disc margins, and may present a picture of consecutive optic atrophy. We should examine the blood for serum reaction which will prove to us that the other correlated ailments of the body are also due to the positive serum reaction.

Arterio-sclerosis is diagnosed by the tortuosity of the vessels, beaded appearance, widening of the central streak, and arterio-venous crossings.

Pulsation of the retinal arteries is seen in aortic regurgitation.

Temporal pallor of the disc is a common condition associated with neuro syphilis and disseminated sclerosis and a recognition of the condition early is invaluable in the treatment of the nervous conditions.

An examination of the fundus is valuable to the obstetrician, especially during the antenatal period. Sudden spasm of the vessels is seen sometimes and the patient complains of dimness of vision which is equally sudden. I remember one case during the time of Col. Cox as D. M. O. in Coimbatore when I was called in to see a woman, carrying nine months, complaining of sudden

loss of vision. I could make out only spasm of the vessels and the exhibition of amyl nitras immediately relieved her. This is only in addition to the other usual changes in the vessels as hæmorrhages associated with a rise in blood pressure and a tendency for eclampsia.

Cases of headache with vomiting and presenting cyclical periodicity are seen associated with papilloedema of the Fundus indicating increased intracranial tension. Early and definite diagnosis will be of great help towards getting a cerebral decompression done. Cases of bitemporal hemianopsia are seen associated with pituitary tumours. Sometimes we may see a condition of papillitis or inflammation of the nerve head. Either way, an early diagnosis will help us to tackle the condition early. Even in cases of suspected meningitis the engorgements of the veins in the fundus, resort us to do a Lumbar puncture to relieve the tension and send the fluid for pathological examination.

I shall recount three instances of a series of brain tumours that I have seen.

(1) An officer 40 years old was sent from Erode for severe headache. I examined him thoroughly. Apart from a little engorgements of the veins nothing else was seen. Oral sepsis set right, blood for Kahn negative. He got a little relief and went back. But returned after 3 weeks with severe headache again. This time examination revealed early papilloedema. Skiagram Skull was taken. L. P. done. Nil abnormal. I advised him to go to Madras for specialist surgical treatment. He was confirmed as a case of tumour in the brain and operated at Stanley Hospital. He survived the first stage of operation. At the second sitting he passed away.

(2) A native doctor from Satyamangalam 30 years came with severe headache. Routine examinations were done which were all negative. Early papilloedema was noted one month after the onset of headache. He was directed to General Hospital. He survived the first stage of operation but succumbed to pneumonia in the convalescent stage.

(3) A young boy aged 10 years came with severe headache. Apart from a little blurred disc margins nothing else was noted. His blood was negative 3 months later he again came with severe headache when there was a picture of early papilloedema

In almost all the cases I have seen, the onset has been slow with periods of interval when the headache is not prominent and the diagnosis has been apparent only after a short interval. No age is exempt from this condition I can only add that one has to be very watchful and on the alert to spot these tumours early.

I must mention about hæmorrhages in the vitreous. Sometimes this is seen in young people without any obvious cause. It goes by the name of Eale's disease. Some attribute a tubercular diathesis. In two cases both aged 24 years I did a complete investigation and failed to find any evidence of tubercle or syphilis. One of them had a progressive lesion with the ultimate Retinitis proliferans and detachment of the retina. The other was given Vit. C. 100 mgns. daily intravenously along with calcium. He showed excellent recovery.

Last but not the least I must mention diseases of the structures in the vicinity of the orbit as Ear, nose, and throat. Either pyogenic or neoplastic. Some invade from the nasal sinuses or maxillary antrum. A close collaboration with the E. N. T. specialist is of great benefit in the successful treatment of conditions.

In conclusion I may just allude to two conditions seen in the eye after administration of sulphanamide group of drugs, one a transitory myopia and the other membranous inflammation of the conjunctive after the administration of sulphathiazols which disappeared automatically on withholding the drug.



Extracts from Current Medical Literature*



Two Cases of Amoebic Granuloma:

The condition may be easily mistaken for Carcinoma, nay more, both conditions may coexist. Two cases are cited,— One a combination of amoebic infection and syphilis - a tumour or growth in the anal region which was combined with warty masses extending for an inch round the anal margin, was worsening after a course of antisyphilitic treatment but gradually improved and healed after a course of emetine injections. Bacteriological examination of the discharge however did not reveal amoeba but only secondary organisms. A section of the tissue showed only inflammatory cells and not carcinogenic tissue.

The second case was a person aged 36. He had a protuberance from the anus which the patient thought to be a hæmorrhoid. There was trauma and bleeding when an attempt was made to replace the mass. Patient gave a history of many attacks of dysentery. The mass was hard, grey and not tender and had an ulcer crater exuding a dark thin pus. Examination of pus revealed a number of active amoebae. Stool examination however revealed only cysts. Treatment with emetine injections was successful and rapid.

The situation in the above cases was unusual, the common site being the colon. (B. M. J. 2-2-1946.)

Streptomycin in Tuberculosis:

In a leading article review is made about the results of experiments with a new antibiotic, Streptomycin, a product of *Actinomyces* (*Streptomyces*) *Griseus* which was found to be bacteriostatic to the Tubercle bacilli in relatively low concentration in the test tube. The results of its use in experimental infection together with a preliminary clinical report indicate that this drug has some curative action on progressive tuberculosis. The authors conclude that the use of Streptomycin in tuberculosis should be limited to the treatment of early and hæmotogenous forms of pulmonary tuberculosis (it is not effective in the common fibro-caseous type with cavitation or on tubercular empyema), tuberculosis of the genitourinary tract, suppurative lymphadenitis and early miliary tuberculosis; that treatment should be supplementary to other proved therapeutic measures; and that a cautious attitude should be preserved about this Streptomycin in tuberculosis until the results of fuller studies are available. (B. M. J. 23-2-1946.)

*This section of the annual has been the contribution of chiefly Dr. R. Sundararajan, M. B., B. S. We are thankful to him for his efforts.

Folic Acid and Blood Disorders:

Folic acid has been a new discovery for the past 2 years. In October 1943, successful treatment of granulocytopenia and leucopenia was carried on in rats with crystalline Folic acid. When experimental leucopenia was established with sulphoguanidine folic acid raised the white count from 2700 to 14,000 per C. mm. and percentage of granulocytes from 1 to 39. There has been however another direction in which folic acid has become a substance of great interest. Its crystallisation led to the identification of Vitamin B an anti-anæmic factor for the chick. The outcome of the indication that folic acid was concerned not only with white cell production in the bone marrow but also with the production of Red cells, is what Spies has recently described in the successful treatment of macrocytic anæmia with folic acid.

Experiments conducted on 42 cases with folic acid showed a good response in macrocytic anæmia (26) and Addisonian pernicious anæmia (5). This effect of folic acid in anæmia is of the greatest interest and suggests that the position of 'Castles' intrinsic and extrinsic factors will require reconsideration. Among the other patients successfully treated were 8 cases of sprue in whom not only did the anæmia disappear but the liquid fatty stools turned to brown solid faeces.

(B. M. J. 6-4-1946.)

Progress in the Treatment of Syphilis:

At the present time in U. S. A. when treatment of early Syphilis is carried out by organic arsenicals, Mapharside is the substance for the most part used, and it is given either three times weekly for 9 to 12 weeks or daily for 20 days. The use of Neoarsphenamine has been discontinued. Confusion respecting the relative value of the two compounds mentioned above has risen in England because some do not understand that mapharside is excreted in 2 days whereas the latter drug takes 5 to 7 days. 40 Mgs. of mapharside is equal to 600 Mgs. of Neoarsphenamine — This procedure counteracts the serious criticism of the treatment of syphilis by weekly injection of Neoarsphenamine that a large proportion of cases do not complete the courses, remain infected and are a source of danger to the community. With Mapharside the course is completed in 9 to 12 weeks in 5 day course — as against 12 to 18 months with the original drug. Also it has been made certain that a combination of penicillin and Mapharside is much more effective in preventing early relapses than is penicillin alone — on which high hopes were placed in early clinical cases. Experiments with the use of penicillin in syphilis also seem to show that we have not yet found the final place of penicillin in syphilis.

(B. M. J. 18-5-1946.)

General debility in the Ordinary Working Class Patient:

The family doctor will best serve his clientele by patiently attempting to discover the cause of this general debility. Common disorders such as anæmia, tuberculosis, newgrowths, cardiovascular or renal disease, involutional depression must be excluded (all these are productive of debility as a presenting symptom). The doctor must decide what investigations are necessary and justifiable. Minor physical disorders such as varicose veins, painful feet, prolapse, hæmorrhoids and skin disorders discovered in the general examination should be treated since they be important in contributing to debility. In 10% to 20% of persons, the causes of debility are revealed in the above manner.

The remaining large majority may be classified thus:

- (i) *Poor frails*: By constitution of life long habit.
Treatment: Encouragement, tonics, sedatives for decent sleep.
- (ii) *Psychological disorders*: Advise examination and investigation; holiday. Hysterics, mild anxiety states, depressions and obsessional states to be handled carefully.
- (iii) *Environmentally induced debility*: Domestic worry, tension at work, sex troubles, bad feeding and hygiene.
Treatment: Thoughtful and energetic advice.
- (iv) *Tired folk*: Especially devoted mothers.
They are badly short of rest and appreciation;
Supply both. (B. M. J. 23-2-1945.)

Neostibosan in Filariasis:

Culbertson and his associates administered Neostibosan to 35 patients with filariasis due to *Wuchereria bancrofti*, of whom 20 were apparently entirely cured of the infection, as shown by their loss of all microfilariae during the period of observation (five to fifteen months). Ten others lost more than 80 per cent of their circulating microfilariae and appeared likely to lose the remainder within a few additional months. In 5 of the 35 treated persons, administration of the drug failed to influence the infection noticeably. Fifteen untreated controls were all still infected after observation from fourteen to seventeen months. Neostibosan appears to act chiefly on the adult phase of the worm rather than on the embryos in the blood, although once the adults are killed the embryos gradually decline in number. The immediate reactions of patients neostibosan were slight, consisting chiefly of nausea and vomiting. Usually patients acquired tolerance for the drug within the first few days of its administration. In no case was it necessary to stop the drug because of toxicity. In no patient were symptoms suggestive of elephantiasis induced by chemotherapy. (J. A. M. A. June 29, 1946.)

Riboflavin Deficiency:

Gopalan found that genital symptoms of Riboflavin deficiency occur chiefly during the child bearing age. Of 67 females who presented genital symptoms in association with other signs of riboflavin deficiency and in whom these symptoms cleared on the administration of riboflavin, 64 were adult women and 3 were children. The minimal genital manifestation of riboflavin deficiency in women is an increase in the normal vaginal secretion. The resulting leucorrhœa is apparently the result of increased transudation through the vaginal walls. Pruritis vulvæ is present in cases of profuse leucorrhœa. The leucorrhœa abates on treatment with riboflavin, and the pruritis and vulvitis also subside. Pruritis and, perianal inflammation and anal fissure are among the signs of riboflavin deficiency. Treatment with 10 mg. of riboflavin, daily by mouth for two to four weeks leads to rapid healing of the fissure and subsidence of other signs. Scaly dermatitis of the scrotum is frequent in subjects with riboflavin deficiency, but preputial ulceration is also observed. Both these conditions are seen much more often in men than in boys. Among 92 cases of riboflavin deficiency in men above 18 years, 59 showed scrotal dermatitis which was associated with ulceration of the preputial margin in 32 cases; 3 cases showed preputial ulceration without scrotal involvement. In several cases of riboflavin deficiency observed by the author the angles of the lids showed ulceration. He designates this condition as angular blepharitis.

(J. A. M. A. December 14, 1946.)

Treatment of Headache with Intravenous Sodium Nicotinate:

The successful use of oral or parenteral Nicotinic acid in the treatment of certain types of cephalalgia, such as migraine, malarial headache or sinus headache, has been reported within recent years.

Sodium Nicotinate ("Naotin", Drug Products Company, Inc.) was used. Intravenous route administration was chosen for precision and decisiveness of the clinical effects; 100 mg. of the salt was taken as the standard dose because this amount was found adequate to produce a flush in almost every case. One hundred consecutive headaches were treated; excluding all neurotic or hypersensitive persons.

Reaction to injection:— First sensation of heat in genitalia then throbbing in the vertex or burning of the head and neck with concomitant flushing appeared. A feeling of restlessness and oppression could be observed for a few moments. The heat gradually subsided in about 15 minutes. The greatest number of patients were immensely relieved and many repeatedly sought the "heat treatment" for subsequent headaches.

Results: Excellent results were obtained in the treatment of migraine both as to rapidity and duration of effect. In the treatment of headaches following spinal tap, Sod. Nicotinate has given better results than the drugs commonly employed. Of the group of idiopathic headaches 74 per cent were completely relieved.

Conclusions: Intravenous Sod. Nicotinate is recommended in the symptomatic treatment of (a) severe idiopathic headache, (b) Migraine and (c) Post spinal tap cephalalgia. (J. A. M. A. May 11, 1946).

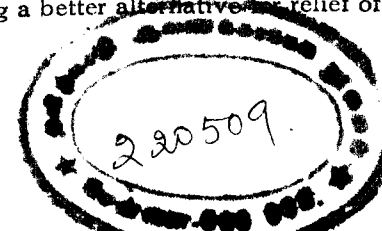
Ocular Signs in Prisoners of War Camps and in Returned Prisoners of War:

Clinical findings:— No ocular muscle paresis. No peripheral field constriction. Incidence of bilateral Retrobulbar neuritis was high, while the scotoma to white targets seemed to show a characteristic tailing but had some affinity to those of the toxic amblyopias. Vitamin B (Ariboflavinosis) is the most common deficiency. Conjunctival and corneal vascularisation is commonly seen. Though no frank Vitamin A deficiency could be included, the medical staff in the camps admirably performed their task of tackling these cases with ingenuity and skill in improvisation and used all available means to hand from shark liver oil to red palm oil to allay the ravages of this disease. (B. M. J. 23—2—1946.)

Ocular Decompensation:

When a patient with refractive error develops from it symptoms which he did not have before, we should say that he has become decompensated, thus implying that he may become 'compensated' or symptom free; and it is pointed out that many of these cases can be treated without glasses. Unfortunately though the attitude of ophthalmologists to small errors may have changed, their practise towards patients has not. Seeing that alternative treatment for relief of symptoms does exist, this means that many people are ordered glasses unnecessarily. Stuttechien showed that most of these patients have a deficiency of convergence and described an excellent technique for convergence training. The author of the article states that he has personally found that the principles of relaxation and proper use of the eyes described by the late much maligned Dr. Bates are definitely helpful in treating these cases. And he appeals to eye hospitals to expand their squint department for the treatment and critical study of these cases of decompensation to avoid the unnecessary and unphysiological prescribing of glasses for small errors, by having a better alternative for relief of symptoms.

(B. M. J. 11—5—1946.)



Penicillin for External Eye Infections:

Penicillin is useful in eye infections of the lids and external surfaces particularly in presence of staphylococcal infection. This is common in blepharitis and these cases yield to the penicillin ointment. In lachrymal sac infection in children the drug is useful. In ordinary conjunctivitis with ulceration of the cornea in children its effects are rapid. Staphylococcus and Morax-axenfeld bacillus are penicillin sensitive as well as pneumococcus. Kickweeks bacillus is only slightly sensitive, but infections of these organisms are cured in concentrations of 1000 to 2000 units per cc. Blepharitis which is most often of the seborrhic type responds rapidly if staphylococcus infection is present.

Corneal abrasions, superficial burns of the cornea and conjunctiva are best treated with gutte penicillin. The life of penicillin in solution is limited. The Ph of the solution has a much greater effect on the stability of the penicillin. Ph 6 solution is stable for 360 hours, acid side is more detrimental. Ph of tears is 7.2. Penicillin dissolved in distilled water has a Ph of 6.5. Such solutions are not irritating to the eyes. Eye drops containing 1000 to 2000 units per cc. may be supplied to mothers for use at home six times a day and advice given to keep the solution in the pantry. The deterioration is to the extent of 20% only. Penicillin ointment is made with lanette wax B. P. Ointment. Penicillin (Calcium salt) 100,000 units, yellow soft paraffin 90 Grs., wool fat 10 Grs. (B. M. J. 7-9-1946.)

Aluminium Hydroxide Gel for Erosion in**Patients with Bowel Fistulas:**

A problem frequently encountered in the managements of the patient with an ileostomy or colostomy is excoriation of the skin around the fistula. The prime cause of the skin erosion is believed to be in most cases the digestive action of the draining intestinal fluids. The contents from duodenum have a more corrosive action than the contents from the ileum, and the contents from the colon are least corrosive. Colostomies are usually less troublesome with respect to excoriation than ileostomies.

The use of Aluminium Hydroxide Gel was found to give gratifying results. It is applied to the ileostomy or colostomy in the form of thick paste. This paste could be prepared from the more liquid Aluminium Hydroxide Gel, which is already available as an acid adsorbant in the treatment of peptic ulcer, (Wyeth's Al. Hydroxide Gel), by simple means of either by allowing it to evaporate for 36 — 48 hours in wide dishes or until the desired consistancy is attained or by low centrifugation, the supernatant liquid portion being discarded. A third procedure, that of thickening the gel by titrating with powdered Cal. Carb., Kaolin, starch and Al. Hydroxide, was also used on numerous occasions. But this though satisfactory tended to harden and cake more readily.

The paste is applied in thick portions to both the excoriated area and the everted intestinal mucosa, the whole then being covered in the usual manner with several layers of gauze. When the skin is badly eroded or inflamed it is advisable to change the paste dressing every few hours during the first 2 or 3 days. Unmistakable objective evidence of healing were noted by the second day of treatment. Subjectively the patients early, reported relief from itching and sensation of burning. Oils and oily solutions should not be used as cleansing agents, since this prevents the gel from adhering to the skin.

Aluminium Hydroxide Gel is also an efficient deodorant. Of no little importance is the consideration that the patient might develop a local or systemic reaction to the medication. No patient had skin reaction and no special dermatitis has been reported by pharmaceutical chemists and others engaged in the preparation of Aluminium Hydroxide Gel.

(J. A. M. A. June 8, 1946.)

Regional Injection of Penicillin in Local Infections:

The series of cases treated comprised 2 cases of osteomyelitis of the finger, 6 of felon, 6 of carbuncle, 3 of perianal infections, 6 of cellulitis, with and without abscess, and 2 of furuncle. Penicillin dissolved in isotonic solution of sod. Chloride was prepared in the usual manner, the amount of solution used depending on the type and size of lesion to be treated. In fingers and other areas where loose tissue precluded a large volume, 2 to 4 cc. was used to dissolve 100,000 units of penicillin, thus giving a concentration of 50,000 to 15,000 units per cubic centimeter. The parts were cleaned with soap and water and painted with suitable antiseptic, and zones of tenderness were mapped out. Two to four sites of injection were chosen. The authors made the injection by hypodermic needle, starting outside the zone of palpable tenderness, injecting slowly ahead of the needle and progressing towards the centre of the infection. The injection was made deeply in the tissue, not merely subcutaneously, except when the infection was within the skin, such as furuncle. Disability is reduced far below the point reached by any other means of treatment. There is no deformity such as that frequently following radical surgical incision and drainage. Pain is quickly relieved, in some cases within one hour and always within thirty six hours. Preferably no evacuation should be performed until localisation, with freedom from pain occurs. Injections are painful and the degree of pain is in direct ratio to the density of tissue and the volume of injection. Injections once daily are adequate. The fear of spreading the infection by this treatment has not been substantiated. In part, this is due to fact that injections are started well outside the centre of infection, thus reinforcing the barrier and aiding in localisation.

(J. A. M. A. June 22, 1946.)



Doctor Muthu's X-Rays

(OPPOSITE: CLOCK TOWER)

BIG BAZAAR STREET :: COIMBATORE

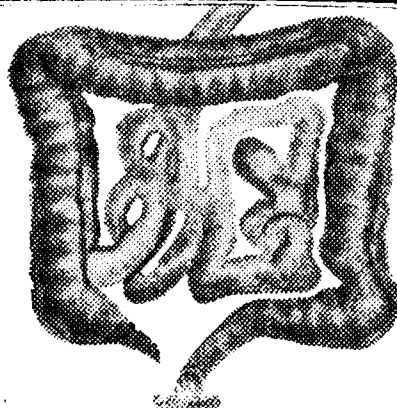
Best X-Rays exposures with perfect screening by the latest model X-Ray unit

Ultra-Violet Ray, Infra-Red Ray
and Radiant Heat

Attended by Trained Technicians With Best Interpretations



IN AMOEBIC DYSENTERY AMOEBINDON



The New Amoebicide contains purest DI-iodoquinoline 3.2 grs. per tablet. Iodine content approx. 64 per cent. Of outstanding Therapeutic effectiveness against vegetative and cystic forms of Intestinal Amoebiasis for oral administration.

It can be given concurrently with Emetine in Amoebic Hepatitis.

Bottles of 60 tablets for one full course. Hospital packings of 250, 500 and 1000 tablets.



INDO-PHARMA
PHARMACEUTICAL WORKS
BOMBAY 14 CALCUTTA

THE COIMBATORE DISTRICT MEDICAL ASSOCIATION ANNUAL, 1946

Laugh a Bit-If You Like or Would You Smile!

What an answer?

The physician was taking the history from the interpreter with the Chinese patient. The chief complaint was itching and the doctor had asked what was done for it. There was the long winded give and take of the lovely Chinese language. Then the answer: "Hand Scratching".

* * * *

The old ones are the best—

A male nurse in a mental hospital noticed a patient with his ear close to the wall, listening intently. The patient held up a finger as a warning for him to be very quiet; then beckoned him over and said "you listen here".

The nurse put his ear to the wall and listened for some time, then turned to the patient and said; "I can't hear anything."

"No", said the patient, "and it's been like that all day."

* * * *

The Young Scientist:

The three year old boy had taken his mother's powder puff and was fixing his face as he had seen her do, when his five years sister grabbed it from him.

"You must n't do that," she said. "Only ladies use powder. Gentleman wash themselves."

* * * *

"Have you any abnormal children in your class?" a barrased looking teacher was asked.

"Yes," she replied, "Two of them have good manners."

* * * *

A Good reason for Stopping:

Heparin Therapy was discontinued because of its apparent ineffectiveness, its cost and the difficulty of administration, and finally because of a fatal cerebral haemorrhage.

It moves around:

X-Rays of Roger's back where taken at St. Mary's Hospital and Dr. A. C. Forster, Missouri State Athletic Commission, who took the X-Rays, stated they revealed a fracture of the transferred process of the fourth lumbar of the fourth vertebral.

* * * * *

"Pop," said a boy of ten, "how do wars get started?"
"Well, son," began Pop, "let us say, for example, that America quarrelled with England—"
"America is not quarrelling with England," interrupted Mother.
"Who said she was?" said Pop, visibly irritated.
"I merely was giving the boy a hypothetical instance."
"Ridiculous," snorted Mother. "You will put all sorts of wrong ideas in his head."
"Ridiculous nothing," continued Pop. "If he listens to you, he 'll never have any ideas at all in his head."
Just as the lamp-throwing stage approached, the son spoke up.
"Thanks, Mom, Thanks, Pop. I 'll never have to ask how wars get started again."

* * * * *

Dentist with Golf bag over his shoulder, answering the telephone, "Sorry, no more appointments to-day. I have 18 cavities to fill this afternoon."

Right on the nose:

One afternoon a bee stung our English Setter pup on the nose. Before long his muzzle was painfully swollen, his eyes were almost shut, and he was having trouble in breathing. In a frenzy I telephoned the Vet.

"Just bathe his muzzle in warm soda water," he said, "He 'll be better by morning."

"But, Doctor," I pleaded, "is n't there something more I can do? He is suffering. Would an aspirin help?" "Yes" the doctor answered, "an aspirin might calm him. Give him one — and you take two."

* * * * *

"No man's day should ever be so long that it demands an extra drink of whisky to keep him going. No man's bank account is worth a coronary or a cerebral accident. And what fools, men are to work themselves to death, paying big insurance premiums. Too often the insurance gets the widow a luxury-loving, second husband who can easily make her forget that her first husband had no time for leisure, for luxuries, for loving, or for LOAFING."

THE PATHOLOGICAL LABORATORY,

4/4, RACE COURSE ROAD,
COIMBATORE.



ALL BACTERIOLOGICAL
BIO-CHEMICAL AND
CLINICAL-PATHOLOGICAL
WORKS UNDERTAKEN.



For Particulars Etc.

Please Contact Doctor-in-charge.

A. NANJAPPA & CO.,

DRUGGISTS & GENERAL MERCHANTS,
Avanashi Road, COIMBATORE.

*

WE STOCK:
PATENT MEDICINES of all kinds
TOILET Requisites
Imported Food-Stuffs
GIFT-SETS for Ladies & Gents
STATIONERY for Office & Personal use
HOSIERY, Enamel & Glass-Ware
Cutlery and Crockery Etc.

From our BRANCH AT RAJA STREET:

School Books & Exercise Note Books
All kinds of Office Requisites & Account Books
Stationery for Personal use
Papers of Different Varieties, Toilets Etc.

Thanks for the Glance.

Reflections and Aphorisms

"THOUGHTS ON DUTY"

Work for Work's Sake

"It is work through the sense of duty that leads us to work without any idea of duty; when work will become worship -- nay, something higher. Then work will be done for its own sake."

"By work alone men may get to where Buddha got largely by meditation and Christ by prayer."

"Be unattached; let things work; let brain centres work; work incessantly, but let not a ripple conquer the mind. Work as if you were a stranger in this land, a sojourner; work incessantly, but do not bind yourself; bondage is terrible."

"It is the worker who is attached to results that grumbles about the nature of the duty which has befallen to his lot; to the unattached worker all duties are equally good, and form efficient instruments with which selfishness and sensuality may be killed, and the freedom of the soul secured."

"Be grateful to the man you help, think of him as God. Is it not a great privilege to be allowed to worship God by helping our fellow-man?"

"Never will unhappiness or misery come through work done without attachment."

"Misery comes through attachment, not through work."

"The only true duty is to be unattached and to work as free beings, to give up all work unto God. All our duties are His."

— Swami Vivekananda.

THE COIMBATORE DISTRICT MEDICAL ASSOCIATION

ANNUAL 1946

*

Another year has passed on, since we published our last annual. During the interval that has elapsed since our last publication, several outstanding events have taken place in the history of our country and in the history of our province. The most outstanding and happy event of the year is the installation of an "Interim Government" in Delhi consisting of the representatives of the country—a step towards our cherished ambition of "Free India."

Equally so, in the formation of a representative Government at the province. We rejoice over these incidents, not so much on their political value, as on their influence on problems of Health and Health givers—the Medical men. It is but natural that for a successful attainment of a beneficial health service, it is essential to secure the active co-operation of the public and hence naturally its development should be entrusted to Ministers of Health, who enjoy the confidence of the people and are able to secure their co-operation, especially as certain legislative and administrative measures to be undertaken may not be permitted by the local social and religious customs unless they are properly tackled.

Hence with the introduction of the popular ministry we hope all our dreams of (a) Improvement of the professional status of paid and Honorary services (b) Provision for post graduate and refresher courses (c) Establishment of central laboratories

in various districts to facilitate early and proper diagnosis (d) Control over manufacture and trade of spurious drugs and patients (e) legislation to prevent quacks and unauthorised persons from practising the sacred art of medicine (f) Establishment of an All India Medical Institute for Research and advanced studies concerned with public health problems of all India character, and many other vital problems etc., will be fulfilled.

While we glory over these dreams, we should not forget that we as medical men and as those in whom the health of the nation which is the most important asset to the nation itself depends, owe a great responsibility to the public and to the nation at large. It is our duty to serve the sick and suffering; It is our duty to keep abreast with the changing times; It is our duty to equip ourselves with the latest knowledge of the scientific development; It is our duty to discard all drugs and patients, which have not gone through a scientific research laboratory; It is our duty to fight against the right of practice by unqualified and unauthorised persons; It is our duty to stand united, to raise our voice to say our rights and grievances, and hence it is our duty to join together as a single family.

And, if so, the body that represents the medical profession all over India is the Indian Medical Association of which we are but a limb. It is this association that could talk to the Government and to the public by virtue of its representation. So, let us hope all the medical men with registrable qualifications will join the association and give strength to it for "Unity itself is Strength".

THE COIMBATORE DISTRICT MEDICAL ASSOCIATION.

TWENTYSECOND ANNUAL REPORT.

FOR THE YEAR 1946.

Ladies & Gentlemen,

The Executive Committee of The Coimbatore District Medical Association have great pleasure in presenting the twentysecond Annual Report of the Association, for the year 1946. As we began the year we were under the dark shadows of War. Still we are not outside it. Everywhere around us we see famine, starvation, sickness and death. Not to mention of more than one incident we were in difficulty to obtain even an attendant for our Association, and the Secretary had to be the attendant, messenger, clerk, etc. However at the close of the year, we seem to be in a better position. Changes have taken place all over the world. In our country, we are seeing the glow of the Light of the Independence, and we expect to see our land lit with of the Light in a very short time, inspite of the many dark events. "In the midst of darkness, light prevails." So let us hope that the coming year will be brighter and prosperous.

The Last Annual Meeting of the Association was held on 14th April 1946, and

1. The following Office bearers were elected:

(a)	President	...	Dr. J. K. Gnanaolivu.
	Vice-President	...	Dr. C. Nanjappa.
	Secretary	...	Dr. C. V. Ramaraj.
	Associate Secretary	...	Dr. Miss S. V. Swarnam.
	Treasurer	...	Dr. T. V. Sivanandam.

(b) Other Members of the Committee:

Dr. N. Velappan.
Dr. R. Soundararajan.
Dr. L. Munuswamy.
Dr. K. N. Ramanathan.
Dr. B. S. Viswanathan.

(c) *Representatives for the Committee of the Central Council of the I. M. A.*

Dr. J. K. Gnanaolivu.
Dr. K. V. Subrahmaniam, L. M. & S., B. S. Sc.

(d) *Representatives for the Committee of the Provincial Council of I. M. A.*

Dr. C. V. Ramaraj.
Dr. Miss. M. K. Saraswathi.
Dr. L. Munuswamy.

2. Membership:

Our membership at the commencement of the year was 104 of which 67 were resident and 37 non-resident members. We are glad to announce that our membership has increased to 114 of which 74 are resident and 40 non-resident members. We understand several young medical men and some of our old members who had temporarily left us, on active service, have settled again in this city of ours, and we extend to them our hearty welcome and trust they will join us and increase our strength.

3. Meetings:

There were 11 monthly meetings during the year, details of which are shown in the appendix I. Unlike our previous annual gatherings, this year we had a scientific session also incorporated in the proceedings and our inaugural address was delivered by Dr. U. Mohana Rao, M. S., F. R. C. S., Honorary Surgeon, Govt. General Hospital, Madras. Dr. Ratnavelu, Subrahmaniam, M. D., M. R. C. P., of the medical unit of the same institution followed him up with a paper on medicine. We had the pleasure of hearing Major J. W. Lovett Doust, B. Sc., M. B., B. S. (Lond.), M. R. C. P., A. K. C. R. A. M. C., Medical Specialist to C. M. H. Coimbatore, this year also. Lt. Col. P. J. Kelly, I. M. S., District Medical Officer and Superintendent, Government Head Quarters Hospital, Coimbatore, delivered an interesting talk in a small but important subject of varicose veins. From the appendix, it will be seen that we had the fortune of having amidst us the specialists in various subjects like Surgery, Medicine, Tropical Medicine, Psychiatry, Venereal diseases, Ophthalmology and Pathology etc., and most of them were from the special departments of the military hospital. Our thanks are due to the various lecturers for their interesting lectures.

We are glad to note that our members appreciate — Practical work than plain talk — by the record attendance of 58, at the clinical meeting held at the instance of Lt. Col. P. J. Kelly, I. M. S., Superintendent of the Institution. We are highly thankful to him and to the staff of the institution and look forward to them for more of such meetings in the coming years.

Attendance at the meetings:— Though poor on one or two occasions due to inclemencies of weather etc., on the whole it has been satisfactory being about 41 on an average compared to 37 for the last year.

Committee Meetings: There were three committee meetings, of which one was by circulation.

4. Reading Room & Library:

Owing to difficulty in getting an attender, the reading room was not opened regularly during the first part of the year, but subsequent to the employment of an attender, it is kept open from 5 P. M. — 8 P. M. for any occasional visitor.

No additional journal was subscribed for this year, than those we were getting last year:

1. British Medical Journal, London.
2. Practitioner, London.
3. Lancet.
4. Journal of the American Medical Association.
5. Indian Medical Gazette.
6. Indian Medical Journal.
7. Indian Journal of Pediatrics.
8. Indian Physician.
9. Journal of the Indian Medical Association.
10. Antiseptic.
11. Medical Review of Reviews.

5. Finance:

Our financial position is better than last year, an additional source of revenue this year being the rent from a plot of land leased by the Association, to a neighbouring theatre for a car park.

6. Building Fund:

Except what interest we received from the deposit of the Building Fund, we did not make any collections during the year; neither did we progress any more in putting up additional constructions, the main reason for the latter being the still prevailing dearth of materials and labour. However we hope to definitely put up atleast a compound wall and verandah in a very short time.

7. Audit:

Our thanks are due to Sri. N. C. Rajan, C. D. A., R. A., for his readiness in accepting to audit our accounts.

8. Annual 1945:

The Annual 1945 was as usual very popular with the medical men, advertisers, representatives all alike. The publication of the Annuals has been one of our chief activities and the purpose of the publication has been (a) to record our activities during the year (b) to publish the scientific papers read and discussed at our meetings (c) to obtain and publish articles of interest to medical men from eminent people (d) to give a list of the members and medical practitioners in the various institutions and in the district, (e) to abstract and publish important and valuable articles from other journals and lastly (f) to set apart a few pages for advertisement of products of interest to medical men, so also to develop a close relationship between the manufacturers and the prescriber. We have been successful in attaining all these objects, but the difficulty has been only to obtain the articles read at our meetings. Several of the lectures, which were really worth recording were not available for publication since the authors could not or would not take pains to have them sent to us. We request in future atleast, the lecturers will kindly hand over the scientific papers to us, so that, our magazine could be made more interesting and useful to the profession.

9. Other Activities:

(a) Our members contributed a sum of Rs. 154/- to the *Red Cross Fund* of the Coimbatore District and the same has been acknowledged by the Collector.

(b) On receipt of a letter from the Honorary Secretary of the Indian Medical Association, we passed a resolution of condolence and conveyed our sympathies to the victims and members of the bereaved families of the

recent Bengal and Bihar disturbances. Further we sent an appeal to the members of our Association inviting contributions for the relief of the distressed and in response a sum of Rs. 312/- was collected and sent to the Honorary Secretary, Indian Medical Association, towards "*The Central Relief Fund*".

(c) The "*Twentythird All India Medical Conference*" was attended by nearly 28 members of our Association, though all most all of them had become Reception Committee members. Infact ours was one of the best represented districts. The Subjects Committee meetings were attended by Dr. K. V. Subrahmaniam as a representative to Committee of the Central Council.

10. Conclusion:

Before we conclude we apologise to the members and to the advertisers for the late publication of this Annual. The delay was due to the unavailability of the news print from any of the recognised dealers, and the paper that is used now, we are proud to say-is Indian made, and was received only in the month of March 1947.

Now it is our pleasant duty to thank the various lecturers and hosts who have made our meetings successful and the members who having placed their confidence in us, always helped and supported us in all our enterprises. We will be failing in our duty if we do not thank the management of the Coimbatore Co-operative Printing Works, Ltd., for all their sincerity, willingness and co-operation in bringing out this number of ours.

Coimbatore, }
14th April, 1947. }

C. V. Ramaraj,
Secretary.

Appendix I.

DETAILS OF THE MONTHLY MEETINGS HELD IN 1946.

S. No.	DATE	LECTURER	SUBJECT	PRESIDENT	Host	No. OF DOCTORS PRESENT
1	14-4-46	Dr. U. Mohan Rao, M. S., F. R. C. S.,	"Carcinoma of the Stomach"	Dr. J. K. Gnanaolivu	(Annual Meeting)	50
2	25-5-46	Dr. Ratnavelu Subramaniam, M. D., M. R. C. P.	"Chronic Abdominal Pain"	"	Dr. J. K. Gnanaolivu	36
3	29-6-46	Lt. Col. G. Parasuraman, A. I. R. O.	"Psychiatry-to-day"	"	Dr. Miss S. V. Swarnam	34
4	27-7-46	Major P. J. Kelly, I. M. S.	"Varicose Veins"	"	Dr. Mrs. G. V. Rajamma	39
5	31-8-46	Capt. Calderwood, R. A. M. C., Surgical Specialist, C. M. H.	"Penicillin in Surgery"	Dr. C. Nanjappa	Dr. Miss S. Subbulakshmi	39
6	28-9-46	Major J. W. Lovette Doust, R. A. M. C., Graded Specialist in Medicine & Pathology and Medical Specialist, C. M. H.	"Respiratory Complications of Ankylo-stomiasis"	Dr. J. K. Gnanaolivu	Dr. P. K. Kalyanaraman	47
7	26-10-46	Capt. S. C. Gomez, I. M. S., I. A. M. C., Pathologist, Station Laboratory, C. M. H.	"Laboratory Methods in Clinical Diagnosis"	"	Dr. Miss G. Santhanamary	29
8	30-11-46	Capt. N. A. Subramanian, M. B. M. C., I. M. S., Specialist in Venereology, C. M. H.	"Modern Treatment of Syphilis"	Dr. K. V. Subrahmaniam	Dr. K. S. Vedachalam	37
9	25-1-47	Dr. V. Iravatham, D. L. Sc. (Madras) D. T. M. (Calcutta)	"Some Recent Advances in Tropical Medicine"	Dr. C. Nanjappa	Dr. K. V. Subramaniam (Pathologist)	39
10	28-2-47	Dr. D. Sundareswaran, M. B., B. S., L. O.	"Eye Diseases and the General Practitioner"	"	Dr. U. A. Menon	39
11	27-3-47	"Clinical Demonstration" at Govt. Hd. Qrs. Hospital, Coimbatore		Dr. J. K. Gnanaolivu	Lt. Col. P. J. Kelly	58

THE COIMBATORE DISTRICT MEDICAL ASSOCIATION, COIMBATORE.

Receipts and Payments Account for the year 1946.

RECEIPTS		Rs. A. P.		PAYMENTS		Rs. A. P.	
To Opening Balance:				By Fixed Deposit		2,500	0 0
In current account with the Coimbatore City Co-op. Bank, Ltd., Coimbatore		3,098	1 0	" Annual - Printing, Paper, etc.		347	13 0
Subscriptions		652	0 0	" Contribution to I. M. A.		187	4 0
Advertisement		852	0 0	" Attender's pay and allowance		160	0 0
Rent		210	0 0	" Books and periodicals		131	7 0
Interest receipts		357	4 5	" Printing and stationery		34	4 6
Advances by Secretary		124	3 6	Monthly Meetings Rs.	17 5 6		
Contributions		15	0 0	Annual Rs.	21 2 6		
Sale of Annual		4	0 0	Sundries Rs.	11 13 0	50	5 0
				" Lighting		13	4 0
				" Property tax		17	12 2
				" Bank charges		5	10 0
				" Typing charges		5	8 0
				" Closing balance at Bank		1,859	5 3
Total	...	5,312	8 11	Total	...	5,312	8 11

Examined and found correct subject to my report of even date.

Coimbatore, }
12th April, 1947. }

(Sd.) S. V. Swarnam,
President.

(Sd.) C. V. Ramaraj,
Secretary.

(Sd.) N. C. Rajan, G. D. A., R. A.,
Registered Accountant, Auditor.

(Sd.) T. V. Sivanandam,
Treasurer.

THE COIMBATORE DISTRICT MEDICAL ASSOCIATION, COIMBATORE.

Income and Expenditure Account for the year 1946.

EXPENDITURE	Rs.		INCOME		Rs.	
	A.	P.			A.	P.
To Annual-Printing, Paper, etc.,	347	13 0	By Subscriptions	...	652	0 0
" Contribution to I. M. A.	187	4 0	" Advertisements	...	852	0 0
" Pay and Allowance of Attender	135	0 0	" Interest receipts—			
" Books and Periodicals	131	7 0	Fixed Deposits	550—0—0		
" Printing and Stationery	34	4 6	Current accounts	7—4—5	357	4 5
" Postage	50	5 0				
" Lighting	12	3 0	Rent	...	210	0 0
" Property Tax	9	2 6	" Contributions	...	15	0 0
" Bank Charges	5	10 0	" Sale of annual	...	4	0 0
" Typing Charges	5	8 0				
" Advertisement written off	17	8 0				
" Balance—Excess of income over Expenditure	1,154	3 5				
Total	2,090	4 5	Total	2,090	4 5	

Examined and found correct subject to my report of even date.

Coimbatore, }
12th April, 1947. }(Sd.) N. C. Rajan, G. D. A., R. A.,
Registered Accountant, Auditor.(Sd.) S. V. Swarnam,
President.(Sd.) C. V. Ramaraj,
Secretary.(Sd.) T. V. Sivanandam,
Treasurer.

THE COIMBATORE DISTRICT MEDICAL ASSOCIATION, COIMBATORE.

Balance Sheet as at 31—12—1946.

CAPITAL & LIABILITIES	Rs.		PROPERTY & ASSETS	Rs.	
	A.	P.		A.	P.
Capital Fund as per last Balance Sheet	5,531	8 7	Building as per last Balance Sheet	3,277	8 0
Add Excess of Income over Expenditure this year	1,154	3 5	Furniture as per last Balance Sheet	150	0 0
Building Fund as per last Balance Sheet	...	...	Books and Periodicals	405	0 0
Liabilities:			Deposit—Coimbatore Municipality	10	0 0
Advances by Secretary:			Fixed Deposit as per last Balance Sheet	7,000	0 0
As per last Balance Sheet	11	13 9	Addition this year	2,500	0 0
This year	124	3 6	Cash Balance—In current Account with the Coimbatore City Co-operative Bank, Ltd., Coimbatore	1,859	5 3
Total	15,201	13 3	Total	15,201	13 3

Examined and found correct subject to my report of even date.

Coimbatore, }
12th April, 1947. }(Sd.) N. C. Rajan, G. D. A., R. A.,
Registered Accountant, Auditor.(Sd.) S. V. Swarnam,
President.(Sd.) C. V. Ramaraj,
Secretary.(Sd.) T. V. Sivanandam,
Treasurer.

THE COIMBATORE DISTRICT MEDICAL ASSOCIATION

1946

* RESIDENT MEMBERS.

1	Appaji S. V.,	L. M. P.	Ramanathapuram
2	Arumugham C.,	M. B., B. S.	R. S. Puram
3	Akilambal (Mrs.)	L. M. & S.	Govt. Hd. Qrs. Hospital.
4	Balakrishnan Nair K.,	L. M. P.	Do.
5	Dayanand K.,	L. M. P.	Municipal Dy., Raja Street
6	Dharmarajan S.,	L. M. P.	Jail Road
7	Capt. Eapen K. E.,	L. M. P.	Cross Cut Road
8	Mrs. Eapen	L. M. P.	Do.
9	Ganapathy S.,	M. B., B. S.	Big Bazaar Street
10	Gnanaolivu J. K.,	M. B., B. S.	Union High School Road
11	Hariharan V., (Major)	M.B., B.S., B. S. Sc.	Municipal Health Officer, R. S. Puram
12	Joseph J.,	M. B., B. S.	District Health Officer, Cross Cut Road
13	Jagannathan N.,	M. B., B. S., T. D. D.	Big Bazaar Street
14	Kalyanarama Iyer P. K.,	M. B., B. S.	Brahmin Extension
15	Kondaswami N. G., (Capt.)	D. M. & S.	Pappanaickenpalayam
16	Kandaswami N.,	L. M. P.	Rangai Goundan Street
17	Kesava Marar P. V.,	M. B., B. S.	Raja Street
18	Krishnamurthi A. V.,	L. M. P.,	Do.
19	Krishna Rao V.,	M. B., B. S.	R. S. Puram
20	Krishnaswami V. S.,	L. M. P.	Raja Street
21	Kelly P. J. (Lt. Col.)	I. M. S.	District Medical Officer Govt. Hd. Qrs. Hospital
22	Krishnaswami N.,	M. B., B. S.	R. S. Puram
23	Lakshmana Rao R.,	L. M. P.	R. S. Puram
24	Leelakrishnan A. G.,	M. B., B. S.	Oppanakara Street
25	Mascaranhas J. A.,	L. M. & S.	Jail Road
26	Thyagarajan K. R.,	L. M. & S.	Brahmin Extension

27	Menon K. G. T.,	L. M. & S.	Club Road
28	Menon U. A.,	L. M. P.	Big Bazaar Street
29	Munuswami L.	M. B., B. S.	Oppanakara Street
30	Nair M. G.,	L. M. P.	Raja Street
31	Nanjappa C.,	L. M. P.	Variety Hall Road
32	Narayanan K.,	L. M. P.	R. S. Puram
33	Narayanan M. R.,	D. M. & S.	R. S. Puram
34	Narayanan T. K.,	L. M. P.	Raja Street
35	Narasimhan S. S.,	L. M. P.	R. S. Puram
36	Narayanaswami N. R.,	L. M. P.	Avanashi Road
37	Paul Ratnavelu (Mrs.)	L. M. P.	R. S. Puram
38	Pichai Robert L.,	L. M. P.	M. G. Eye Hospital, Big Bazaar Street
39	Pratap K.,	L. M. P.	Big Bazaar Street
40	Rajagopalan G. N.,	M. B., B. S.	Raja Street
41	Rajagopala Udupa	D. M. & S.	Sukravarapet
42	Ramaachandra Rao	B. A., M. C. P. S.	Imperial Bank Road
43	Ramanathan K. N.,	D. M. & S., D. L. Sc.	Clinical Laboratory R. S. Puram
44	Ramaraj C. V.,	M. B., B. S.	Brahmin Extension
45	Rama Rao K.,	L. M. P.	Do.
46	Ramaswami Iyer C. S.,	L. M. & S.	Raja Street
47	Ramaswami Naidu P. N.,	L. M. P.	Pappanaickenpalayam
48	Rajaratnam S. G.,	M. B., B. S.	Kattoor
49	Rajammal (Mrs.)	D. M. & S.	Singanallore
50	Saraswathi (Miss) M. K.,	M.B., B.S., D.G.O.	Grey Town
51	Sambandam R. S.,	L.R.C.P., M.R.C.S.	Do.
52	Sharadambal Mrs.,	D. M. & S.	Kasturibai Memorial Maternity Home, Singanallur
53	Sampath N. K.,	M. B., B. S.	Jail Road
54	Subbian N.,	D. M. & S.	Nanjundapuram
55	Siva Iyer S. V.,	M. B., B. S.	R. S. Puram
56	Sivanandam T. V.,	M. B., B. S.	R. S. Puram
57	Srikantan S. R.,	L. M. P.	Do.
58	Subrahmanyam K. V.,	L.M & S., B.S.Sc.	Do.

59	Subramaniam K. V.,	M. B., B. S.	The Pathological Laboratory, Race Course Road
60	Subramaniam S. (Capt.)	L. M. P.	Lawley Road
61	Sundararajan R.,	M. B., B. S.	Raja Street
62	Sundareswaran D.,	M. B., B. S., L. O.	Brahmin Extension
63	Swarnam (Miss) S. V.,	M.B., B.S., D.G.O.	Govt. College Road
64	Santhanamary (Miss) G.,	D. M. & S.	Raja Street
65	Sakkarama Rao N.,	L. M. P.	Govt. Hd. Qrs. Hospital
66	Sengaliappan S.,	L. M. P.	Do.
67	Subbulakshmi (Miss) S.,	M.B., B.S., L.R.C.P., M.R.C.S.	Govt. Hd. Qrs. Hospital
68	Sudhakar Rao R., (Major)	M. R. C. P.	R. S. Puram
69	Vedachalam K. S.,	M. B., B. S.	Jail Road
70	Velappan N.,	L. M. P.	Big Bazaar Street
71	Venkatraman T. R.,	L. M. P.	Oppanakara Street
72	Vasudevan M. K.,	L. M. P.	Inf. Diseases Hospital
73	Vijayaraghavan C. (Capt.)	L. M. P.	Police Hospital
74	Yegneswara Iyer R.,	L. M. & S.	Karuppa Goundan Street

NON-RESIDENT MEMBERS.

75	Anandam C.,	L. M. P.	Medical Officer, Andiyur
76	Ananda Rao K.,	L. M. P.	Satyamangalam
77	Balasubramaniam,	L. M. P.	Perundurai
78	Condillae M. C. (Major)		D. M. O. Railway Hospital, Podanur
79	Chandrasekaran G. A.,	L. M. P.	Chettipalayam (via) Podanur
80	R. G. Iyer,	L. C. P. S.	Tirupur
81	Harris D. E.,	L. C. P. S.	Herbert Borough Memorial Hospital, Chennimalai
82	Lakshminarayanan S. V.,	M. B., B. S.	Pollachi
83	Kamath P. M.,	L. M. P.	Gobichettipalayam
84	Kolandaswami J.,	L. M. P.	Podanur
85	Krishnamurthy T. V.,	L. M. P.	Perianaickenpalayam

86	Krishnier R.,	L. M. P.	Palladam
87	Krishnier N.,	L. M. P.	Kalpathy, Palghat
88	Krishnan Unni T.,	M. B., B. S.	Agraharam Street, Erode
89	Muthuswami L. K.,	M. B., B. S.	Erode
90	Menon M. K.,	L. M. P.	Koduvayoor
91	Naidu S. V.,	L. M. P.	Trichy Road, Coimbatore
92	Narasimaiah R.,	B. A., M. B., B. S.	Satyamangalam
93	Narasimha Iyengar R.,	L. M. P.	Gobichettipalayam
94	Raghavan A. K., Rao Bahadur		Palghat
95	Ramanathan S.,	L. M. P.	Pongalur
96	Rajaraman R.,	L. M. P.	L. F. Dispensary, Uthukuli
97	Ramalingam V.,	L. M. P.	Kodumudi
98	Ramachandran N.,	L. M. P.	17/33, Fisher Street, Erode
99	Raman T. S.,	L. M. P.	Pollachi
100	Rao B. V. H.,	L. M. P.	Dharapuram
101	Sengottayan,	M. B., B. S.	Gobichettipalayam
102	Shenoy M. M.,	M. B., B. S.	Erode
103	Sitaraman P. R.,	L. M. P.	L. F. Dy., Peddappanpatti, (via) Udamalpet
104	Sivaswami Iyer P.,	L. M. P.	Parasagowndampalayam, Kollegal
105	Subramaniam S.,	D. M. & S.	Satyamangalam
106	Subramaniam S. Capt.,	D. M. & S.	Thondamuthur
107	Subramania Iyer K. R.,	L. M. P.	Andiyur
108	Tirumurthi Iyer K. S.,	L. M. P., L. T. M.	Tirupur
109	Krishnan P. N.,	M. B., B. S., T. D. D.	Perudunrai
110	Venkatraman G. K.,	L. M. & S.	Gobichettipalayam
111	Vasudevan M. C.,	L. M. P.	L. F. Dy., Satyamangalam
112	Viswanathan B. S.,	M. B., B. S., T. D. D.	Perundurai
113	Vasudeva Rao A. K. Capt.,	L. M. P.	Tirupur
114	Vittal Rao C. R.,	M. B., B. S.	Pollachi



LIST OF MEDICAL PRACTITIONERS ATTACHED TO MEDICAL INSTITUTIONS IN THE DISTRICT



Government Head-quarters Hospital, Coimbatore.

- 1 Lt. Col. P. J. Kelly, I. M. S., District Medical Officer
- 2 Lt. Col. M. A. Parthasarathy, F. R. C. S.,
Assistant District Medical Officer
- 3 Dr. Mrs. S. N. Akhila Bai, L. M. & S., Woman Assistant Surgeon
- 4 Dr. Miss S. Subbalakshmi, M. B., B. S., D. G. O.,
Woman Assistant Surgeon
- 5 Rao Sahib Dr. N. Sakharana Rao, L. M. P., L. O.,
Resident Medical Officer
- 6 Capt. E. Balakrishnan Nair, Radiologist
- 7 Dr. S. Sengaliappan, L. M. P., Sub Assistant Surgeon
- 8 Capt. V. N. Ramakrishnan, L. M. P., Sub Assistant Surgeon

Honorary Medical Officers.

- 1 Dr. T. V. Sivanandam, M. B., B. S., Hony. Asst. Medical Officer
- 2 „ L. Munuswami, M. B., B. S., „
- 3 „ N. Jagannathan, M. B., B. S., T. D. D., „
- 4 „ S. V. Subramaniam, M. B., B. S., T. D. D., „
- 5 „ D. Sundareswaran, M. B., B. S., L. O., „
- 6 „ G. N. Rajagopalan, M. B., B. S., „
- 7 „ C. V. Ramaraj, M. B., B. S., „
- 8 „ P. R. Kuppuswamy, B. A., L. M. & S., „
- 9 „ P. K. Kalyanaraman, M. B., B. S., „
- 10 „ K. V. Subramaniam, M. B., B. S., „
- 11 Capt. K. S. Sarangapani, M. B., B. S., „
- 12 Dr. Miss. S. Swarnambal, M. B., B. S., Hon. Woman Asst.
Medical Officer.

House Surgeons.

- 1 Dr. Kolandaivelu, M. B., B. S., Paid House Surgeon.
- 2 „ Monterio, M. B., B. S., „ House Surgeon.
- 3 Capt. G. N. Rajan, D. M. & S., Un-paid House Surgeon.
- 4 Dr. Ramasubramaniam, M. B., B. S., Un-paid House Surgeon.
- 5 „ V. Krishnamurthi, M. B., B. S., „
- 6 „ G. V. Rajamma, D. M. & S., M. B., B. S., Un-paid House Surgeon.

I. Government Medical Institutions.

Dharapuram.

- Dr. A. Gopalan Nambiyar, M. B. C. S., Civil Asst. Surgeon,
Govt. Hospital.
- „ Miss Anna Thomas, W. S. A. S., „

Erode.

- Lt. Col. C. K. Padmanabha Menon, M. B., B. S.,
Civil Asst. Surgeon, Govt. Hospital.
- Dr. Miss. G. Asirvatham, L. M. P., W. S. A. S., „

Gobichettipalayam.

- Dr. S. Srinivasan, M. B., B. S., Civil Asst. Surgeon, Govt. Hospital.
- „ Mrs. G. Herbert, L. M. P., W. S. A. S., „

Kollegal.

- Captain S. G. Audinarayanan Raju, M. B., B. S., Civil Asst. Surgeon,
Govt. Hospital.
- Dr. Miss. A. P. Mathai, W. S. A. S., „

Pollachi.

- Dr. C. R. Vittal Rao, M. B., B. S., Civil Asst. Surgeon, Govt. Hospital.
- Dr. Miss K. M. Lakshmi Amma, W. S. A. S., „

Tirupur.

- Dr. V. E. Ganesa Mudaliar, M. B., B. S., Civil Asst. Surgeon,
Govt. Hospital.
- „ Mrs. G. Gordon, W. S. A. S., „

Udamalpet.

Captain P. R. R. Menon, Civil Asst. Surgeon, Govt. Hospital.
Dr. Miss M. Catherine Anna, W. S. A. S.,

Police Hospital, Coimbatore.

Captain C. A. Vijayaraghavan, L. M. P., Sub Asst. Surgeon.

Coimbatore Rural - Lawley Road Dispensary.

Dr. S. Subramaniam, L. M. P., Sub Asst. Surgeon.

II. Local Fund Medical Association.

- | | | | |
|----|---------------------------------------|----------------------------|----------------------|
| 1 | Dr. M. Anandan | Sub Asst. Surgeon, | Andiyur |
| 2 | Capt. C. A. Ramaswamy Iyer, | Sub Asst. Surgeon, | Avanashi |
| 3 | Dr. M. S. Krishnaswamy | " | Bhavani |
| 4 | " G. A. Krishnamurthi | " | Cowdhally |
| 5 | " C. V. Viswanathan | " | Hanur |
| 6 | " S. Thyagaraja Chetty | " | Kangayam |
| 7 | " I. Vasudeva Rao | " | Kottur |
| 8 | " Capt. P. Balasundaram— | Temp. Civil Asst. Surgeon, | Mettupalayam |
| 9 | " Mrs. Subburatham Angappa, | (D. M. & S.) W. S. A. S., | Do. |
| 10 | " T. C. Sitaraman, Sub Asst. Surgeon, | | Palladam |
| 11 | " V. Subba Rao | " | Pedappanpatti |
| 12 | " R. Krishnaswamy Iyer | " | Perundurai |
| 13 | " P. Sivaswamy Iyer | " | Porasagoundenpalayam |
| 14 | " P. R. Sitaraman | " | Satyamangalam |
| 15 | " M. K. Vasudevan | " | Sulur |
| 16 | " T. G. Rajagopalan | " | Talavadi |
| 17 | " Captain S. Subramaniam | " | Thondamuthur |
| 18 | " R. Rajaraman | " | Uthukuli |
| 19 | " R. Venkitaratnam | " | Valparai |
| 20 | " Captain C. O. Thomas | " | Vettaikaranpudur |
| 21 | " Captain S. Mukunda Rao | " | Punjaipuliampatty |

III. Municipal Institutions.

- | | | |
|---|--|--|
| 1 | Dr. K. Dayanandam, L. M. & S., Municipal Asst. Surgeon, | |
| | Municipal Dy., Raja Street, Coimbatore. | |
| 2 | " Mrs. Sharada Aiyadurai, L. M. P., W. S. A. S., | |
| | Municipal Dy., Raja Street, Coimbatore. | |
| 3 | " Miss G. Santhanamary, D. M. & S., Hon. W. A. M. O., | |
| | Municipal Dy., Raja Street, Coimbatore. | |
| 4 | " S. S. Narasimhan, L. M. P., | |
| | Honorary Asst. Medical Officer, Coimbatore. | |
| 5 | " J. R. Sundaram, L. M. P., S. A. S., | |
| | Municipal Dy., Devangapet, Coimbatore. | |
| 6 | " Mrs. M. L. Ratnavelu, W. S. A. S., | |
| | Municipal Dy., Devangapet, Coimbatore. | |
| 7 | " N. Krishnaswamy, M. B., B. S., Honorary Asst. Medical Officer, | |
| | Municipal Dy., Devangapet, Coimbatore. | |
| 8 | " Miss A. E. Eapen, L. M. P., | |
| | Women and Children Dy., Pollachi. | |
| 9 | " P. V. Ranganathan, L. M. & S., | |
| | Municipal S. A. S., General Dy., Tirupur. | |

IV. Rural Dispensaries.

- | | | | |
|----|-------------------------|----------|------------------|
| 1 | Vacant | | Ammamet |
| 2 | Vacant | | Alandurai |
| 3 | Dr. Bhima Rao | L. M. P. | Chittode |
| 4 | " G. A. Chandrasekharan | " | Chettipalayam |
| 5 | Vacant | | Ganapathipalayam |
| 6 | Vacant | | Koilpalayam |
| 7 | Dr. N. V. Vaidyanathan | " | Kundadam |
| 8 | " T. Rajaram | " | Kinathukadavu |
| 9 | " C. V. Rama Iyer | " | Kavandapadi |
| 10 | " V. Ramalingam | " | Kodumudi |
| 11 | Vacant | | Kallipatti |
| 12 | Vacant | | Kethanur |
| 13 | Dr. P. Rangachar | " | Lokkanahalli |
| 14 | Vacant | | Murli |

15	Dr. C. A. Ramakrishnan	L. M. P.	Negamam
16	Vacant		Nambiyur
17	Vacant		Olagadam
18	Dr. H. V. Shamanna	"	Palayam
19	" S. V. Appaji	"	Papanaickenpalayam
20	" S. Ramanathan	"	additional charge
21	" S. Balasubramaniam	"	Pongalur
22	" C. R. Subramaniam	"	Perumanallur
23	" N. Subbian	"	Pulavadi
24	" S. V. Appaji	"	Selvapuram
25	Vacant	"	Ramanathapuram
26	Vacant		Sivagiri
27	Vacant		Somanur
28	Vacant		Dhalli
29	Dr. C. S. Sivaraman	D. M. & S.	Thingalore
30	Kaniyur—Kolumam and Thingalore—		Vellacoil

• converted into that of Indian Medicine

V. Perundurai Sanatorium.

1	Dr. B. S. Viswanathan, L. M. & S., T.D.D., Medical Superintendent.
2	" K. A. Arumugam, M. B., B. S., T.D.D., Assistant Superintendent.
3	" Balasubramaniam, B. A., L. M. & S.
4	" P. N. Krishnan, M. B., B. S.
5	" Daniel



LIST OF MEDICAL PRACTITIONERS IN THE COIMBATORE DISTRICT

(FROM THE MADRAS MEDICAL REGISTER 1943)

—With Corrections—

1	Achai (Miss)	D. M. & S.	Gobichettipalayam
2	Akila Bai S. N. (Mrs.)	M. B., B. S.	Govt. Hd. Qrs. Hospital, Coimbatore
3	Anandam M.	L. M. P.	L. F. Dy., Andiyur
4	Anna Thomas (Miss)	"	Govt. Hpl., Dharapuram
5	Ananda Rao K. K.	"	Satyamangalam
6	Anklesria	M. B., B. S.	M. O., N. M. C. Hpl., Valparai P. O.
7	Appaji S. V.	L. M. P.	2-36, Trichy Road, Ramanathapuram, Coimbatore
8	Arumugam K. A.	M. B., B. S., T. D. D.	Asst. M. O., Tuberculosis Sanatorium, Perundurai, Coimbatore
9	Arumugam C.	"	R. S. Puram, Coimbatore
10	Adinarayana Raju (Capt.) S. G.		Govt. Hpl., Kollegal
11	Bhima Rao	L. M. P.	R. M. P., Chittode
12	Balakrishnan Nair E.	L. M. P.	Radiologist, Govt. Hd. Qrs. Hospital, Coimbatore
13	Balasubramanyam S.	L. M. P.	R. M. P., Perumanallur P. O.
14	Balasubramanyam K.	B. A., L. M. & S., T. D. D.	T. B. Sanatorium, Perundurai
15	Balasundaram	B. A., L. M. & S.	Temporary C. A. S., Mettupalayam
16	Campbell C. E.	"	Race Course, Coimbatore
17	Chaco R. (Miss)	L. M. P.	London Mission Hpl., Erode
18	Chandrasekharan G. A.	"	Chettipalayam, (via) Podanur
19	Catherine (Miss)	LadyApothy.,	Govt. Hpl., Udamalpet, Coimbatore Dt.

20	Chelliah C. M.	L. M. P.	Private Practitioner, Kodumudi
21	Condillae M. C. Major	D. M. O.	Rly. Hpl., Podanur
22	Cornelius (Miss) J. R.	Lady Apothy.,	Race Course, Coimbatore
23	Cornelius (Miss) P.	Lady Apothy.,	Race Course, Coimbatore
24	Daniel	L. M. P.	T. B. Sanatorium, Perundurai
25	Daniel A. M. (Mrs.) <i>formerly</i> (Miss) A. M. Moses	"	Methodist Mission Hpl., Dharapuram, Coimbatore Dt.
26	Dayanand K.	L. M. & S.	Mpl. Dy, Raja Street, Coimbatore
27	Dharinapalan P.	"	M. O., Mudis P. O., Pollachi
28	Dharinarajan S.	L. M. P.	Jail Road, Coimbatore
29	Durai Raj S.	L. M. & S.	M. O., Hakdypet P. O., Pollachi
30	Durai Raj T. M.	D. M. & S.	Sir Shammugam Road, R. S. Puram, Coimbatore
31	Eapen (Mrs.)	L. M. P.	Crosscut Road, Coimbatore
32	Eapen K. E.	"	Coimbatore
33	Eapen K. N.	"	Valparai P. O., (via) Pollachi
34	Ganapathi S. N.	M. B., B. S.	Annur
35	Ganapathi S.	"	Avanashi Road, Coimbatore
36	Gokernesan S.	L. M. P.	Private Practitioner, Dharapuram
37	Ganesa Mudaliar V. E.	M. B., B. S.	Govt. Hpl., Tirupur
38	Govinda Rao V.	L. M. P.	88, Agraharam St., Erode
39	Gopalan N.	"	Hardayat Estate Malakiparai P. O., (via) Pollachi
40	Gopalakrishnan G. N.	"	M. H. O., Tirupur
41	Gopalakrishna Rao T. A.	"	L. F. Dy., Sular
42	Gopalaswami N.	"	Pachamalai Estate, Valparai P. O., (via) Pollachi
43	Gordon (Mrs.)	"	Govt. Hpl., Tirupur
44	Govinda Nayar M.	L. M. P., T. D. D.	Raja St., Coimbatore

45	Harris D. E.	L. C. P. & S.	Herbert Brough Memorial Hpl., Chennimalai, Coimbatore Dt.
46	Hariharan Major V.	M. B., B. S., B. S. Sc.	Mpl. H. O., Coimbatore
47	Herbert C. (Mrs.)	L. M. P.	Govt. Hpl., Gobichettipalayam
48	Hiranyappa E. V.	L. M. P.	New Street, Erode
49	Jaganathan N.	M. B., B. S., T. D. D.	Big Bazaar Street, Coimbatore
50	Jaganatham (Miss) D. A.	L. M. & S.	Podanur
51	Jagaraya Mudaliar S. A.	L. M. P.	Cvl. Asst. Surgeon, (Retd.) St. Antony's Cottage, Coimbatore
52	Jayamma Diana	L. M. P.	Satyamangalam
53	Kalyanarama Iyer P. K.	M. B., B. S.	Brahmin Extension, Coimbatore
54	Kamath P. M.	L. M. P.	Gobichettipalayam
55	Kandaswami N.	"	Coimbatore
56	Kantayya (Mrs.) K. K. (Miss) Krupabai Nayanar	M. B., B. S.	Thiruvannamalai
57	Kelly P. J., Lt. Col.	L. M. S.	D. M. O., Coimbatore
58	Kolandaiswami	L. M. P.	R. C. Church Road, Podanur
59	Kothandaraman K.	"	Waterfall Estate, Attakatti P. O., (via) Pollachi
60	Kondaswami N. G.	D. M. & S.	P. N. Palayam
61	Kesava Marar P. V.	M. B., B. S.	Raja Street, Coimbatore
62	Krishna Ayyar R.	"	Palladam
63	Krishnamurthi A. V.	"	"Benhome" Coimbatore
64	Krishnamurthi G. A.	"	Cowdhalli, Kollegal
65	Krishnamurthi S.	"	Sivagiri P. O., (via) Unjalur
66	Krishnamurthi T. V.	"	Perianaickenpalayam P. O., Coimbatore Dt.
67	Krishnan Unni T.	"	73, Agraharam Street, Erode
68	Krishnan P. N.	"	T. B. Sanatorium, Perundurai

69	Krishna Rao V.	M. B., B. S.	Dewan Bahadur Road, Corner of Ponnuramam Street, R. S. Puram, Coimbatore
70	Krishnaswami N.	"	C/o C. Narasimha Ayyangar Lawley Road P. O., Coimbatore
71	Krishnaswami N. (Major)	I. M. S.	R. S. Puram, Coimbatore
72	Krishnaswami Pillai T. D.	L. M. P.	R. Dy., Satyamangalam
73	Krishnaswami V. S.	"	Raja Street, Coimbatore
74	Krishnaswami V.	"	20/112, Sullivan Street, Coimbatore
75	Krishnaswami Asari M.	L. M. P.	Chittode (via) Erode
76	Kuduva	M. B., B. S.	Kollegal
77	Kunhiraman Nayar M.	"	M. O., Valparai P. O., Estate
78	Kuppuswami N. C.	L. C. P. & S.	83, Kutcherri Street, Erode
79	Kuppuswami P. R.	B. A., L. M. & S.	Jail Road, Coimbatore
80	Krishna Bader Pillai	L. M. P.	M. H. O., Erode
81	Lakshmana Rao R.	"	Dewan Bahadur Road, R. S. Puram, Coimbatore
82	Leelakrishnan A. G.	M. B., B. S.	Coimbatore
83	Lakshmana Setty	L. M. P.	Kollegal, Coimbatore
84	Mascarenhas J. A.	L. M. & S.	Jail Road, Coimbatore
85	Mathew N. S.	L. C. P. & S.	Lord Napier Street, Erode
86	Menon U. A.	L. M. P.	Big Bazaar St., Coimbatore
87	Menon P. R. R. (Capt.)	M. B., B. S.	Govt. Hpl., Udamalpet
88	Mathai A. P. (Miss)	"	Govt. Hpl., Kollegal
89	Munuswami L.	"	54, Chinna Ellai Lane, Coimbatore
90	Muthukumaraswami M.	"	Udamalpet, Coimbatore
91	Muthuswami L. K.	"	Erode
92	Muthuswami Nadar U. S.	L. M. P.	Sankara Dy., Udamalpet
93	Myleri Nadar S.	"	Udamalpet
94	Nanjappa C.	"	V. H. Road, Coimbatore
95	Narasimha Ayyangar R.	"	Gobichettipalayam
96	Narasimham S. S.	L. M. P.	Coimbatore

97	Narasimhayya R.	M. B., B. S.	C/o Mr. Hiranyappa Iyer, Mirasdar, Satyamangalam Raja Street, Coimbatore
98	Natarajan G. N. (Capt.)	D. M. & S.	R. S. Puram, Coimbatore
99	Narayanan K.	L. M. P.	R. S. Puram, Coimbatore
100	Narayanan M. R.	D. M. & S.	Tirupur
101	Narayanan M. S.	L. M. & S.	Brahmin Extension, Coimbatore
102	Narayanan T. K.	L. M. P.	Valparai P. O., Pollachi
103	Narayanan P. V.	"	Pappanaickenpalayam, Coimbatore
104	Narayanaswamy N. R.	"	25th ward, Pallapalayam
105	Natesan P. A.	"	76, New Street, Udamalpet (On Military Duty)
106	Natarajan M.	M. B., B. S.	
107	Nayudu Raymond Vivan Norman	M. B. C. S. (Eng).	S. A. S., S. I. Ry., Hospital, Erode
108	Padmanabha Menon C. R. Lt. Col.	M. B., M. S. L. M. P.	M. O., Erode Komarapalayam, Bhavani, P. O., (via) Erode
109	Parthasarathi P. S.		
110	Parthasarathi M. A., Lt. Col.	A. D. M. O.	Govt. Hd. Qrs. Hospital, Coimbatore
111	Parthasarathi Naidu V.	M. B., B. S. L. M. P.	Podanur Municipal Dispensary Devangapet, Coimbatore
112	Paul (Mrs.) M. L.	"	M. G. Eye Hpl., Coimbatore
113	Pichai Robert I.	M. B., B. S.	London Mission Hpl., Erode
114	Pollard (Miss) H. M.	L. M. P.	C/o Messrs. Joseph & Co., Chemists & Druggists, Coimbatore
115	Pratap K.		
116	Rajagopala Udupa P.	D. M. & S. L. M. P.	Sukrawarpet, Coimbatore L. F. Dispensary, Talavadi
117	Rajagopalan G. T.	M. B., B. S.	R. S. Puram, Coimbatore
118	Rajagopalan G. N.	L. M. P.	Railway Hpl., Erode
119	Rajagopalan T. R.		

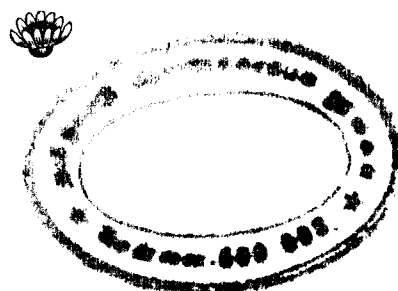
120	Rajagopal C. S.	M. B., B. S.	Ponnurangam Street, R. S. Puram, Coimbatore
121	Rajammal (Mrs.) G. V.	D. M. & S.	C/o Mr. Venkataswamy Naidu, Janardhana Mills, Singanallur
122	Rajaraman R.	L. M. P.	L. F. Dy., Uthukuli
123	Rajuvadan E.	"	Chittode, Bhavani (on Military Duty)
124	Ramachandran R. N.	L. M. P.	58, New Street, Udampalpet
125	Ramachandra Rao	B. A., M. C. P. S.	I. B. Road, Coimbatore
126	Ramaiyer C. V.	L. M. P.	Rural Dy., Kavundapady, (via) Erode
127	Ramakrishnan C. A.	"	L. F. Rural Dispensary, Negamam, (via) Pollachi
128	Ramalingam V.	"	Kodumudi
129	Ramamurthi K.	"	Sholagar Estate, Sholagar Post, (via) Pollachi
130	Ramanuja Acharya A.	"	L. F. Hospital, Bhavani
131	Ramanathan S.	"	R. M. P., Pongalur
132	Ramanathan R.	D. M. & S.	C/o K. N. Renga Iyer, 5/19, Kurichi Road, Podanur
133	Ramanathan K. N.	D. M. & S., D. L. Sc.	Brahmin Extension, Coimbatore
134	Rama Raj C. V.	M. B., B. S.	Brahmin Extension, Coimbatore
135	Rajaratnam G. S.	M. B., B. S.	Kattoor
136	Ramaratnam Iyer G.	L. C. P. & S.	Erode
137	Ramaswami B. R.	L. M. P.	Bhavani
138	Ramaswami C. S.	L. M. & S.	Raja Street, Coimbatore
139	Ramaswami Mannadiar C.	"	M. O. Pannimeda Estate, Valparai P. O.
140	Ramaswami Naidu P. N.	L. M. P.	Pappanaickenpalayam
141	Ramasubramaniam M. K.	M. B., B. S.	Brahmin Extension, Coimbatore
142	Rangachar P.	L. M. P.	R. M. P., Lockanahalli
143	Ranganatham K.	L. M. & S.	67, Eswaran Koil Street, Erode

144	Ranganatham P. V.	L. M. & S.	S. A. S., Mpl. Dy., Tirupur
145	Rangaswami V.	M. B., B. S.	C/o S. Ramaswami Naicker, Erode
146	Ratnasabapathy P.	L. M. P.	A. D. H. O., Coimbatore
147	Rosamma J. (Mrs.) <i>formerly</i> (Miss Koothoor Rosamma John)	"	Erode
148	Sakharama Rao N.	L. M. P., L. O.	Gopalapuram, Coimbatore
149	Sambandam P. S.	L. R. C. P., M. R. C. S.	Grey Town, Coimbatore
150	Sampath Ayyangar N. K.	M. B., B. S.	Jail Road, Coimbatore
151	Santhanamary G.	D. M. & S.	Raja Street, Coimbatore
152	Saraswathi M. K. (Miss)	M. B., B. S.	R. S. Puram, Coimbatore
153	Samuel L. (Mrs.)	L. M. P.	Govt. Hospital, Gobi
154	Sharadambal (Mrs.)	D. M. & S.	Kastooribai Memorial Hospital, Singanallur
155	Sargunar V. (Miss)	M. B., B. S.	Syrian Church Road, Coimbatore
156	Mrs. S. Aiyadurai	L. M. P.	R. S. Puram, Coimbatore
157	Sekharam P.	"	Municipal Health Officer, Pollachi
158	Shenoy M. M.	"	Lord Napier Road, Erode
159	Sengaliyappan S.	L. M. P.	Govt. Hd. Qrs. Hospital, Coimbatore
160	Sengottayan K.	M. B., B. S.	Gobichettipalayam
161	Sesha Ayyar V.	L. M. P.	Tirupur
162	Shammanna H. V.	"	R. M. P., Palayam
163	Sitaraman P. R.	"	L. F. Hpl., Satyamangalam, Coimbatore Dt.
164	Sitaraman T. C.	"	S. A. S., Palladam, Coimbatore
165	Siva Ayyar S. V.	M. B., B. S.	R. S. Puram, Coimbatore
166	Sivanandam T. V.	"	Hony. Asst. M. O., Govt. Hd. Qrs. Hpl., Coimbatore
167	Sivaraman C. S.	D. M. & S.	R. M. P., Vellakoil
168	Sivasami Ayyar P.	L. M. P.	L. F. Dy., Purasagoundenpalayam

169	Srikantan S. R.	L. M. P.	R. S. Puram, Coimbatore
170	Srinivasamurti K. S.	"	Srinivasa Pharmacy, Kollegal
171	Srinivasan C. K.	"	Coimbatore (on Military Duty)
172	Srinivasan S.	M. B., B. S.	Govt. Hpl., Gobichettipalayam
173	Sriramamurthi R.	L. M. P.	Udamalpet
174	Subba Rao V.	L. M. P.	L.F.Dy., Punjai Pulianpatti
175	Subbaraya Mudaliar A.	"	Ganapathipalayam, Modakkancheri P. O. Coimbatore Dt.
176	Subbian N.	"	Pallapalayam
177	Subburatnam (Miss) G.V.	D. M. & S.	Gobichettipalayam
178	Subburatnam Angappa (Mrs.)		L. F. Dy., Mettupalayam
179	Subbaratnam G. L.	M. B., B. S.	Gobichettipalayam
180	Subramaniam Pillai N.	L. M. P.	Tuluva St., Karungalpalayam, Erode
181	Subramania Iyer K. A.	"	Govt. Hd. Qrs. Hpl., Coimbatore
182	Subramania Iyer, K. N.	"	Andiyur
183	Subramanyan, T. K. Capt.	"	Mill Road, Coimbatore
184	Subramanyam C. R.	"	Pulavadi, Udamalpet, Coimbatore Dt.
185	S. S. Subramaniam, Capt.	D. M. & S.	L. F. Dy., Thondamuthur
186	Subrahmanyam K. V.	L.M. & S., B.S.Sc.	R. S. Puram, Coimbatore
187	Subramanian S.	D. M. & S.	Satyamangalam
188	Subramanian S. V.	M.B., B.S., T.D.D.	Jail Road, Coimbatore
189	Subramaniam K. V.	M. B., B. S.	College Road, Coimbatore
190	Sundaran N.	"	15, Subramanyaswami Koil St., Pollachi
191	Sundaram C. R.	L. M. P.	Main Road, Mettupalayam
192	Sundara Rajan R.	M. B., B. S.	Raja Street, Coimbatore
193	Sudhakara Rao Major	M.B., B.S., M.R.C.P.	R. S. Puram, Coimbatore
194	Sundararajulu Naidu J. R.	L. M. P.	Mpl. Dy., Devangapet, Coimbatore

195	Sundareswaran D.	M. B., B. S., L. O.	Brahmin Extension, Coimbatore
196	Swamidasan Y. D.	L. C. P. & S.	Talavadi P. O.
197	Swarnambal (Miss) S. V.	M.B., B.S., D.G.O.	Govt. College Road, Coimbatore
198	Thanaratnam	M. B., B. S.	Talliar P. O., (via) Udamalpet
199	Tala (Mrs.) A. formerly A. E. Perumal (Miss)	L. M. P.	Tirupur
200	Thayarammal V.	"	Vettaikkaranpudur, Pollachi Taluk
201	Thyagaraja Chetty S.	"	Kangayam
202	Thyagarajan K. R.	L. M. & S.	Brahmin Extension, Coimbatore
203	Theyunni Menon K. G.	L. M. & S.	Race Course, Coimbatore
204	Thomas V. T.	L. M. P.	Murali, Velli-Tirupur P. O., Bhavani Taluk
205	Thomas O. C.	"	L. F. Dy., Avanashi (Military Duty)
206	Thirumurthi K. S.	"	Tirupur, Coimbatore Dt.
207	Vaidyanathan T. S.	M. B., B. S.	Lawley Road P. O., Coimbatore
208	Varkey M. (Miss)	L. M. P.	Dharapuram
209	Vasudevan M. C.	"	Private Practitioner, Satyamangalam
210	Vasudevan M. K.	"	Govt. Hd. Qrs. Hpl., Coimbatore
211	Vasudeva Rao I.	"	L. F. Dy., Kottur
212	Vasudeva Taravanar T.	"	Olagadam P. O., (via) Bhavani, Erode Tq., Coimbatore Dt.
213	Vedachala Mudaliar K. S.	M. B., B. S.	Avanashi Road, Coimbatore
214	Vedamuthu I.	D. M. & S.	Talliar Estate, Talliar Post, Udamalpet
215	Veeraswami R.	"	Railway Hospital, Erode

216	Velappan N.	L. M. P.	Grey Town, Coimbatore
217	Velayudhan P. K.	M. B., B. S.	Pollachi
218	Venkataraman G. K.	L. M. & S.	Gobichettipalayam (on Military Duty)
219	Venkataraman T. R.	L. M. P.	R. S. Puram, Coimbatore
220	Venkataraman E. S.	"	32, Agraharam Street, Erode
221	Venkataraman G. N.	M. B., B. S.	Gobichettipalayam
222	Venkataraman R.	L. M. P.	L. F. Dy., Valparai
223	Venkatraswami Naidu S.	"	Trichy Road, Coimbatore
224	Venugopalaswamy K.	"	Udamalpet
225	Vijarahavan C. A. Capt.	"	"Shanti Nivas" Gopalapuram, Imperial Bank Road, Coimbatore
226	Visvasam S. D.	"	Tirupur
227	Viswanatha Ayyar C. V.	"	Nambliyyur, Coimbatore Dt.
228	Viswanathan B. S.	L.M. & S., T.D.D.	Tuberculosis Sanatorium, Perundurai, Coimbatore Dt.
229	Viswanathan C. V.	L. M. P.	Hanur
230	Vittal Rao C. R.	M. B., B. S.	Govt. Hpl., Pollachi, Coimbatore Dt.
231	Welford E. J.	M. B., Ch. B. (Edin.)	London Mission Hpl., for Women and Children, Erode
232	Yegneswara Ayyar R.	L. M. & S.	77, Karuppa Goundan St., Coimbatore



Some of the Renowned Specialities:

SYRUP GLUCAL

Calcium Gluconate combined with Potassium Guaicol Sulphonate, Pepsin and other valuable ingredients. For Coughs, Colds and all affections of the chest and Respiratory Tract. Rs. 2/- a bottle.

BRONCASTHMIN ELIXIR

Ensures relief in Asthma, Bronchitis and Kindred Ailments. Contains Ephedrine, Codeine, Euphorbia, Caffidin, etc. Rs. 3/4/- a bottle.

ELIXIR GLYCEROTONE

A unique preparation of the Glycerophosphates, containing the Glycerophosphates of Lime, Soda, Potash and Magnesium with Pepsin, Strychnine and Kola. The Great Nervine Tonic. The remedy for all Mental and Physical Exhaustion. Rs. 3/- a bottle.

Large Stock of Drugs, Chemicals, Surgical Instruments and appliances are held to meet the requirements of the profession at competitive prices.

WILFRED PEREIRA LIMITED,

QUALIFIED CHEMISTS,

VEPERY :: MADRAS.

BRANCHES AT:

MOUNT ROAD, MADRAS, COIMBATORE, COONOR,
OOTACAMUND, KOTAGIRI, KODAIKANAL.

CONSULT

FOR

All Allopathic Medicines

RAMRAJ BROS.,

CHEMISTS,
BRAHMIN EXTENSION, :: COIMBATORE.

Stockists for:

"SIRAKRISEN" Dr. RAO'S WHOOP CURE.

LIVERITES (REGD.) A WELL TRIED PRODUCT For INFANTILE BILLIARY CIRRHOIS. <i>Composition & Literatures on request.</i>	VINO-FORMAT CO. (With Vitamins B₁ & C). A General Tonic for Muscular Tone and Nervous Vigour. Composition: Formates of Potassium, Sodium and Lithium, Vitamins B₁ & C, and fermented grape juice in a palatable base. Vitamin Content: B₁ = 2000 I. U. per fluid oz. C = 2000 I. U. per fluid oz.
--	--

LIVERITES COMPANY, TANUKU (M. & S. M.)

DISTRIBUTORS:

Sole Distributors for Tamilnad and Ceylon:

Messrs. THE ALLIED AGENCIES, PUDUKKOTTAI (S. India.)

Copy of letter No. 29 - 47/42 - SI (II) dated the 4th July, 1942, from the Director-General, Indian Medical Service, to the Bengal National Chamber of Commerce:-

"Reference your letter No. G. I/Ik. Every endeavour is always made to utilise Indian firms and quite considerable orders for Diphtheria and Tetanus Antitoxin have recently been placed with Messrs. Bengal Immunity Co."

"Our inspection reports of various firms manufacturing Sera show that the above mentioned firm was the only one in a position to produce Sera in quantities suitable to purchase for Government requirements and to satisfy all requirements as to conditions and standards of manufacture."

For
ABSOLUTE DEPENDABILITY
BENGAL IMMUNITY SERUM
RECOGNISED AS INDIA'S BEST

Extract from the Report of the Committee of the Indian Chemical Manufacturer's Association for the year 1942 - 43:-

"A further letter was received from the Government of India, Department of Supply, on the 25th July, 1942, wherein it was pointed out that an enquiry was made regarding the matter and it was found that Bengal Immunity Co., Ltd., was the only Indian firm at that time able to supply Sera upto the standard of army specifications and the same had been given orders....."

BENGAL IMMUNITY CO., LTD.,
153, DHARAMTALA STREET, CALCUTTA-13.

The Coimbatore District Medical Association Annual, 1946

CLINICAL LABORATORY

COIMBATORE (R. S. PURAM)

(STARTED IN 1944)

*

Provides Complete Diagnostic Laboratory Service to the Medical Profession.

Equipped for all Pathological,
Bacteriological and Bio-Chemical Investigations — Such as
Routine Blood, Urine, Faeces, Sputum and C. S. F. Examinations.

GLUCOSE TOLERANCE TEST

KAHN TEST

BLOOD-UREA CLEARANCE TEST

WIDAL TEST

FRACTIONAL TEST MEAL ANALYSIS

BLOOD & URINE CULTURES

KAHN TEST DONE ON MONDAYS & FRIDAYS

WIDAL TEST DONE ON ALL DAYS.

For further details apply to: *Clinical Laboratory, R. S. Puram.*

FERROGEN

An Ideal, Palatable Blood Regenerating Restorative Iron Tonic
Containing IRON, MANGANESE, CALCIUM, POTASSIUM & PHOSPHORIC ACID
in an aromatic base.

For Anæmia, Chlorosis and other Debilitating Diseases.

PAMPALON

A UTERINE TONIC

Indicated in Leucorrhœa, Dysmenorrhœa, Hæmorrhage (Menorrhagia)
Endocervicitis, Post-Partum Hæmorrhage and Allied Conditions.

We Also Manufacture All Standard Injections.

TRACOBAR PHARMACEUTICALS LIMITED,
MANUFACTURING CHEMISTS,
COIMBATORE.

The Coimbatore District Medical Association Annual, 1946

Murugan Pharmacy

DISPENSING CHEMISTS, DRUGGISTS AND GENERAL MERCHANTS

9, ST. MICHAEL'S EMPORIUM

COIMBATORE

Dealers in:

DRUGS & CHEMICALS
PATENT MEDICINES
SERA & VACCINES
SURGICAL INSTRUMENTS
HOSPITAL REQUISITES
RUBBER GOODS
TOILETS ETC.

Special Rates for Medical Profession

THE RELIABLE BUSINESS HOUSE
FOR THE
BEST VARIETIES of GOODS at the CHEAPEST PRICE

For Your Requirements of:

MEDICINES
DRUGS & CHEMICALS
SURGICAL NECESSITIES
INFANTS & INVALIDS REQUIREMENTS
TOILETS & SUNDRIES

Suppliers to:

Hospitals, Nursing Homes,
Sanatoria, Estates, Etc., Etc.

Agents for:

UNDERWOOD TYPEWRITERS
AND ACCESSORIES
FOR COIMBATORE, SALEM, NILGIRI DISTRICTS AND PALGHAT.

KRISHNASWAMI & Co.

PHARMACEUTICAL CHEMISTS AND GENERAL SUPPLIERS

"KRISHNAMANDIRAM"

10/43, DEWAN BAHADUR ROAD

R. S. PURAM :: COIMBATORE

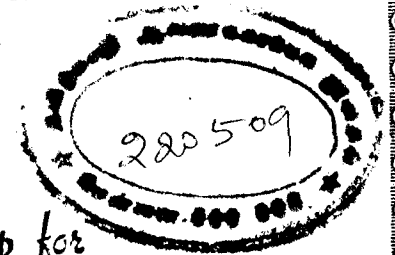
Branch: POWER HOUSE ROAD, GANDHIPURAM, COIMBATORE

THE PARAMOUNT DRUG STORES,

DISPENSING AND FAMILY CHEMISTS,
CARNATIC BUILDINGS,
COIMBATORE.

Now Run Under New Expert Management.

PRESCRIPTIONS ACCURATELY DISPENSED
WITH PURE DRUGS
BY QUALIFIED AND EXPERIENCED PHARMACIST
Late of Messrs. THOMSON & TAYLOR, LTD.,
EUROPEAN QUALIFIED CHEMISTS,
BOMBAY.



The Quality Chemists' Shop for

**ALL YOUR
MEDICAL, SURGICAL &
TOILET REQUIREMENTS**