

THE ANTISEPTIC

1956

DECEMBER 53-12



1345

Index Number

Vol. 53, No. 12

Regd. No. 9, M. 429

DECEMBER, 1956

The Antiseptic

A Monthly Journal of Medicine & Surgery

For the use of Registered Medical Practitioners, Hospitals and Laboratories only

Founded by the late Dr. U. RAMA RAU in 1904

Editor: U. KRISHNA RAU, M.B., B.S., M.L.A. Associate Editor: U. VASUDEVA RAU, M.B., B.S.

Editorial & Publishing Office: 323-24, Thambu Chetty St., Madras-1.

Telegrams: "ANTISEPTIC"

P. O. Box 166

Telephone: 2163

Subscription Rs. 7-8-0.

Foreign Rs. 10 a year.

Single Copy Re. 1-0-0 in advance

Pages from 885 to 962

Contents on Advt. page 2 & 4

Index to Advertisers on page 6

1345
4-56

VITAMULSON

A Multivitamin Mixture



Promotes Normal Growth

Increases Resistance to Infection

Improves General Metabolism

EAST INDIA PHARMACEUTICAL WORKS LTD.,

CALCUTTA-26.



*an entirely
new type
of tranquilizer
with
muscle relaxant
action*

Miltown*
MEPROBAMATE



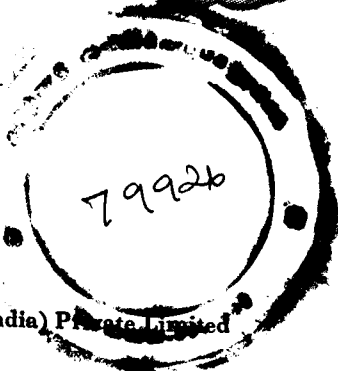
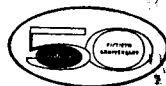
clinically tested and orally effective in

**anxiety, tension
and mental stress**

- Not related to reserpine or other tranquilizers
- Selectively affects the thalamus
- No autonomic side effects . . . Well tolerated
- Effective within 30 minutes for a period of 6 hours

Literature available to physicians on request

PACKAGES: Bottles of 25 tablets, 400 mg. each



Distributed by: Lederle Laboratories (India) Private Limited
P. O. B. 1994, BOMBAY 1.

• Registered Trade-Mark

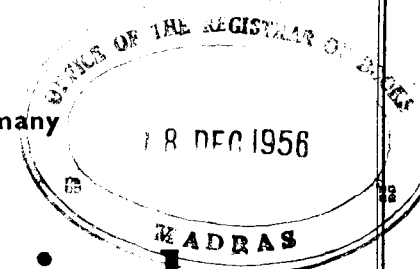
DEC.]

THE ANTISEPTIC

[1956

A NEW product from

Messrs. Nordmark-Werke, G.m.b.H. Germany



K 5 Medicinal HAIR-TINCTURE

Contains Rubriment, nicotinic-acid ester of
benzyl-alcohol and Vitamin K5

It is a new effective remedy for:

Loss of Hair

Baldness of nervous or parasitic origin or
caused by infectious or wasting diseases

Hair lesions caused by injuries

Trichophytosis

Dermatitis-Seborrhœica



Factory Representatives:

**GERMAN REMEDIES & TRADING Co.
PRIVATE LTD.,**

P. O. Box 1945, : BOMBAY-1

THE ANTISEPTIC

Vol. 53, No. 12

CONTENTS

DECEMBER 1956

ORIGINAL ARTICLES,

- | | PAGE |
|---|------|
| Viral Hepatitis (Acute Infective Hepatitis)—K. N. Gour, M.D., M.R.C.P. (Ed.), F.R.F.P.S.G., D.C.H. (Eng.), D.P.H., Agra | 885 |
| Piperazine Adipate in the Treatment of Ankylostomiasis and its Effects on the Liver, Bonemarrow and Kidneys—M. N. Bhattacharyya, B.A., M.B., D.T.M., D.C.H., M.R.C.P., and S. D. Barua, M.B., B.S., Dibrugarh | 895 |
| Investigation and Treatment of Heterophoria—B. K. Dhir, M.S., D.O.M.S. (London), Indore | 901 |
| Occlusive Arterial Diseases of the Leg—N. K. Rangarajan, M.B., B.S., Calcutta | 905 |
| The Treatment of Typhoid Fever by a Combination of Antibiotics—M. G. Prabhu, M.D., and D. S. Kumaraswami, B.A. M.B., B.S., Madras | 909 |
| Cardiac Massage—C. V. Shevade, M.B., B.S., D.T.M., Chhatarpur, V.P. | 915 |
| CASES AND COMMENTS: | |
| Arsenic Encephalopathy (Report of a Case)—S. Chatterjee, M.B., B.S., D.T.M. (Cal.), and C. M. Gupta, M.B., B.S., (Lucknow), Meerut | 921 |
| The Strangulation of the Sigmoid Colon in a Mesenteric Hole—M. S. Verma, B.Sc., M.B., B.S., and P. J. Deshpande, A.M.S., M.A. and Th. S.C.S.R. (Vienna) B.H.U. | 929 |
| Clinical Trials on a Laxative Preparation of Pure Senna Glycosides—M. T. Modi, Bombay | 932 |
| Sedation with Analgesia in Ocular Surgery—H. D. Dastoor, F.C.P.S., D.O. (Oxon), D.O.M.S., (Lond.), Bombay | 936 |
| Treatment of Enteric Fever—A Survey of 44 Cases—Kishori Lal Sachar, L.M.P. (U.P.), Punjab | 937 |
| Anæmia and Anxiety Neurosis—S. N. Chakravarty, M.D., Lucknow, U.P. | 939 |

(Continued on Advt. page 4)

A SELECTED RANGE OF OUR TABLETS

Aspirin 5 Gr.
A.P.C. 6½ Gr.
Blaud's Tablets (s.c.) 5 Gr.
Cal. Gluconate 5 Gr. & 7½ Gr.
Cal. Lactate 5 Gr.
Calomel 1 Gr. & 2 Gr.
Dover's Powder 1 Gr. & 5 Gr.
Ephedrine Hydrochlor ½ Gr.

Santonin ½ Gr.
Santonin & Calomel
Sodium Citrate 5 Gr.
Soda Salicylas 5 Gr.
Sulphadiazine 7½ Gr.
Sulphaguanidine 7½ Gr.
Sulphanilamide 7½ Gr.
Sulphathiazole 7½ Gr.

VITAMINS

Beovit (Vit. B₁ 5 mg. & 10 mg.)
Ceovit (Vit. C 50 mg.)
Esty B Complex (Vit. B Complex)

SPECIALITIES

Influenza Tablets
Throat Tablets
Vegetable Laxative

Write for your copy of the Price List today

TABLETS OF GUARANTEED QUALITY

LITTLE'S ORIENTAL BALM & PHARMACEUTICALS LTD.
SOLE SELLING AGENTS FOR:

Tablets (Private) Ltd., 11/12, First Line Beach, Madras-1

DEC. '56]

THE ANTISEPTIC

3

children...

a special responsibility



The new 'Sulphamezathine' Suspension (Oral) provides a convenient alternative to 'Sulphamezathine' Tablets, and is particularly suitable for children. Attractively flavoured, this product has been re-formulated as a stable homogeneous emulsion which does not separate on storage, so that each teaspoonful may be relied upon to contain the same dose (0.5 gramme) of 'Sulphamezathine'.

FOR RAPID AND EFFECTIVE TREATMENT OF BACTERIAL INFECTIONS IN CHILDREN

'Sulphamezathine'

Sulphadiazine B.P.

SUSPENSION (ORAL)

Trade Mark

the safe sulphonamide

IMPERIAL CHEMICAL INDUSTRIES (INDIA) PRIVATE LTD.
Calcutta Bombay Madras New Delhi

Sole Distributors in India for

IMPERIAL CHEMICAL (PHARMACEUTICALS) LTD., MANCHESTER



107 646

EDITORIALS:	PAGE	PAGE
Medical Research in India—(Prosperous Days Ahead) ...	941	Treatment for toxæmias of pregnancy ... 952
Ophthalmologists in Conference at Coimbatore ...	943	Surgery:
Leprosy Control in India ...	944	Medical aspect of mitral commissurotomy ... 940
GLEANINGS FROM MEDICAL PRESS:		On the treatment of acute generalized peritonitis ... 953
Venereology:		The management of acute gastroduodenal hæmorrhage ... 953
Non-specific urethritis ...	919	The treatment of fractures by transfixing .. 954
Toxic urethritis ...	920	Complications of treatment of severe burns 954
Causes of decreased syphilis incidence ...	947	Medicine & Therapeutics:
Hypertherm treatment of neurosyphilis. Methods of evaluation and prognostically important factors ...	947	Treatment of recurrent urolithiasis with aspirin ... 904
Pædiatrics:		Favourable effect of aspirin in heat stroke .. 914
The rehabilitation of hemiplegic patients... 903		The treatment of tuberculous lung cavities by continuous intrapulmonary drip: A preliminary report ... 928
Rehabilitation of poliomyelitis stricken children ...	948	The physician's aim ... 938
Chronic otitis in children ...	948	Practice of medicine ... 940
The psyche as an ætiologic agent in infantile eczema ...	949	Simplified heparin therapy of impending and acute myocardial infarction ... 946
Obstetrics & Gynæcology:		Venous angioma as the cause of cerebellar apoplexy ... 954
Value of antenatal exercise ...	894	Albuminuria in congestive heart failure ... 955
Erythromycin in combination with triple sulfonamides in the treatment of acute gonorrhoea in the male ...	900	The treatment of allergic diseases with the steroid hormones ... 956
Is premature birth preventable ...	935	Herpes zoster ... 957
The influence of hormone therapy on metastatic mammary carcinoma ...	949	Bronchial asthma ... 958
Factors affecting premature neonatal mortality ...	950	Diet for the older patient ... 959
Diabetic coma and diabetes in pregnancy ...	951	Books Received ... 959
		Correspondence ... 960
		News and Notes ... 960
		Preparations and Inventions ... 962



NEW

ISOLEVIN

(l-Isoprenaline bitartrate)

FOR EFFECTIVE TREATMENT OF ASTHMA

Available: Inhalation solution in packings of 10cc. & 100 cc.—(0.75%)
Sublingual tablets in packings of 20 & 100 tabs.—(15mg.)

CILAG-HIND (PRIVATE) LTD. 15, CAWASJI PATEL ST., BOMBAY-1

HUMAN PARASITES & PARASITIC DISEASES

By

K. D. CHATTERJEE, M.D. (CAL.)

766 pp. Profusely Illustrated

Price Rs. 65/-

Special concession of Rs. 50/- per copy for Medical Students and Practitioners upto 31-3-57.

To be had of:

DAS GUPTA & CO., LTD.,

54/8, COLLEGE ST., CALCUTTA-12

MEDICAL BOOKS

(at reduced rates)	Rs. A.
WAKELY: Modern Treatment Yearbook 1956 Sh. 25/-	15 0
BLACK'S Medical Dictionary 1953 1022p. 416 illus. & c. Sh. 30/-	15 0
MARTIN: Peripheral Vascular Disorders, 1956. New Book, 856p. 568 illus. 35 in col. Sh. 110/-	69 6
MCGREGOR: Practical Prescribing 1953	4 8
DICKINSON: Techniques of Conception Control, 3rd ed. 50 half-tone illus.	2 8
MEDICAL ANNUAL 1956 Sh. 38/6	22 0
BAILEY: Demonstrations of Operative Surgery, 1954, 402p. 571 illus.	16 8
CURREN-GUTTMAN: Psychological Medicine 1955	13 2
FARQUHARSON: Textbook of Operative Surgery, 1954, 863p. 945 illus. Sh. 75/-	46 14
PRIMER: Hints of Prescribing — ORDER TODAY —	2 10

SARCOR BOOK COMPANY
10/86, MATTANCHERY

COCHIN-2 (S.I.)

3 ORTHO products for vaginal therapy

Triple Sulfa Cream

For treatment of vaginal infections; post-operative and post-partum care; treatment after cervical cauterization. A water-dispersible cream, containing three sulphonamides and 1% urea peroxide for selective control of vaginal pathogens at their optimum pH range.

Aci-Jel Therapeutic Vaginal Jelly

For restoration and maintenance of normal vaginal acidity; treatment and prophylaxis of non-specific vaginitis. A buffered acid (pH 4.0) vaginal jelly containing acetic, boric and ricinoleic acids and oxyquinoline sulphate.

Dienoestrol Cream

For topical use in treatment of post-menopausal and atrophic vaginitis. An absorbent cream, containing 0.1 mg of synthetic oestrogen per gramme.



AVERAGE DOSE:
1-2 applications daily for duration of therapy

PACKAGING: 3 ounce tubes. ORTHO measured-dose vaginal applicator can be used with all 3 products. Specify applicator on first prescription only

Manufactured by:
ORTHO PHARMACEUTICAL LIMITED
High Wycombe, England

IMPERIAL CHEMICAL INDUSTRIES (INDIA) PRIVATE LIMITED
Post Box 310 BOMBAY • Post Box 334 CALCUTTA • Post Box 130 MADRAS • Post Box 107 NEW DELHI

Detailed literature available from your nearest office.

THE ANTISEPTIC

Vol. 53, No. 12

INDEX TO ADVERTISERS

DECEMBER 1956

A		J—(Contd.)	
Advertiser	PAGE	Advertiser	PAGE
Abbott Laboratories India Ltd.	61	Jammi Venkataramanayya & Sons	46
Adcoo Ltd.	47	Jivdaya Netraprabha Karyalaya	73
Alarsin Pharmaceuticals (India) Private Ltd.	74	John Wyeth & Brother Ltd.	54, 86
Alembo Chemical Works Co. Ltd.	22	Juggat Singh's Son & Bro	16
Allen & Hanburys Ltd.	28		
Amarchand Sobachand	80		
Aseptic Co.	74	Kesari Kuteeram Private Ltd.	52
Associated Drug Co. Private Ltd.	31	Kothari Book Depot, The	39
Atlantis (East) Ltd.	70		
Atul Drug House	15	Lederle Lab. (I) Private Ltd. <i>Inside Front Cover</i>	
		Lever Bros. (India) Private Ltd.	42
B.A. Bros.	73	Lord & Co., J. L.	78
Babbal Bros. (Private) Ltd.	79		
B. D. H. (India) Private Ltd.	30, 53	Mandoss Drugs Ltd	75
Behar Chemical Works	75	Martin & Harris Private Ltd.	18, 28
Bengal Chemical	<i>Inside Back Cover</i>	Martin H. Smith Company	85
Bengal Health & Chemical Works Ltd.,	72	May & Baker (India) Private Ltd.	27
Bengal Immunity Co. Ltd.	37	Menley & James Ltd.	63
Bharat Book Corporation	8	Mohan Brothers,	78
Bhattacharji & Bhattacharji	47	Mukerji H. & Banerjee Surgical Ltd.	40
Biod Mills Co. Ltd.	72	Muller & Phipps (Asia) Ltd.	84
Birla Laboratories	50		
Bronkol Ltd.	75	Narotam & Co. C.	50
B. W. & Co. (India) Private Ltd.	57	Neo-Pharma Private Ltd.	18, 68
		Nestle's Products (India) Ltd.	14, 29, 42
Calcutta Chemical Co. Ltd., The	60	O.R.C.L. Ltd.	48, 74, 77
Capco Private Ltd.	66	Ortho Pharmaceutical Ltd.	5
Carr & Co., Ltd.	21	Organon Laboratories Ltd.	7
Chowgule & Co. (Hind) Private Ltd.	81	Oriental Pharmaceutical Industries Ltd.	40
Ciba Pharma Ltd.	12		
Oilag Hind (Private) Ltd.	4	Pannalal Bros.	76
Oipla Laboratories	26	Parke, Davis & Co. Ltd. <i>Outside Back Cover</i>	
Corn Products Co. (India) Ltd.	79	Pasteur Laboratories Private Ltd.	51
Cow & Gate Ltd.,	68	Parry & Co.	48, 56
Crookes Laboratories Ltd., The	20	Pixie Products	72
Current Technical Lit. Co., Private Ltd.	8, 44	Popular Book Depot, The	8
Dalal & Co., M. C.	73	Ranbaxy & Co., Private Ltd.	33
Dalmis Ltd.	51	Ravison Pharmaceuticals Ltd.	67
Darbara Singh & Sons	41	Rosbay & Co.	75
Das Gupta & Co.	4	Ruma Laboratories	46
Dey's Medical Stores Private Ltd.	31		
Dumex Private Limited.	61, 65	Sandoz Ltd.	24
		Sarabhai Chemicals	9, 10
East India Pharm. Works Ltd. <i>Front Cover</i>		Sarcor Book Company	4
Elil Lilly & Company of India, Inc.	25	Scientific Publication Concern	8
		Shah & Co., D.	74
Franco-Indian United Laboratories	11, 19	Shanti Trading Co.	85
		Sinora Chemicals	73
Geoffrey Manners & Co. Private Ltd.	55	Spencer & Co. Ltd.	45, 48
German Remedies & Trading Co. P., Ltd.	1	Sreevatsa Chemicals & Drugs Private Ltd.	76
Glaxo Laboratories (India) Private Ltd.	71	Sri Krishnan Bros.	73
		Stadmed Private Ltd.	41
Hall's Wine	45	Standard Pharmaceutical Works Ltd.	59
Hamdard	58	Suren & Co. Private Ltd. W. T.	49
Health & Co.	72	Swann & Co. Ltd. W. R.	38
Hering & Kent	32		
Hewlett & Son (India) Ltd. C. J.	36	Tablets Private Ltd.	2
Himalaya Drug Co., The	69	Thakore, T. M.	76
Hindusthan Drug House Ltd.	77	Therapeutic Pharmaceuticals	82
Horlicks, Ltd.	86		
		Ubique Chemical Laboratory Private Ltd.	72
I. C. I. (India) Private Ltd.	8, 17	Unichem Laboratories	84
Indian Health Institute & Lab. Ltd.	77	Union Drug Co. Ltd.	32
Indoco Remedies Ltd.	76	Unique Trading Corporation	83
Indo-French Pharmaceutical Co.	35, 44	United Pharma (India) Private Ltd.	78
Indo-Pharma Pharmaceutical Works	87	Universal Drug House Ltd.	72
Indra Laboratories	77		
Industrial & Engr. Apps. Co. Private Ltd.	72	V/O Mezhdunarodnaya Kniga, Moscow	39
		Volgas Ltd.	88
Jai Singh & Co., Dr.	8	Vora & Co., P. N.	78
Jai Singh's Son & Co.	52		
James A Jobling Co. Ltd.	48	Zandu Pharmaceutical Works Ltd.	88
		Zeal Pharmaceuticals	76
		Zona Chemical Co.	76

Dec. '56]

THE ANTISEPTIC

7

A LONGER-ACTING *

long-acting

A.C.T.H.

CORTROPHIN "Z"

CORTROPHIN "Z" is also:—

• **easily prepared**

1 cc. from the ampoule is injected into the contents of the rubber-capped vial, and after a gentle shake, CORTROPHIN "Z" is ready for use.

• **free flowing**

CORTROPHIN "Z" is a fine aqueous suspension. It can be used with the finest needle and the syringe is easily cleaned after injection.

• **painless**

No pain or related effect has been experienced with CORTROPHIN "Z."

• **very economical**

CORTROPHIN "Z" costs no more than normal A.C.T.H. but much less of it is required for treatment.

CORTROPHIN "Z" IS AVAILABLE FROM:—

20 i.u. of
Cortrophin "Z"
every 48 hours is
fully sufficient for
most patients

PACKS

CORTROPHIN "Z" is available in boxes containing 6 twin packs, each giving, when mixed, 40 i.u. of long-acting A.C.T.H.

Sole Agents for India and Burma:

MARTIN & HARRIS (Private) LTD.

BRANCHES:

Calcutta: Mercantile Buildings, Lall Bazar St. Bombay: Savoy Chambers, Wallace St.
New Delhi: 22-a, Mahant Bldgs. Asaf Ali Road Madras: Sunkurams Chetty St. Rangoon: P.O.B. 97



ORGANON LABORATORIES LTD., LONDON

LATEST MEDICAL BOOKS

BAILEY & LOVE—Short Practice of Surgery, 1956	Rs. A. ... 47-4
BAKER—Introduction to Medical Laboratory Technology, 1955	.. 22-8
BROWNE—Postgraduate Obstetrics and Gynecology, 2nd Series 1955	... 52-8
CAJAL—Studies on the Cerebral Cortex, 1955	... 20-10
DONALD—Practical Obstetrics Problems, 1955	... 33-12
KEATING—Anaesthetic Accidents, 1956	... 18-12
MALPAS—Genital Prolapse and Allied Conditions, 1955	... 35-10
NAISH—Breast Feeding, 1956	... 9-6
SIMON—Principles of Chest X-ray Diagnosis, 1956	... 37-8
SPOT DIAGNOSIS, Vols. I and II per set	... 12-12
THACKER—Postural Drainage '56	6-6

CURRENT TECHNICAL LITERATURE CO. PRIVATE

Madras Branch: LIMITED, Head Office:
331-333, Thambu Chetty St., "INDIA HOUSE,"
Post Box 128, Opp. G.P.O.,
MADRAS-1 P. B. 1374, BOMBAY-1

MEDICAL BOOKS

MODERN TREATMENT YEAR BOOK 1957 (please register your order— due in January 1957)	Rs. A. ... 15-10
BIRCH—Emergencies in Medical Practice, 5th Ed. 1956	... 23-7
BEAUMONT—Clinical Approach in Medical Practice, 1956	... 28-0
GRANT—Atlas of Anatomy, 4th Ed. 1956	... 60-0
GREY TURNER—Modern Operative Surgery, 2 vols. 1955/56 per vol.	... 46-12
REHFUSS—A Course in Practical Therapeutics, 3rd Ed. 1956	... 60-0
MAY & WORTH—Diseases of the Eye, 11th Ed. 1954 (40s)	... 23-12
IAN AIRD—A Companion in Surgical Studies, 2nd Ed. 1956 (due soon)	... 52-8

Please ask our prices for other Medical books also. Your enquiries & orders will receive our prompt attention.

BHARAT BOOK CORPORATION

Medical Booksellers & Publishers
KITAB MAHAL, DADABHAI NAOROJI ROAD,
BOMBAY-1
phone: 289950 gram: MEDIBOOK
Branches: Parel, Pombay-12 & Ahmedabad.

Dr. K. M. NADKARNI'S
INDIAN MATERIA MEDICA

Foreword by Col. R. N. Chopra

TWO VOLUMES

Pages 2367. In Attractive Box

"This is a monumental and informative work on Indian Materia Medica which will be widely welcomed by students and practitioners of Indian Medicine as well as by practitioners of other systems and other scientists interested in the vast extent and rich content of the pharmacopoeia of Indian Medicine..."
—The Hindu.

"...The third edition is excellently produced. The foreword by Col. Chopra confirms the value of this highly esteemed and well-known work. The number of pages has increased by more than a half. Descriptions of more than 1500 drugs have been added to the original of 1200 drugs..."
—The Times of India.

THIS MONUMENTAL WORK
FOR RUPEES SIXTY ONLY

Detailed Prospectus on application

Please ask for our complete Medical Catalogue.

THE POPULAR BOOK DEPOT (Regd.)
Lamington Road,
BOMBAY-7.

By RAI Dr. A. R. MAJUMDAR BAHADUR,
Prof. of Clinical Medicine, Medical College,
Calcutta, Bck.

MODERN PHARMACOLOGY
AND THERAPEUTIC GUIDE

Ninth Edition, Demy 856 pages and 63 Diagrams,
with Supplement of Recent Advances 1954 and
British Pharmacopoeia 1955

PRICE Rs. 14 PLUS POSTAGE

This contains up-to-date Pharmacology & Therapeutics exemplified by 500 chosen prescriptions and over 800 extr. pharm. preparations, these being indexed under 310 diseases of daily practice. It has Indian Food Recipes and Electrotherapy. Concise Encyclopaedia of latest Drug Information, especially suitable for a General Practitioner.

SCIENTIFIC PUBLICATION CONCERN,
9, Wellington Square, CALCUTTA 18

GERMAN MAKE DRESSING CASE

Containing:

1 Scissors Dressing Big German; 1 Scissors Dressing fine German; 1 Forceps Dissecting Big German; 1 Forceps Dissecting Fine German; 2 Probes Chromium; 2 Directors with Bar Scoop Chromium; 1 Scalpel B.P. Handle with Blade English; 1 Bistoury German; 4 Suture Needles English; 1 Hank Ligature Silk Down Bros. London; 1 Female Catheter Chromium; 2 Male Catheters International; 1 Cilia Forceps German.

20 Instruments Fitted in an English Velvet Lined Case Price Rs. 18/12/-

Only a limited number of sets available. This offer is therefore subject to stock being unsold

Dr. JAI SINGH & CO., BANARAS-2 U.P.

IN WOMEN,

the preferred broad spectrum
antibiotic preparation is

MYSTECLIN

STECLIN-MYCOSTATIN (SQUIBB TETRACYCLINE-NYSTATIN)

Usual broad spectrum antibiotic therapy may be followed by vaginal moniliasis. Mysteclin supplies well tolerated broad spectrum therapy without subsequent vaginal moniliasis.*

*Stone, M. L. and Mersheimer, W. L.: "Comparison of side effects of tetracycline and tetracycline combined with nystatin." Antibiotics Annual 1955-56, New York, Medical Encyclopedia Inc., 1956, p. 862.

Vaginal moniliasis following antibiotic therapy



Oral antibiotic therapy may cause an overgrowth of monilia in the vagina, producing vaginal moniliasis with vulvar pruritus and vaginal discharge. All women are susceptible, but this complication is especially frequent in women who are pregnant or diabetic. In many cases, the woman fails to inform the physician through embarrassment or failure to relate the condition to preceding antibiotic therapy.

SQUIBB

(Please turn over)

**vaginal moniliasis:
an increasingly
common complication of
antibiotic therapy**

"... wide use of penicillin and broad spectrum antibiotics, with resultant disturbance of vaginal bacteriology has increased markedly the incidence of yeast and fungus infections of the vagina. ... Before advent of the wonder drugs, relationship of trichomonas to monilia was roughly four to one in the usual office practice. Within the past eight years the ratio has been reversed with three monilia problems to one of trichomonas."

Lee, A. F. and Keifer, W. S.:
Northwest Med. 53:1227 (Dec.) 1954.

"Vaginal moniliasis ... is quite common and the incidence may well have been increased following the extensive use of the broad-spectrum drugs or prolonged oral use of penicillin."

Welch, H.: Editorial,
Antibiotic Med. 2: 74 (Feb.) 1954.

MYSTECLIN

*the only broad spectrum antibiotic
preparation that:*

- 1: provides the antibacterial activity of tetracycline and
- 2: protects the patient against monilial superinfection

Each Mysteclin capsule contains 250 mg. Steclin (Squibb Tetracycline) Hydrochloride, a well tolerated broad spectrum antibiotic, and 250,000 units Mycostatin (Squibb Nystatin), the first well tolerated antibiotic active against fungi. Minimum adult dosage: 1 capsule q.i.d.

Supply: Vials of 8, 16 and nested packing of 50.

SQUIBB

**A PARTIAL LIST OF
INDICATIONS FOR MYSTECLIN**

When caused by tetracycline-susceptible organisms, the following conditions are among those which may be expected to respond to Mysteclin:

Abscess	Metritis
Bronchiectasis	Osteomyelitis
Bronchitis	Otitis Media
Bronchopneumonia	Peritonitis
Burns, Infected	Pertussis
Cellulitis	Pharyngitis
Cervicitis	Pneumonia
Chancroid	Psittacosis
Colitis	Pyelonephritis
Cystitis	Q Fever
Diarrhea, Infectious	Rocky Mountain
Dysentery, Amebic	Spotted Fever
Dysentery, Bacillary	Salpingitis
Empyema	Scarlet Fever
Endocarditis,	Scrub Typhus
Bacterial	Sepsis, Puerperal
Epididymitis	Septic Sore Throat
Furunculosis	Septicemia
Gastroenteritis	Sinusitis
Gonorrhea	Skin Graft Infections
Granuloma Inguinale	Surgical Prophylaxis
Klebsiella Pneumonia	Tonsillitis
Laryngitis	Tracheobronchitis
Lymphadenitis	Tularemia
Lymphangitis	Typhus
Lymphogranuloma	Urethritis
Venereum	Vesiculitis
Mastoiditis	Wounds, Infected
Meningitis	

It is impossible to predict with certainty in which patients clinical moniliasis may develop as a result of broad spectrum antibiotic therapy.

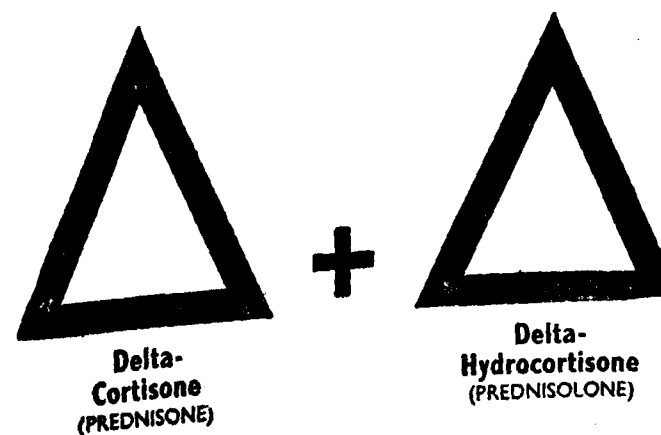
However, the added protection afforded by Mysteclin against monilial superinfection is *especially* important when antibiotic therapy must be prescribed in high dosage or for prolonged periods.

It is also particularly important in women; in debilitated, elderly, or diabetic patients; in infants (particularly prematures); in patients for whom concomitant cortisone or related steroid therapy is prescribed; and in individuals who have developed a monilial complication on previous broad spectrum therapy.

SARABHAI CHEMICALS, BARODA

Manufacturers & Distributors of Squibb Products in India

**The sum of advances in anti-inflammatory
adrenal corticotherapy**



BI-DECORTISYL

Rheumatology
Allergies
Asthma
Dermatology
Ophthalmology

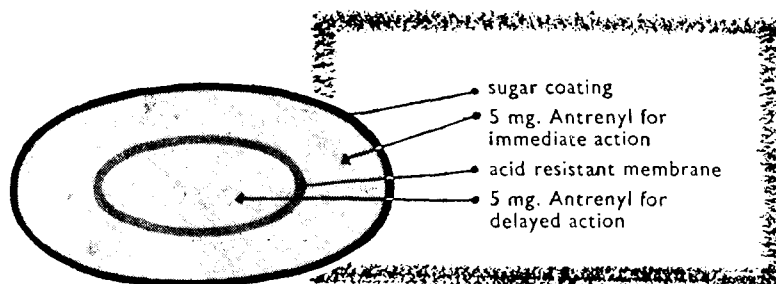
5 mg. tablets according to the formula:

Delta-Cortisone 2.5 mg.
Delta-Hydrocortisone 2.5 mg.
VIALS OF 10 & 20 TABLETS

LES LABORATOIRES ROUSSEL
Laboratoires Français De Chimiothérapie
PARIS-FRANCE

Particulars, Literature, Etc. From
FRANCO-INDIAN UNITED LABORATORIES
Bapnu Ghar, Hornby Vellard, BOMBAY 18,

Antrenyl



2 doses in 1 tablet
provides prompt and prolonged relief

day & night

in

gastric and duodenal ulcer,
hyperacidity, gastritis,
spasms of the gastro-intestinal,
biliary and renal tracts

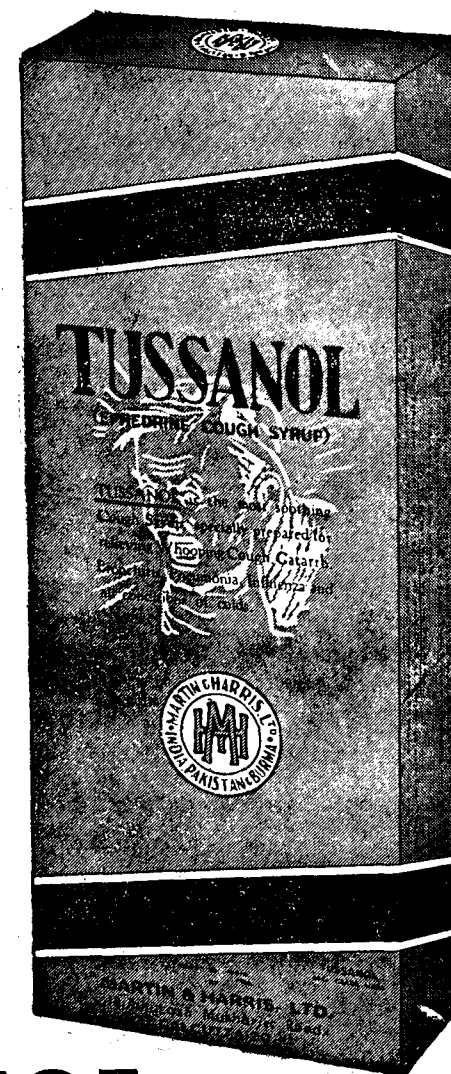
Antrenyl Duplex 10 mg.: bottle of 20 tablets
Antrenyl (plain) 5 mg.: bottles of 30 & 100 tablets

*Regd. Trade Mark

CIBA PHARMA PRIVATE LIMITED, P.O. BOX NO. 1123, BOMBAY

Coughk!

when
diagnosis
demands a
cough remedy
a majority
of physicians
prescribe



TUSSANOL

(COUGH SYRUP)

THE SAFEST REMEDY FOR PATIENTS OF ALL AGES
A MARTIN & HARRIS PRODUCT



*Never a
moment's
worry
although he is not
breast-fed*

For the child who cannot be breast fed, Lactogen has earned a world-wide reputation as a safe and reliable substitute.

Prepared to resemble as closely as possible the formula of breast milk, it offers a well balanced and strictly uniform diet. By homogenization, the fat globules are made even smaller than those of human milk, facilitating digestion, while pasteurization has ensured the removal of pathogenic organisms.

Lactogen is also suitably fortified to provide adequate (but not excessive) intake of essential Vitamins A & D & Iron, based on standards recommended by the National Research Council, Washington.

LACTOGEN

The better milk for babies



NESTLÉ'S PRODUCTS (INDIA) LTD.

P.O. Box 396 Calcutta, P.O. Box 315 Bombay, P.O. Box 180 Madras

Cardiac specialities of preference:

Angosedine

Coronary affections

Each dragee contains:

Dihydroxypropyltheophyllinum	100 mg.
Triturate of perithrol	125 mg.
Adiphenine hydrochloride	15 mg.
Phenobarbital	15 mg.
Extract of valerian	30 mg.
Caffeine	50 mg.

One dragee thrice a day after meals.

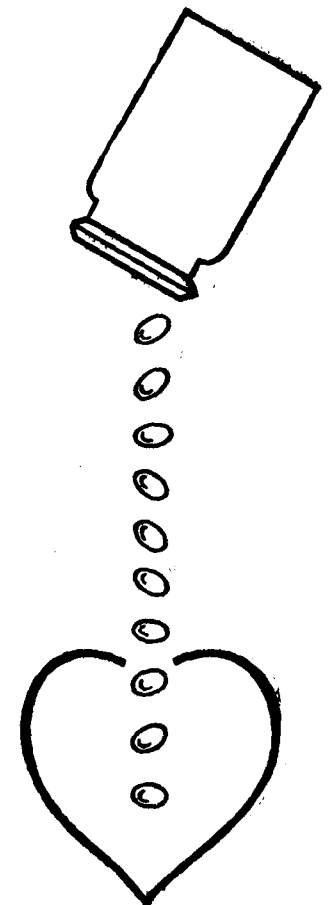
Neurocardine

Functional disorders

Each dragee contains:

Quinine hydrobromide	50 mg.
Extract of crataegus	30 mg.
Extract of valerian	30 mg.
Extract of belladonna	5 mg.
Phenobarbital	15 mg.

One dragee thrice a day after meals.



LABORATOIRES VIFOR S. A.

GENEVA

SWITZERLAND



Sole Importers: ATUL DRUG HOUSE, Bombay 2.

CALMIC LIMITED announce a
NEW AND ORIGINAL ORGANIC-IRON TABLET
FERROMYN
(Ferrous Succinate)

*the latest and most significant advance
towards ideal oral iron therapy*

FERROMYN is an original and logical approach to the problem of iron absorption and utilisation in the treatment of hypochromic anemias and brings oral iron therapy a step nearer the ideal.

This new iron preparation presents Ferrous Succinate, a bivalent iron salt prepared from succinic acid, which, together with glycine is essential for the synthesis in the red bone marrow of a porphyrin (haem) containing iron.

Normal Hb. and serum iron levels were demonstrated over an average period of 24 days treatment with a group of hypochromic

anæmia patients with an average initial haemoglobin of 60%.

The controlled clinical trials with Ferromyn show an iron utilisation factor of 42% as compared with 14% Ferrous Sulphate and 28% Ferrous Gluconate.

This response was obtained with the low total average dosage of pf. 2,604 mgm. available iron.

In comparison, the controlled group treated with Ferrous Sulphate required 42 days with an average dosage of 7,568 mgm. available iron to reach the same Hb. and serum-iron value.

AMOUNT OF AVAILABLE IRON ADMINISTERED	PREPARATION	IRON UTILISATION COEFFICIENT
2600 mgm.	FERROMYN	42%
3180 mgm.	FERROUS GLUCONATE	28%
7560 mgm.	FERROUS SULPHATE	14%

FERROMYN is available in the following forms:

FERROMYN TABLETS Each tablet contains: *Ferrous Succinate 150 mgm.* Available in packs 100 and 1,000 tablets.

ELIXIR FERROMYN 'B' Each tea-spoonful contains: *Ferrous Succinate 150 mgm. Aneurine Hydrochloride 1 mgm. Riboflavin 1 mgm. Nicotinamide 10 mgm.* Available in bottles 4 oz. and 20 oz.

Manufactured in England by

CALMIC LIMITED • CREWE • LONDON

Sole Distributors of CALMIC Preparations in India:

JUGGAT SINGH'S SON & BRO.

Regal Cinema Building, 1st Floor, 41 Apollo Pier Rd., BOMBAY, 1

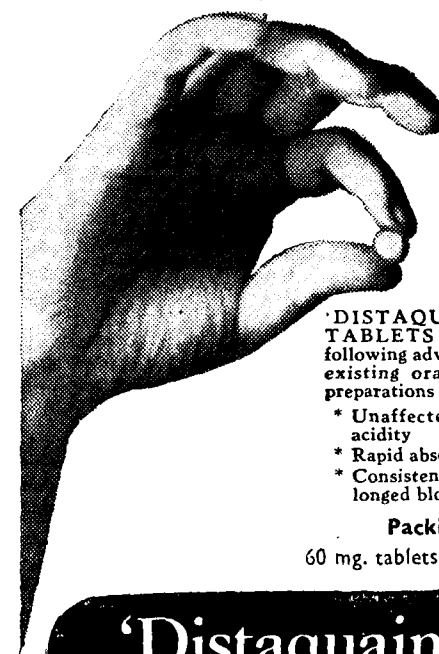
Advertisement by Courtesy of: M/s. CALMIC LTD., CREWE

a **NEW** penicillin

an important advance in
ORAL PENICILLIN THERAPY

In 'DISTAQUAINE' V TABLETS, DC (B) L introduce a new acid-stable form of penicillin which, for the first time, puts oral penicillin therapy on a firm basis comparable with parenteral administration.

Unaffected by the gastric acid of the individual patient, the new preparation produces consistent and reliable blood levels and thus extends significantly the use of oral penicillin therapy to a large number of serious infections.



'DISTAQUAINE' V TABLETS offer the following advantages over existing oral penicillin preparations:

- * Unaffected by gastric acidity
- * Rapid absorption
- * Consistent and prolonged blood levels

Packings:

60 mg. tablets: Bottle of 30

'Distaquaine' V
trade mark brand

PHENOXYMETHYLPENICILLIN

Manufactured by
THE DISTILLERS COMPANY (BIOCHEMICALS) LIMITED, LONDON

Sole Distributors in India
IMPERIAL CHEMICAL INDUSTRIES (INDIA) PRIVATE LIMITED
Calcutta Bombay Madras New Delhi



CALCILUVIN

super antiallergie

INDICATIONS:

All antihistamine indications and routine Calcium therapy

PACKINGS:

3 and 15 ampoules of 10 cc.
Bottles of 20 and 250 dragees.

Combines two important antiallergics:

Ionised Calcium

and

Antihistamine "Luvistin"
(Pyrrolidyl-ethyl-phenyl benzylamine)

Manufactured by

C.F. Boehringer & Soehne *Mannheim Germany*

Sole Importers in India:

NEO-PHARMA PRIVATE LIMITED

Kasturi Buildings, Churchgate Reclamation, Bombay 1

Cardiac Neurosis -

Rp

NEVROVITAMINE 4

adults

*2 tablets t.d.s.
before meals -*

Body Building through Nutrition

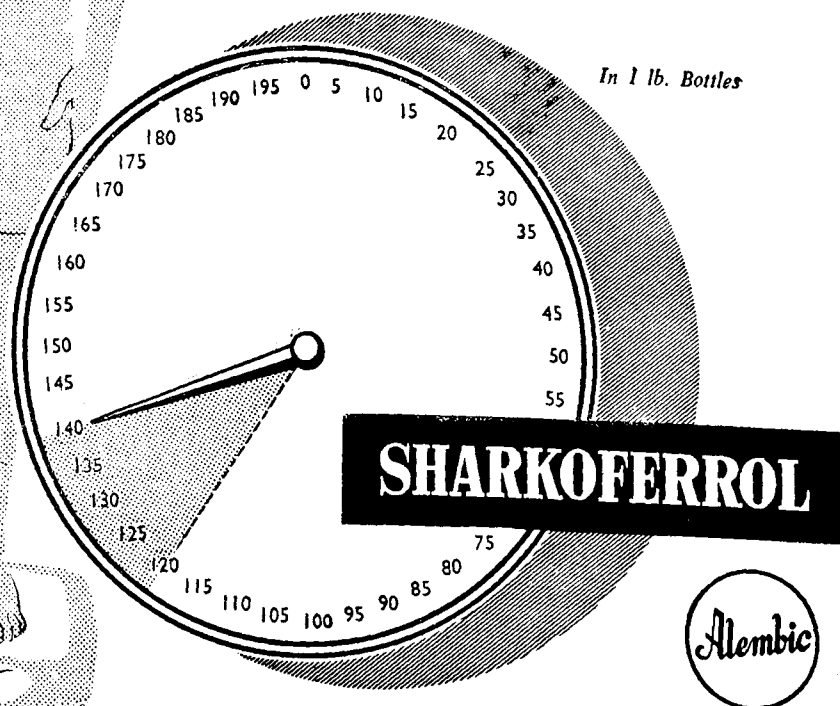
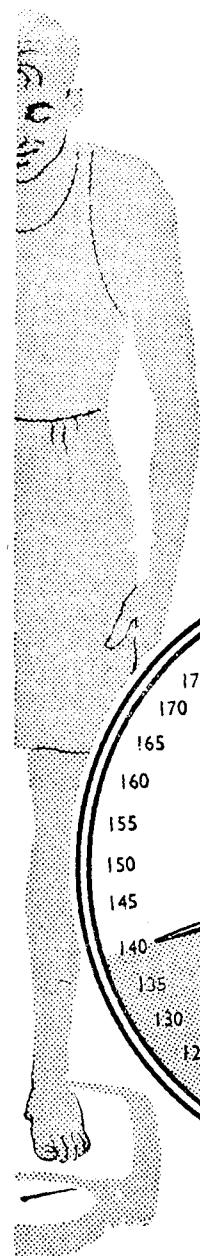
Where selective, adequate nourishment is indicated for overcoming low vitality, debility and malnutrition, Alembic SHARKOFERROL is the rational choice.

COMPOSITION

Each 30 c.c. (fl. oz.*) of Sharkoferrol represents:-

Vitamin A (from 2.4 c.c. of Shark Liver Oil approx.)	25,000 I.U.
Vitamin D	5,000 I.U.
Saccharated Oxide of Iron N.F.	3.55 G. (55 gr.*)
Hypophosphites of Lime, Sodium & Potassium B.P.C.	0.8 G. (12½ gr.*)
Vitamin B1 B.P.	3 mg.
Vitamin B2 B.P.	2 mg.
Niacinamide B.P.	40 mg.
Copper & Manganese	Traces
Palatable base enriched with flavoured Malt Extract	q.s.

*Approximate apothecary equivalent



In 1 lb. Bottles

ALEMBIC CHEMICAL WORKS CO. LTD., BARODA-3.

EVEREST MP-54.16

YOU CAN PUT YOUR CONFIDENCE IN ALEMBIC.

CLINITEST

TRADE MARK

urine-sugar analysis set

Distinct colours for reliable readings

DOCTORS AND PATIENTS CAN BE SURE OF THE RELIABILITY AND SIMPLICITY OF 'CLINITEST' (BRAND) SETS AND REAGENT TABLETS. THE MOST DISTINCT COLOUR SCALE, THE EASILY RECOGNISABLE COLOURS OF THE TEST, GIVE PATIENTS CONFIDENCE IN THEIR READINGS, SO REDUCING THE NUMBER OF UNNECESSARY VISITS TO DOCTORS. THIS ONE-MINUTE, NO HEATING, COPPER REDUCTION TABLET TEST CAN BE MADE EASILY EVEN UNDER TRAVELLING CONDITIONS.

A VALUABLE INSTRUMENT FOR THE PRACTITIONER FOR ROUTINE SUGAR ANALYSIS, 'CLINITEST' IS THE ACCEPTED TEST FOR THE DETECTION AND CONTROL OF GLYCOSURIA.

*Approved by the Medical Advisory Committee of the Diabetic Association in
England*

No. 2155 Complete Set, including 10 Foil-Wrapped Tablets.
No. 2157 Refill (24 Foil-Wrapped Reagent Tablets).

SOLE AGENTS:

MARTIN & HARRIS PRIVATE LTD., CALCUTTA.

BRANCHES: BOMBAY, MADRAS & NEW DELHI.

Manufactured by Ames Company, Inc. Elkhart, Indiana.

for all allergic disorders

R_x
Sandosten
+ Calcium
Sandoz

COMBINED ANTIALLERGIC ACTIONS OF
ANTIHISTAMINE AND CALCIUM

Ampoules of
2 c.c. and 10 c.c.

Effervescent
Tablets

to suit your tiniest patient

Ilotycin Drops

(Erythromycin) Ethyl Carbonate, Crystalline

with an unexcelled antibiotic spectrum

Bacterial pathogens of the respiratory tract are rapidly destroyed by the bactericidal action of 'Ilotycin.' The response is decisive and quick.

'Ilotycin' is notably safe and well tolerated. Because the coliform bacilli are resistant to the action of 'Ilotycin' the bacterial balance of the intestine is seldom disturbed. Staphylococcal superinfection of the intestine, avitaminosis and monilliasis, are not encountered.

The safety, efficacy, and convenience of this 'Ilotycin' preparation make it ideal for the treatment of respiratory tract infections in the infant.

Appeals to baby for its taste-tested flavor.

ELI LILLY AND COMPANY OF INDIA, INC.

(Incorporated in the U.S.A., the liability of the members being limited)

P. O. BOX 1971, BOMBAY-1



MALTOMIN

Necessary for

MOTHERS DURING

PREGNANCY & LACTATION

CHILDREN DURING

GROWTH, RICKETS &
UNDERNOURISHMENT

ADULTS DURING

CONVALESCENCE & ASTHENIA



MALTOMIN combines necessary factors for nourishment and growth. Supplies all requirements of Vitamins, Iron and Calcium.

COMPOSITION. Each fluid ounce contains:

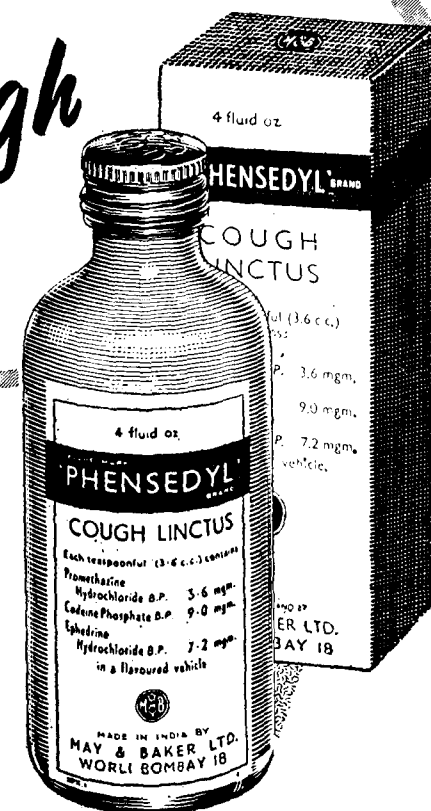
Vitamin B12 10 mcg., Colloidal Iron 4 gr., Vitamin A 16,000 I.U.,
Vitamin D 3,600 I.U., Vitamin B1 2 mg., Vitamin B2 1 mg.,
Niacinamide 20 mg., Calcium Gluconate 5 gr., and Malt Extract.

A PRODUCT OF *Cipla* BOMBAY-8.

LITERATURE SENT ON REQUEST.

Cipla Sales Depot: 1/186, Mount Road, Madras

*Settle
that cough
with*



... a rational and really effective cough linctus designed for the relief of coughs of various types.

'Phensedyl' combines the powerful antihistamine, central sedative and local analgesic effects of promethazine with the cough reflex depressant action of codeine and the bronchodilation of ephedrine. It is of value, therefore, not only in post-influenzal types of cough but also in those due to an allergic cause or to any degree of bronchospasm such as in "asthmatic" cough, bronchitis and whooping cough.

'PHENSEDYL'
trade mark COUGH LINCTUS brand

Supplies: Bottles of 4 fl. oz.

AN M&B brand MEDICAL PRODUCT

MANUFACTURED BY



MAY & BAKER LTD

MA2038-108

Distributed by: MAY & BAKER (INDIA) PRIVATE LTD. BOMBAY • CALCUTTA • GAUHATI • MADRAS • NEW DELHI



"One slumber finds another"

HERBERT Jacula Prudentum 1640

The two-phase action of Bidormal ensures steady sedation throughout the night.

As the effect of the short-acting barbiturate pentobarbitone, contained in the outer shell of Bidormal, begins to fade, the action of the butobarbitone, contained in the inner core, takes over smoothly ensuring calm uninterrupted sleep for approximately eight hours.

The patient awakens refreshed without any trace of drowsiness, hangover or 'drugged' feeling.

BIDORMAL

OUTER SHELL
Pentobarbitone Sodium B.P. 90 mg.
FOR IMMEDIATE ACTION



INNER-CORE
Butobarbitone B.P.C. 60 mg.
FOR DELAYED ACTION

ALLEN & HANBURY'S LTD
INCORPORATED IN ENGLAND THE LIABILITY OF THE MEMBERS OF THE COMPANY IS LIMITED
CALCUTTA BOMBAY

C46/410/X



PRODUCTS



Full cream milk pasteurised and then concentrated with added sugar to the degree necessary to secure a good keeping quality.



A dried combination of milk and extracts of malted barley and wheat flour, fortified with added Vitamin B₁.

Whole milk, modified especially for infant feeding, with added Vitamins A & D, and iron, pasteurised, homogenised and dried by spray process.



Partially separated milk in powder form (with starch added), acidified by a selected culture of lactic ferments to produce a reconstituted buttermilk.

Whole milk, pasteurised, homogenised and dried by a spray process.



An anti-diarrhoeic specific derived from the carob bean, specially recommended for treatment among infants.



NESTOGEN an infant milk food (fortified with Vitamins A & D and organic iron) is specially prepared for use in infant feeding where a milk of reduced fat content is required.

A concentrated food, containing whole milk solids, cocoa, sugar and malted cereal, fortified with vitamins and mineral salts.

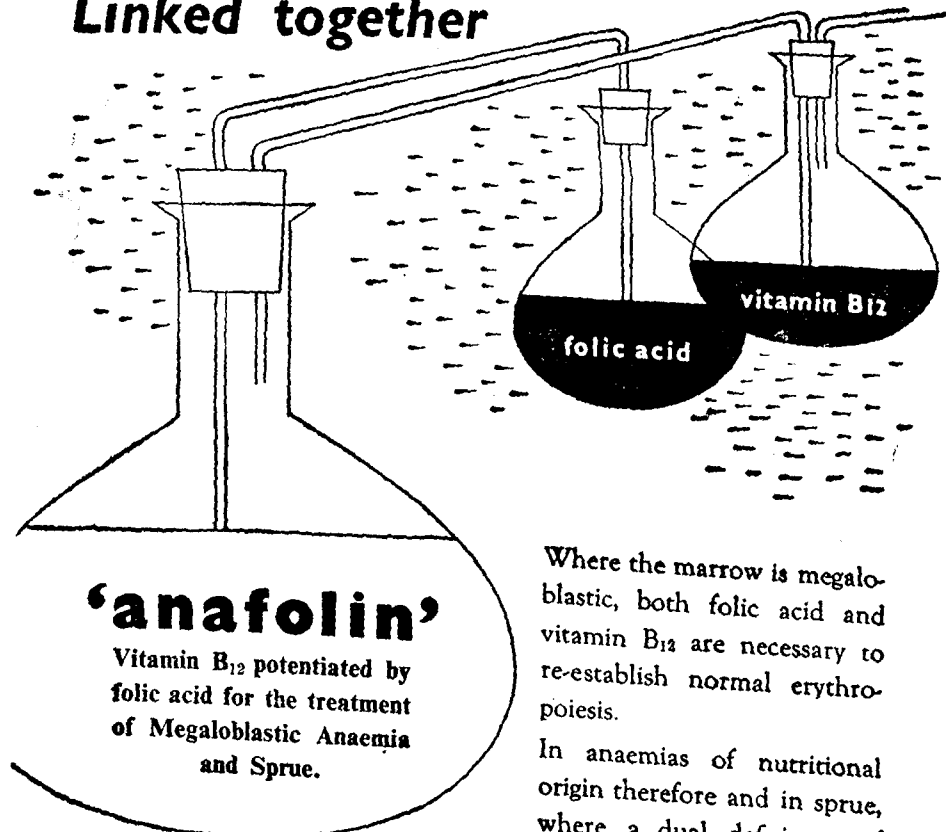


NESTLÉ'S PRODUCTS (INDIA) LTD.

P.O. Box 315, Bombay., — P.O. Box 396, Calcutta.,

P.O. Box 180, Madras.

Linked together



Where the marrow is megaloblastic, both folic acid and vitamin B₁₂ are necessary to re-establish normal erythropoiesis.

In anaemias of nutritional origin therefore and in sprue, where a dual deficiency of folic acid and vitamin B₁₂

exists ANAFOLIN is the treatment of choice. No genuine case of megaloblastic anaemia should fail to respond to ANAFOLIN. Furthermore, ANAFOLIN is the ideal tonic in malnutrition and convalescence, improving the absorption of glucose, fat and fat-soluble vitamins, and promoting a better utilization of dietary protein.

ANAFOLIN INJECTION:

Boxes of 6 and 25 ampoules

Vials of 5 ml. and 10 ml.

ANAFOLIN TABLETS:

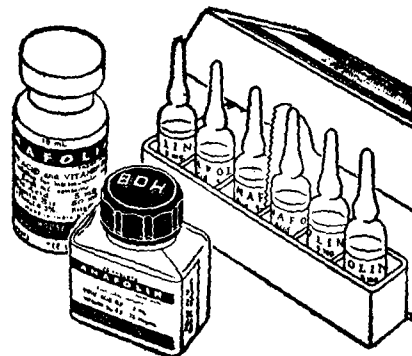
Bottles of 25 and 100 tablets.

THE BRITISH DRUG HOUSES LTD., LONDON

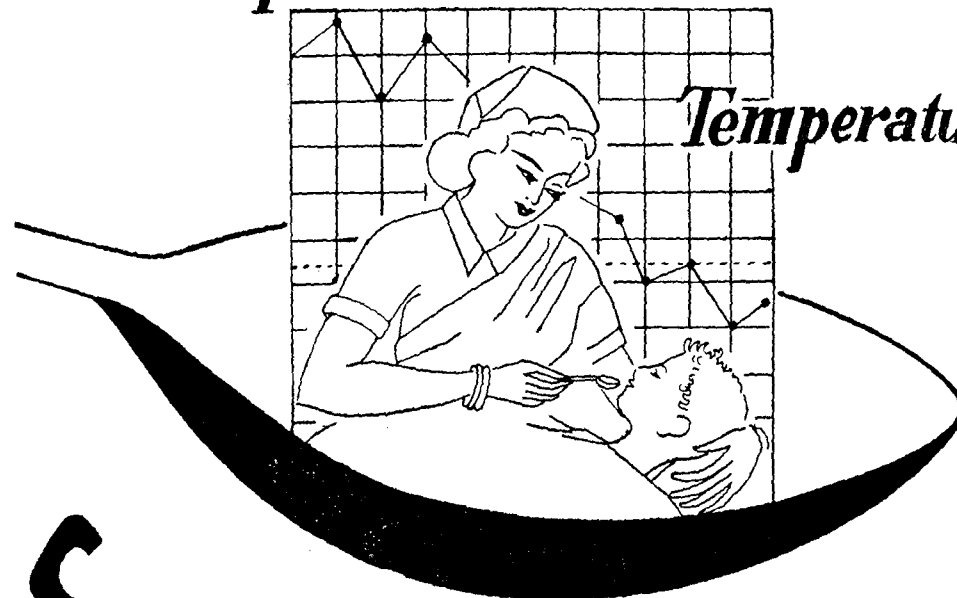
Representatives in India:

BRITISH DRUG HOUSES (INDIA) PRIVATE LTD.,
Post Box 1341, BOMBAY 1.

Branches at: CALCUTTA - DELHI - MADRAS.



... the spoon that brings down the
Temperature.



Enteromycetin syrup

CHLORAMPHENICOL U.S.P.

PLAIN AND WITH VIT. B. COMPLEX



Especially for infants and sensitive patients. Vitamin B-Complex assures further protection by preventing possible effects of avitaminosis.

Packing : Syrup (with Vit. B-Complex) in 60 c.c., and Syrup (plain) in 50 gm. in Tamperproof bottles with Plastic Spoon.

Also available : Capsule, Sulfa tablet, Intramuscular and ophthalmic Ointment.

Manufactured by



G. ZAMBON & CO. S.p.A.
VICENZA ITALY

Exclusive Distributors:-



DEY'S MEDICAL STORES PRIVATE LIMITED

CALCUTTA - BOMBAY - DELHI - MADRAS

1PB-PH-12/56

STERODIN

A dependable non-specific antigen containing bacterial elements with a wide range of therapeutic usefulness. It is of particular value in the early stages of an infective process. By mobilizing the defensive forces, STERODIN will either abort the attack or reduce the course of the disease.

SUPPLIED IN:

2 cc. ampoules for subcutaneous or intramuscular injection

TELEPHONES:
22-7211
22-1901

UNION DRUG CO. LTD.

285, Bowbazar Street,
CALCUTTA-12

Branches at:

Hargovind Desai Building
(1st floor)
14, Old Hanuman Lane,
BOMBAY-2

Sakar Manston
2, Jones Lane,
MADRAS-1

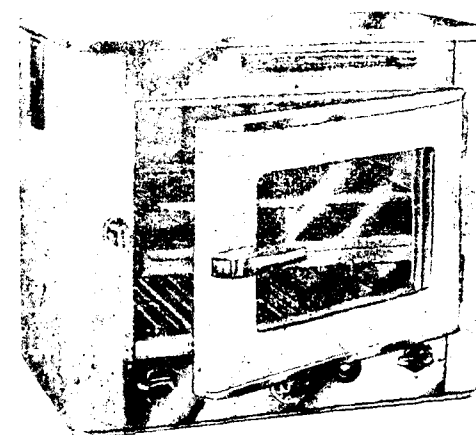
19/46, Ganga
Bathulu Vari St.,
VISAKHAPATNAM-1

Donovan Road,
Gauhati
ASSAM

TELEGRAMS:
'BENZOIC'
Calcutta,

'MEMMERT' UNIVERSAL OVEN

Model TV-10, for Sterilising, Drying and Incubating



Automatic Temperature control without contact points and without relays. Its sensitive, yet sturdy, thermostat permits control within 0.5°C of the average temperature.

Electrically heated with Memmert-black-heating elements (5 years guarantee). For use on 110 volts or 220 volts AC/DC. Rapidly heating up and uniform penetration to all parts of the loaded chamber.

Price and full details from:

UNIQUE TRADING CORPORATION

51-53, Babu Genu Road, BOMBAY-2

Grams: 'UNILAB'

Phone: 30011

"INDULABO PASTE"

WHERE Induction of Labour is therapeutically indicated Indulabo Paste is used now by many doctors with perfectly safe results. The paste is useful right from the twelfth week after conception up to the full term according to indications. The preparation of Indulabo Paste is based on an original German formula which has been perfected by years of clinical trials and research in our laboratories by reputed physicians.

Prices: Rs. 45/- for the Complete Outfit of Indulabo Paste (containing one refill tube of Indulabo Paste, one special low-pressure glass syringe with

metal cannula, and one turn key); per Refill tube of Indulabo Paste Rs. 35/-. Physicians who have already bought the Complete Outfit of Indulabo Paste once, should thereafter order for the Refill tube of Indulabo Paste only. When ordering please state what you want, the Complete Outfit or the Refill

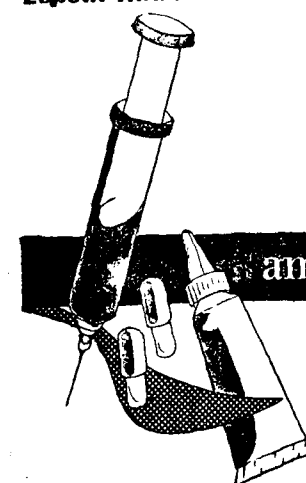
Important:—"Indulabo Paste" is supplied only to qualified and registered doctors who must place their orders on their own letterheads or prescription blanks attaching their full signature.

Exhaustive literature giving composition, indications, etc., will be sent on request to the Members of the Medical Profession only.

HERING & KENT Post Box 323, (A.M.), Opp. Lloyds Bank,
261-263, Hornby Road, Fort, Bombay. Phone: 263537



Lepetit Antibiotics

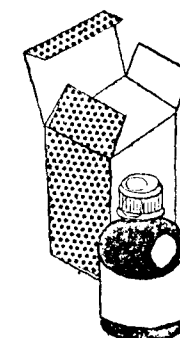


ambramycin

the new broad spectrum antibiotic of widest clinical use and rapid and certain action even where other antibiotics fail

Lepetit
tetracycline hydrochloride

in 4 formulations
capsules-syrup
for injection-intramuscular
ophthalmic ointment



RANBAXY & CO., PRIVATE LTD. P.O. BOX 104
NEW DELHI

BRANCHES: BOMBAY CALCUTTA MADRAS DELHI KANPUR

The hydrolysates of Casein and Yeast amply enriched with B Complex Vitamins and Lipotropic factors for successful Protein Therapy

CASEO-ZYME

Each fluid ounce contains	
Amino Acids	... 20% w/v
Proteolytic Enzymes	... 250 mg.
Vitamin B ₁	... 5 mg.
Vitamin B ₆	... 2 mg.
Methionine	... 200 mg.
Choline	... 200 mg.
Inositol	... 50 mg.

ASSOCIATED DRUG CO. PRIVATE LTD., Yercaud, S. INDIA

UNALGEN HC.

Hydrocortisone 3.3 mg.
Dipyrone 500 mg. Vit. C 50 mg. per Tab.



UNIMYCETIN-VF.

Chloramphenicol 250 mg.
Vit. B Complex, B₁₂ & Vit. C

UNICHEM LABORATORIES, BOMBAY 26.



NEURAGEN

POTENT NERVINE TONIC & REVITALISER

for
**VIGOUR
&
RADIANT HEALTH**

**RECUPERATIVE
& PICK-ME-UP**

Telephone: 4930

Cables: Multamine

Glycerophosphate of Iron, Sodium, Calcium, Strychnine and Manganese, Vitamin B Complex Ext., Vitamin C Sodium Calcium Formoxyl, Kola Nuts Fluid Ext., Wahoo Fluid Ext., Intestinal Ferments, Papaine, Organic Copper Salt, Iron Sulphate, Manganese Sulphate in Palatable base.

INDO-FRENCH PHARMACEUTICAL CO., CATHOLIC CENTRE, MADRAS-1.

Ergoapiol-(Smith)

A Menstrual Regulator . . .

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

In cases of Amenorrhea, Dysmenorrhea, Menorrhagia and Metrorr-

hagia, Ergoapiol serves as a good uterine tonic and hemostatic. Valuable in obstetrics after delivery of the child.

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

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



MARTIN H. SMITH COMPANY
NEW YORK, N.Y.

for expectant and nursing mothers

Made from full-cream fresh milk and the nutritive extracts of wheat flour and malted barley, Horlicks forms an excellent addition to the diet of expectant and nursing mothers.

If it is taken regularly during pregnancy Horlicks helps to prevent and relieve morning sickness. It is the opinion of many doctors and nurses that Horlicks ensures a regular supply of breast milk. Many mothers who have previously failed to breast feed their babies have been able to do so after taking Horlicks regularly.



HORLICKS

*Prescribed with confidence
for over seventy years*

HL 808



FOR OVER 80 YEARS
*Prescribed With Confidence
by Doctors all Over the World..*

HEWLETT'S MIXTURE

WITH OR WITHOUT DRUM IN 4 OZS. & 10 OZS. BOTTLES

**A PRINCIPAL REMEDY
FOR**

Contains:

ACID. HYDRO-
CYAN DIL. B.P.
TINCT. NUX.
VOM. B.P.
LIQ. BISMUTH.
AND ALCOHOL.
16% V/V AVERAGE.

**INDIGESTION
STOMACH DISORDERS
HEART BURN
FLATULENCY
ACIDITY
AND
BOWEL COMPLAINTS**

Our Other
Products

PENICILLIN
SKIN AND EYE
OINTMENTS

SOLE PROPRIETORS
C. J. HEWLETT & SON (INDIA) LTD.,
86, NYNIAPPA NAICK STREET, MADRAS - 3



Dear Doctor,

Is there an effective medicine for colics and vomiting in Babies? Can serious surgery be avoided in Pylorostenosis? Yes, by using:

MYDRINDON FOR BABIES

Atropine Methylnitrate 1/10 mg. per tablet. in all cases of vomiting, colics, Pylorospasms and Pylorostenosis. Used by many since 15 years and respected by all who know about it. Easy to administer as every tablet represents a single effective dose. Tablets for Babies are now marked 'B'.

We also manufacture tablets of 1 mg. each for Adults now marked 'A', for Gastric and Intestinal spasms and ulcers.

Manufactured by



INDO-PHARMA
PHARMACEUTICAL WORKS
DADAR BOMBAY 14

PANVIT B.I.

In Multivitamin Therapy

	INJECTION Each 2 cc. amp. supplies	TABLET Each tablet supplies	DROPS Each cc. supplies
Vitamin A	8000 I.U.	4000 U.S.P. Units	8000 I.U.
Vitamin D	1000 I.U.	400 U.S.P. Units	1600 I.U.
Vitamin E	0.5 mg.	1 mg.	0.1 mg.
Vitamin B ₁	5 mg.	4 mg.	2 mg.
Vitamin B ₂	0.5 mg.	2 mg.	1 mg.
Vitamin B ₆	2 mg.	1 mg.	0.5 mg.
Panthenol	4 mg.	3 mg.	4 mg.
Niacinamide	50 mg.	10 mg.	50 mg.
Choline Dihydrogen Citrate	2 mg.	2.5 mg.	2 mg.
Vitamin C	50 mg.	30 mg.	80 mg.
Methionine	—	—	5 mg.
Folic Acid	—	0.15 mg.	—
	In packs of 6, 12 & 50	In packs of 50, 100 & 500 tablets	In packs of 5 cc., 10 cc. & 30 cc. phials

★ **BENGAL IMMUNITY CO. LTD.**
CALCUTTA-13



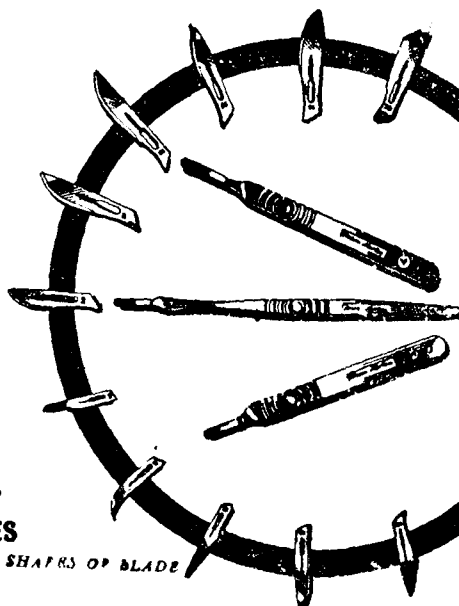
Traditional and International

These eleven shapes of surgical blade have become traditional—and international. Hospitals all over the world send to Sheffield for ever increasing supplies; so the model factory built to produce Swann-Morton blades is always expanding. But, however great the pressure of orders, there is never any relaxation of the individual care given to each individual blade.

Swann-Morton
SURGICAL BLADES AND HANDLES

3 TYPES OF HANDLE 11 TRADITIONAL SHAPES OF BLADE

AGENT: Jagjivandas & Co., Keshav Baug, Princess St., P.O. Box No. 2125, Bombay 2, India
W. R. SWANN & CO., LTD., SHEFFIELD 6 - ENGLAND



2524B

3 LIPOTROPIC PREPARATIONS

from

ZANDU

Pharmacist of Repute

MECHTOL PARENTERAL

Packings
Box of 6, 25 & 100 amp. of 2 cc.

MECHTOL SYRUP

Packings
Bot. of 2, 4 & 16 ozs.

MECHTOL CAPSULE

Packings
Bot. of 25, 100 & 500
sealed capsules

PREPARATIONS CONTAINING METHIONINE, CHOLINE,
INOSITOL, BETAINE, FOLIC ACID, VITAMIN B₁₂ etc.

For literatures and samples, please write to:

ZANDU PHARMACEUTICAL WORKS LTD.,
Gokhale Road South, BOMBAY-28

Kothari's IMPORTANT ANNOUNCEMENT

Messrs. C. V. Mosby Company, St. Louis, USA, have entrusted us the **Sole Distributorships** for their Well renowned **Medical Publications for India** with certain limitations. Here are a selection of the latest **Mosby Books** which are very useful for Practitioners:—

BARD —Medical Physiology by Various Eminent Contributors, 10th Ed. 1956	\$.	14.00
CAMPBELL —Operative Orthopedics, 2 Vols. 3rd Ed. 1956	... \$.	40.00
DeSANCTIS & VERGA —Handbook of Pediatric Medical Emergencies, 2nd Ed. 1956	... \$.	6.25
GRADWOHL —Clinical Laboratory Methods and Diagnosis with Various Contributors, 2 Vols. 5th Ed. 1956	... \$.	38.50
HAUKOHL —Pathology Seminars, 1955	... \$.	7.50
MEAKINS —Practice of Medicine, 6th Ed. Thoroughly Revised, 1956	... \$.	16.00
MOSELEY —Textbook of Surgery, 2nd Ed. 1955	... \$.	16.50
RICHARDS —Surgery for general Practice, 1956	... \$.	17.50
REGAN —Doctor and Patient and the Law, 3rd Ed. 1956	... \$.	12.50
SUTTON —Diseases of the Skin, 11th Ed. 1956	... \$.	29.50
TITUS —Management of Obstetric Difficulties, 5th Ed. 1955	... \$.	12.50
WEINEMAN —Bone and Bones; Fundamentals of Bone Biology, 2nd Ed. 1955	\$.	13.75

OUR NEW COMPREHENSIVE CATALOGUE OF MEDICAL BOOKS—
Just Off the press Secure your copy immediately.

THE KOTHARI BOOK DEPOT
(Established 1935)

Exclusive House for Medical Books

'Phone : 60805

Parel, BOMBAY-12 'Gram: "KOOBOOK"

Branches in 1. POONA. 2. AHMEDABAD 3. HYDERABAD (Dn.)

Books on Soviet Medical Science

HEREDITY AND VARIABILITY by T. D. Lysenko: (Pp. 136)	...	0	4	0
ORIGIN OF CELLS by O. Lepeshinskaya: (Pp. 50)	...	0	6	0
I. P. PAVLOV: His Life and Work by E. A. Asratyan (Pp. 164)	...	0	12	0
SCIENTIFIC SESSION ON THE PHYSIOLOGICAL TEACHINGS OF ACADEMICIAN by I. P. Pavlov.	...	0	6	0
ESSAYS ON THE PATHO-PHYSIOLOGY OF THE HIGHER NERVOUS ACTIVITY by Ivanov-Smolensky: (Pp. 348)	...	2	14	0
PAINLESS CHILDBIRTH by K. Figurnov: (Pp. 30)	...	0	2	0
TISSUE THERAPY by V. Filatov.	...	0	3	0
CANCER AND ITS PROPHYLACTICS by V. Kazansky. (Pp. 96)	...	0	6	0
REGIMEN AND TREATMENT IN TUBERCULOSIS OF THE LUNGS by S. Nezhlin (Pp. 68)	...	0	5	0
THE ORIGIN OF LIFE by A. Oparin: (Pp. 101)	...	0	6	0
SELECTED WORKS of I. P. Pavlov: (Pp. 654)	...	2	13	0
THE ACHIEVEMENT OF SOVIET MEDICAL SCIENCE IN THE CONTROL OF MALARIA by P. Sergiyev: (Pp. 38)	...	0	3	0
THE EYE AND THE SUN by S. Vavilov: (Pp. 136)	...	0	12	0
MODERN METHODS OF TREATING BRONCHIAL ASTHMA by P. Bulatov (Pp. 99)	...	0	6	0

Available with:

- (1) PEOPLE'S PUBLISHING HOUSE, Asaf Ali Road, NEW DELHI
- (2) NATIONAL BOOK AGENCY, 12, Bankim Chatterji Rd., CALCUTTA-13
- (3) NEW CENTURY BOOK HOUSE, 199, Mount Road, MADRAS
- (4) PEOPLE'S BOOK HOUSE, Cowasji Patel Road, BOMBAY-1



V/O MEZDUNARODNAYA KNIGA, Moscow 200, U.S.S.R.

RYBARVIN INHALANT for ASTHMA

IT affords the most speedy relief yet known to Medical Science.



Manufactured
in England
by
RYBAR
LABORATORIES
LTD.

ASK FOR LITERATURE FROM:-
Sole Distributors for India

H. MUKERJI & BANERJEE SURGICAL LTD.
39/1, COLLEGE STREET, CALCUTTA-12
and at ASUTOSH BLDG., CAL. UNIVERSITY

Sole Stockists for Bombay & Saurashtra
KEMP & CO., LTD.
88C, OLD PARBHADVI ROAD, BOMBAY-28

Sole Stockists for South India
SPENCER & CO., LTD.
MOUNT ROAD, MADRAS-2

Sole Stockists for Delhi & East Punjab
BHAGWAN DAS & CO.
CHANDNI CHOWK, DELHI



OPIL

for **VITAMIN DEFICIENCIES
IN GENERAL**

OPIVITOL
DROPS
Aqueous Solution

Each c.c. contains:

Vitamin A	10,000 I.U.
Vitamin D	2,000 I.U.
Vitamin B ₁	10 mg.
Vitamin B ₂	1 mg.
Vitamin B ₆	1 mg.
Vitamin C	100 mg.
Sodium Pantothenate	3 mg.
Niacinamide	30 mg.
Choline Dihydrogen Citrate	25 mg.
Methionine	5 mg.
Inositol	2 mg.
Aqua	q.s.

ORIENTAL PHARMACEUTICAL INDUSTRIES LTD.
64 66, TULSI PIPE ROAD, MAHIM, BOMBAY 16.

Own **OLYMPUS** for

• SERVICE • STABILITY • SUPERIORITY

LABORATORY MICROSCOPE

Improved Model GB

Mechanical Tube Length 160 mm. • Graduated Draw Tube • Fixed Square Stage with Built on Graduated Mechanical Stage • Fine Adjustment of Double Lever-type without scale • Condensor n.A. 1.2, (with iris)—movement by Rack and Pinion • Triple Nose-piece • Interchangeable for Dark Field Condensor, Phase Contrast Accessories, Binocular and Monocular Attachments.

Huygen's Eyepiece 5x, & Periplan 10x, & 15x Achromatic Objectives 10x, 40x and 100x Oil Immersion... Magnification: 50x—1500x.

Price Rs. 748/-

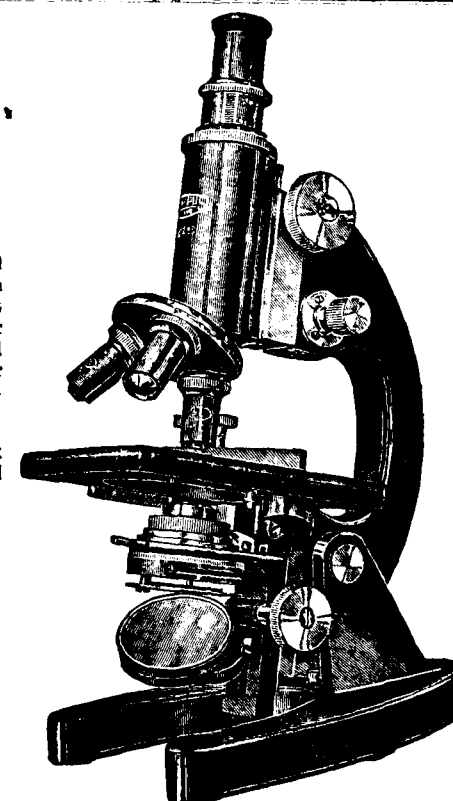
For demonstration and other particulars contact your dealers or the sole agents:—

DARBARA SINGH & SONS,

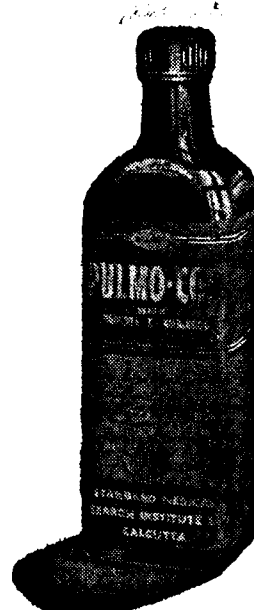
14, Bow Bazar Street,
P. O. Street, Sadar Bazar,
166, Hornby Road, Fort,

Calcutta-12
Delhi-6
Bombay

Also available various other models



Guaranteed



Nutritive Aid
In Case of Malnutrition and Wasting Diseases

PULMO-COD

WITH
Creosote & Gualacol

Supplies
Minerals and generous amount of Vitamins

For Vigour and Vitality

Pulmo-Cod also prevents Seasonal Ailments, Cold, Cough, Bronchitis, Bilets, Summer Complaints, and Bowel Irregularities among Children

STADMED PULMO-COD
(Creosote & Gualacol)

Each fluid oz. contains:

Pancreatic hydrolysate of shark & Cod Liver Oil 50% v/v

Vitamin A 4500 I.U.
Vitamin D 1000 I.U.
Vitamin B₁ 3 mgs.
Vitamin B₂ 2 mgs.
Vitamin B₆ 5.0 mcgs.
Nicotinic Acid 40 mgs.
Folic Acid 920 mcgs.
Sodi Hypo. 120 mgs.
Potassi Hypo. 120 mgs.
Calcii Hypo. 240 mgs.

{ Creosote 13%
Gualacol 1% }

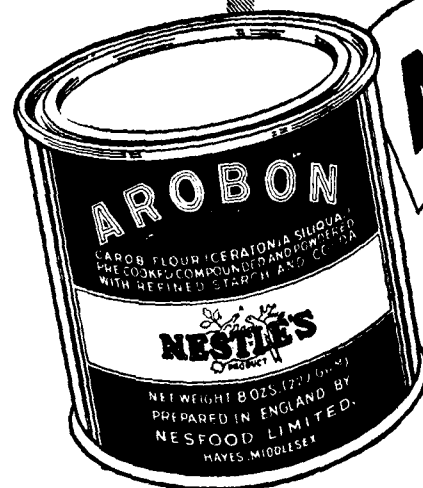
Extract Wild Cherry, Gentian, Eucalypt. 0.7%
Invert Sugar, Glycerine, Malt & Aromatics q.s.

STADMED PRIVATE LTD.
15, JAWPORE ROAD, CALCUTTA-30.

Mg L No DL 62 M
DL 42 MB

STADMED PRIVATE LTD., CALCUTTA-4

For treating acute or chronic diarrhoea



AROBON

Proved highly effective for diarrhoeic and gastro-intestinal disorders amongst infants, children and adults.

Prepared from the pulp of the carob bean.



NESTLÉ'S PRODUCTS (INDIA), LTD.

P.O. Box 396 Calcutta, P.O. Box 315 Bombay, P.O. Box 180 Madras.

DOCTORS ARE REQUESTED TO WRITE FOR LITERATURE.

NA/G/2

WHEN GLYCERIN IS INDICATED —ask for **PYRAMID BRAND**

PYRAMID Brand Glycerin conforms strictly to B. P. Standards. And every bottle, tin or drum comes to you hygienically sealed, straight from the factory.

PYRAMID Brand is now also available in the handy, 1 lb bottle fitted with a tamper-proof roll-on seal.



NOW IN 1 LB BOTTLE TOO
(1 LB NET)

PYRAMID BRAND GLYCERIN

Available in 1 lb bottles; 7 lb tins 28 lb, 56 lb, 1 cwt, 5 cwt and 10 cwt drums.

MANUFACTURED BY LEVER BROTHERS (INDIA) PRIVATE LTD., P. O. BOX 409, BOMBAY, 1
FTG. 4A-329

**USED IN HOSPITALS
ALL OVER THE COUNTRY**

SURGICAL BRAND

Absorbent Cotton Wool, Boric Cotton Wool,
Absorbent Lint, Boric Lint,
Absorbent Gauze in packets
and pieces, Surgical Bandage in
rolls and pieces, First Aid Dressings
and Triangular Bandages.

MANUFACTURED BY
THE RAMARAJU SURGICAL COTTON MILLS LTD.
RAJAPALAYAM, S. I.

Sole Selling Agents:
PARRY & CO., LIMITED.
MADRAS • BOMBAY • DELHI • CALCUTTA



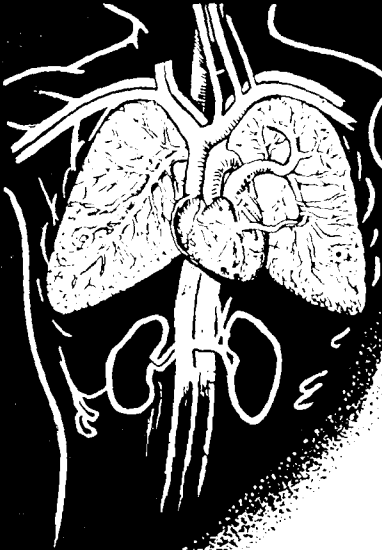
*Do it the handy way
with*
HANDYPLAST

- ready for immediate use even by a child
- easy to use, handy to carry — avoids cumbersome bandaging
- gauze pads are soaked with QAC (Quaternary Ammonium Compound)
- non-irritating — possesses high bactericidal properties



MADE IN GERMANY BY P. BEIERSDORF & CO. A. G. HAMBURG
Sole Agents for India: **PARRY & CO. LTD.** MADRAS • CALCUTTA • BOMBAY • NEW DELHI

A-Ha 9b



MULTIMIX

(Oral & Injectable)
A DEPENDABLE ANTI-ASTHMATIC

For
SYNERGETIC THERAPY
OF
BRONCHIAL ASTHMA &
SPASMODIC COUGHS

Ephedrine, Lobelia, Hyoscyamus, Grindelia, Belladonna,
Sodium Iodide, Sodium Benzoate, Vasaka, Senega,
Glycyrrhiza, Potassium Arsenate, Caffeine and Aminophylline

Telephone: 4930

INDO-FRENCH PHARMACEUTICAL CO., CATHOLIC CENTRE, MADRAS-1.

Cables: Multamine



The British Journal of Clinical Practice—

Founded in 1947

Many doctors who studied in England are familiar with the well-illustrated articles that appear each month in this splendid journal designed especially for the practising doctor. Articles of considerable value and usefulness by authoritative writers plus many regular features keep the doctor up-to-date with current medical and surgical practice. The feature SPOT DIAGNOSIS was originated in this journal and is now obtainable in book form (two volumes) from the address below.

MEDICINE ILLUSTRATED

PUBLISHED IN ENGLAND BY HARVEY & BLYTHE LTD.

Medicine Illustrated is sent post free to any address in the world. Subscriptions should be sent to the address below

★ Authoritative, Informative and Instructive

★ Lavishly illustrated and handsomely produced

Agents in India:

CURRENT TECHNICAL LITERATURE CO. LTD.

"INDIA HOUSE", Opp. G.P.O., P.O. BOX 1374, BOMBAY 1

Rs. 42

ANNUAL SUBSCRIPTION

AVAILABLE ON DOCTOR'S PRESCRIPTION

THE SUPREME TONIC RESTORATIVE

Hall's WINE

Guaranteed free from Meat Extract.

ASMAKON

for Asthma &
Chronic Bronchitis

ASMAKON FORT
acts as a Broncho-
dilator. It improves circula-
tion of blood, promotes metabo-
lism and acts as an antispasmodic and
sedative, relaxing the bronchial muscles and
permits the patient to breathe freely and
easily. It relieves spasms, coughs, choking,
wheezing, gasping and sleeplessness.
Its use dissolves and loosens phlegm, clear-
ing the nose and throat.

ASMAKON

FOR THE TREATMENT
OF SPASMODIC
ASTHMA & CHRONIC
BRONCHITIS.

Each fluid ounce contains:

Sodium Bromide	20.00 grs.
Sodium Iodide	12.00 "
Ephedrine Hydrochloride	1.00 "
Sol. Chloroform	12.50 min.
Tr. Quinine	3.75 "
Tr. Stearal	21.00 "
Tr. Lobelia Simplex	21.00 "
Ex. Gileadine Lvs.	21.00 "
Syrup Tolu	140.00 "
Quinine	6.5 "
Agua to	One ounce.

SPENCER & CO. LTD.
MANUFACTURING CHEMISTS
153, MOUNT ROAD, MADRAS-2, INDIA

SPENCER & CO., LTD.

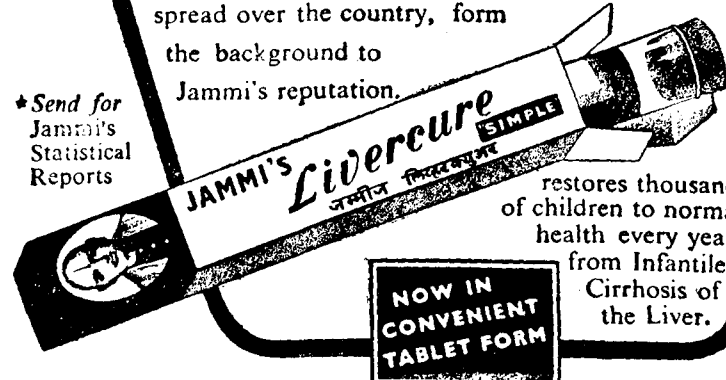
MANUFACTURING CHEMISTS

153, MOUNT ROAD, MADRAS-2, INDIA.

Experience

of over 40 years and a team of Medical Men from nine clinics, spread over the country, form the background to Jammi's reputation.

★ Send for Jammi's Statistical Reports



restores thousands of children to normal health every year from Infantile Cirrhosis of the Liver.

NOW IN CONVENIENT TABLET FORM

JAMMI VENKATARAMANAYYA & SONS, 'Jammi Building', Mylapore, Madras-4.

897-7



ENZYME B COMPLEX

THE BROAD-SPECTRUM ELIXIR

A new formulation containing all B Vitamins including Vitamin B₁₂ & Folic acid with Diastase, Pancreatin, Pepsin, Flavonoids, Lecithin, Methionine, Betaine Hcl., Glutamic acid, etc.



For Precision Therapy.

RUMA LABORATORIES • 248, Tardeo Road, Bombay-7.

BIOTOL

A WORD ABOUT BIOTOL

Why Biotol?

It is ONLY the PURE FORM that fully provide the maximum benefits and offers a twofold action of AMINO ACIDS

BIOTOL (Horner) still remains the only products of its type:

The only pure amino acids in liquid oral form free from Sodium chloride and alcohol with improved flavour

BIOTOL is a 20% concentration of amino acids and lower peptides made by the enzymatic hydrolysis of milk casein, which contains 56% essential amino acids. BIOTOL contains tryptophane (which is lost in acid hydrolysis).

BIOTOL is eminently indicated in Peptic ulcers and all cases where intake of pre-digested protein is desired.

Now available in 16 & 8 oz. sizes bats. Detailed literature on request from Agents.

FRANK W. HORNER Ltd.—Montreal—Canada

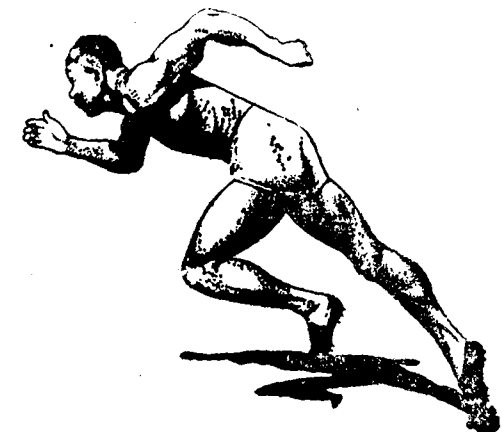
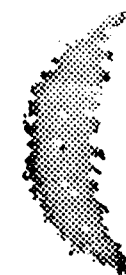
Sole Agents:

BHATTACHERJI & BHATTACHERJI

Post Box No. 132, CALCUTTA-1

Madras Chief Stockists: Mount Pharmacy Ltd., 2/4, Mount Road, Madras-2.

*Agility of
an Athlete*



Insist on
**ADCCO'S
COMPOUND**

The Better Tonic



Happy growth of physical and mental health mainly depends on nourishing food and regular exercises and the non-availability of same tells upon your health. To arrest your ever-decreasing vitality, take the help of ADCCO'S COMPOUND. Regular use of this better tonic will make you energetic, healthy, smart and active as an athlete brimmed with creative power.

ADCCO LIMITED
CALCUTTA-27

THREE TONICS with Vitamin B Complex and B₁₂ combines various B Complex factors with Glycerophosphates and acts as a general stimulant. Easily assimilable Phosphorus is available in this preparation and its administration regenerates nervous energy which has been lost by wasting diseases, over work, exhaustion, anxiety, etc. Potassium and Manganese, two vital elements, are available to the extent of normal daily requirement. Traces of Strychnine in combination with Glycerophosphates have been used for years as a tonic stimulant.

THREE TONICS besides being a dietary adjuvant is useful in the treatment of Anemias, loss of appetite etc. It is also indicated in Neuritis, Beri-Beri, Nutritional Diarrhoea, Sprue, Leucorrhoea, Heartburn and vomiting in pregnancy etc. It is an invaluable dietary supplement during treatment with Sulpha Drugs or Antibiotics and also for patients suffering from Diabetes Mellitus



SPENCER & CO., LTD.
MANUFACTURING CHEMISTS

1/153 MOUNT ROAD MADRAS-2 INDIA.



Experience Prefers

PROVED TO BE A DEPENDABLE REMEDY
THROUGH YEARS OF CLINICAL TESTS.

★ PLEASE CHECK UP THE NEW SCREW CAP
ON QUMARESH PHIALS.

QUMARESH

O. R. C. L. LTD.

QUMARESH HOUSE, SALKIA, HOWRAH.



for
Liver
and
Stomach

*For treatment of tropical
Macrocytic Anaemias...*



- T.C.F. Whole Liver Extract
- T.C.F. Whole Liver Extract
Supplemented with Vitamins
C and B-Complex
- T.C.F. Whole Liver Extract
with Vitamin B₁₂
- T.C.F. Folic Acid with Liver Extract
- T.C.F. Liver Extract Forte

Products of
TEDDINGTON CHEMICAL FACTORY PRIVATE LTD., BOMBAY

Sole Distributors:
W. T. SURÉN & CO. PRIVATE LTD., P.O. Box 229, Bombay 1

WT. 4152

T.C.F.
Serpirutin-C

(Brand of R. Serpentina,
Aminophylline and Rutin)

TABLETS

FOR EFFECTIVE
TREATMENT OF
HYPERTENSION.



A product of
**TEDDINGTON CHEMICAL
FACTORY PRIVATE LTD.**

Sole Distributors:
W. T. SURÉN & CO. PRIVATE LTD.
Post Box 229, Bombay 1.

A Chubby and Cheerful Child
Brings Sunshine to your Home

We Recommend

PAN-VITA DROPS

Concentrated Multivitamin
Drops for Health

BIRLA LABORATORIES,
2, BEERPARA LANE, CALCUTTA-30

Skin Specialties. GLUCOSALINE

ACRINOL
(For burns, abrasion &
Antiseptic dressings)

CALAMINOL.
(Efficacious in Eczema)

CASTELLANI'S PAINT
(For mangoetoe, athlete's foot
etc.)

DERMOTAR.
(For dry Eczema)

EPHYTOL
(Oint. & Paint for Ringworm)

KERASOL.—(Corn Cure)

LEUCODERMOL
(For Leucoderma)

SCABICIDOL.
(For scabies & pediculosis)

SOLU-RESORCINOL.
(An ideal hair tonic)

TRIPLE DYE.
(For burns, cuts, etc.)

THIOTAR.
(Tinea versicolor, Seborrhoea
lichen, psoriasis, etc.)

5% Glucose in Normal Saline
(Pyrogen-free) For intravenous,
intramuscular, hypodermic or
rectal administration.

Indicated in:

Hæmorrhage, shocks, loss of
fluid, toxæmia and other emer-
gency conditions.

AVAILABLE IN 540 C. C. TRANS-
FUSION BOTTLES.
Inquire for other Transfusion Products.



'Phone: 24-2674.

'Gram: "PASLAB"

PASTEUR LABORATORIES PRIVATE LTD.,
2, Cornwallis Street, CALCUTTA-6.

BETTER
HEALTHY
LOOK..

Loma
REGD.
DARKENS GREY HAIR

..KEEPS THE BRAIN COOL
..GROWS MORE HAIR
..REMOVES DANDRUFF & LICE
..SMELLS SWEETER



SOLE AGENTS
M. M. KHAMBHATWALA, AHMEDABAD

Agents: C. NARAYAN & CO., BOMBAY-2.

THIS INJURED ARM IS PROTECTED BY A DALMAS
ELASTIC WOUND DRESSING WHICH GIVES SECURITY
AGAINST OUTSIDE INFECTION AND CONTAMINATION



Dalmas Elastic Dressings are pre-
pared under hygienic conditions. They
reduce danger of secondary infection. Always
keep Dalmas elastic dressings handy—they are an invaluable
aid to rapid healing, easy to apply and perfect in protection.

DALMAS

PRODUCTS



DALZO—Dalzo Zinc Ox-
ide plasters have proved
their efficiency throughout
the world. They are hy-
gienically safe and fully
antiseptic. Available in
10 yd. and 5 yd. spools,
widths $\frac{1}{2}$ in. to 4 in. and
3 $\frac{1}{2}$ yd. and 1 yd. spools,
widths $\frac{1}{2}$ in. and 1 in.



**DALZOFLEX BANDA-
GES AND DALZOFLEX
STRAPPING.** For the
ambulatory treatment of
ulcerated legs there is no
safer dressing than Dalzo-
flex Bandage. The strap-
ping is recommended for
securing abdominal dress-
ings in situ. Available in 1
and 3 yd. spools. Widths
from $\frac{1}{2}$ in. to 4 in.



**DALZOBAND BANDA-
GES** (5 medications). An
Unna's zinc paste type
bandage which is always
moist. Wound loosely
round the affected part and
covered with a Dalzoflex
bandage applied spirally,
size, 6 yds. x 3 $\frac{1}{2}$ in. Medi-
cations include Zinc Oxide,
Ichthammol, Urethane,
Calamine or Coal Tar.



**PERMALAST BANDA-
GES.** The efficient cotton
elastic bandage, light, por-
ous and washable. Firm
support without restriction
of circulation. Widths: 2
in., 2 $\frac{1}{2}$ in., 3 in., 3 $\frac{1}{2}$ in.,
4 in., 6 in. Fully stretched
5 yards long.

Enquiries should be sent to:—
Advani Limited, Calcutta. H. S. Cox & Co. Ltd., Bombay.
Messrs. Oriental Mercantile Agency, Madras.
M. G. Shahani & Co. Ltd., Delhi.

DALMAS
Manufacturers of Medical and Surgical
plasters for over 130 years.
JUNIOR STREET, LEICESTER, ENGLAND. Est. 1823.

ACTH THE HOPE

ACTON

is a highly purified ACTH - preparation, containing about 30 I. U. per mg. standardized according to the method of Sayers and Sayers. Even though ACTH (corticotrophin) has only been known for a comparatively short term of years, the progress made both in production and in therapy is very great.

In contrast with cortisone and similar preparations, ACTON does not cause adrenocortical atrophy. As a rule, the effect of ACTON does not cease when treatment is discontinued, but persists for a short or longer period afterwards.

ACTON (A.C.T.H.)

20 I.U. box of 6 vials	Rs. 29-10-0
20 I.U. " " 25 vials	Rs. 103-2-0
25 I.U. " " 6 vials	Rs. 37-4-0
25 I.U. " " 25 vials	Rs. 125-0-0
40 I.U. " " 6 vials	Rs. 49-0-0

ACTON (A.C.T.H. Retard)

20 I.U. box of 10 vials	Rs. 50-0-0
-------------------------	------------

Literature on request

Packing & Postage FREE



FREDERIKSBURG-CHEMICAL LABORATORIES LTD.

Copenhagen - Denmark

Sole Agents:

DR. JAI SINGH'S SON & CO.

18/4 ASAF ALI ROAD, NEW DELHI

BRANCHES:

Cooper Road,
Amritsar.

16, Bhopal House,
Lucknow.

FAMOUS FOR OVER
FIFTY-FIVE YEARS
To Regulate and Restore
the Functions
OF THE UTERUS



Lodhra

for ladies

CONTAINS

- Asoka (Saraca Indica),
- Lodhra (Symplocos Racemosa),
- Bals (Sida Cordifolia),
- Khadira (Acacia Catechu),
- etc. etc.

Packings: 12 ozs. & 6 ozs.

KESARI KUTEERAM PRIVATE LTD.
ROYAPETTAH, MADRAS-14.



'PYREX' Beakers and
Flasks last longer . . .
because they are stronger

Their basic strength derives from the borosilicate glass of which they are made, the coefficient of expansion of which is three point two times ten to the minus six, which is so low that it gives the glass an amazing resistance to sudden heat changes.

This means that 'PYREX' Beakers and Flasks can be made much thicker, heavier and more robust, thus protecting them against breakage through careless handling or clumsy washing.

Beakers and Flasks are the items you use most in your lab. They may seem almost commonplace, but they cost money, and if you can save fifty per cent on your breakages by using 'PYREX' and nothing but 'PYREX,' then this best of all laboratory glassware becomes a real investment.

- You'll find 'PYREX' everywhere, from the school to the research institute. Everybody recognises the 'PYREX' quality, and all appreciate the handy carton packs. Insist on 'PYREX' to cut down your breakages and reduce your costs.

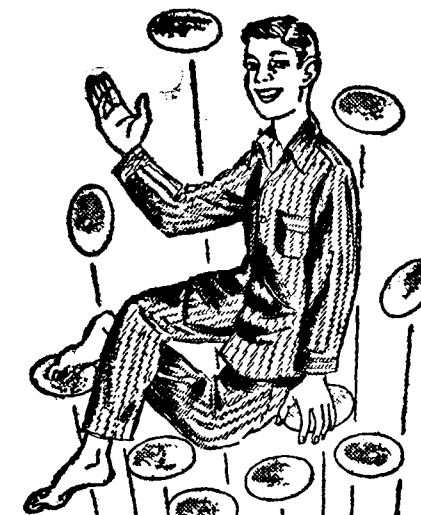


'PYREX'

THE BRITISH
LABORATORY GLASSWARE

JAMES A JOBLING & CO LTD
Wear Glass Works Sunderland England

THE ONLY MAKERS OF 'PYREX' BRAND GLASS IN THE
UNITED KINGDOM.



MULTIVITE FORTE

assists recovery

Patients soon feel on top of the world when convalescence is assisted by 'MULTIVITE' FORTE. The six vitamins combined with Calcium restore appetite and the unpleasant 'out of sorts' feeling is eradicated.

During pregnancy, the extra demands on the mother for vitamins and calcium can be met by prescribing 'MULTIVITE' FORTE B.D.H.

And the administration of 'MULTIVITE' FORTE B.D.H. throughout the period of lactation ensures the best start in life for the breast-fed baby.

MULTIVITE FORTE

In Chocolate-Coated Tablets

Bottles of 25, 100 and 500 tablets

BRITISH DRUG HOUSES
(INDIA) LTD.

P.O. Box 1341, Bombay 1
Branches at Calcutta, Delhi, Madras



VITAMIN A, B₁, C, D

NICOTINAMIDE

RIBOFLAVINE

CALCIUM

MULTIVITE
FORTE



The simple application of 'Algipan' provides immediate relief from muscular pain of rheumatic origin. 'Algipan' combines the activity of histamine as a vasodilator, with the spasmolytic action of methyl nicotinate. Presented in a non-staining, vanishing cream base, 'Algipan' is non-irritant and extremely well tolerated on local application.

* Trade Mark



ALGIPAN*

ANALGESIC CREAM
Tubes of 40 Gm.

JOHN WYETH & BROTHER LIMITED

(Incorporated with limited liability in England)
India Branch: Magnet House, Dougall Road, Bombay I.
Distributors: **GEOFFREY MANNERS & CO. PRIVATE LTD.**
Bombay . Calcutta . Madras . New Delhi



where
PAIN
is a
symptom...

as in
HEADACHE
TOOTHACHE
MUSCLE PAIN
NEURALGIA
NEURITIS
DYSMENORRHOEA
INFLUENZA

Therapy of the underlying causal condition is no doubt the prime consideration. However, when treatment of the basic disease does not or cannot afford prompt relief, 'ANACIN' will often alleviate the distress of pain and impart a sense of well-being.

'ANACIN' is a non-toxic and clinically dependable preparation, specially formulated to provide a prolonged period of analgesia with a single dose of 1 or 2 tablets.

Composition

Quinine 1/4 gr. Aspirin 3 gr.
Phenacetin 3 gr. Caffeine 1/4 gr

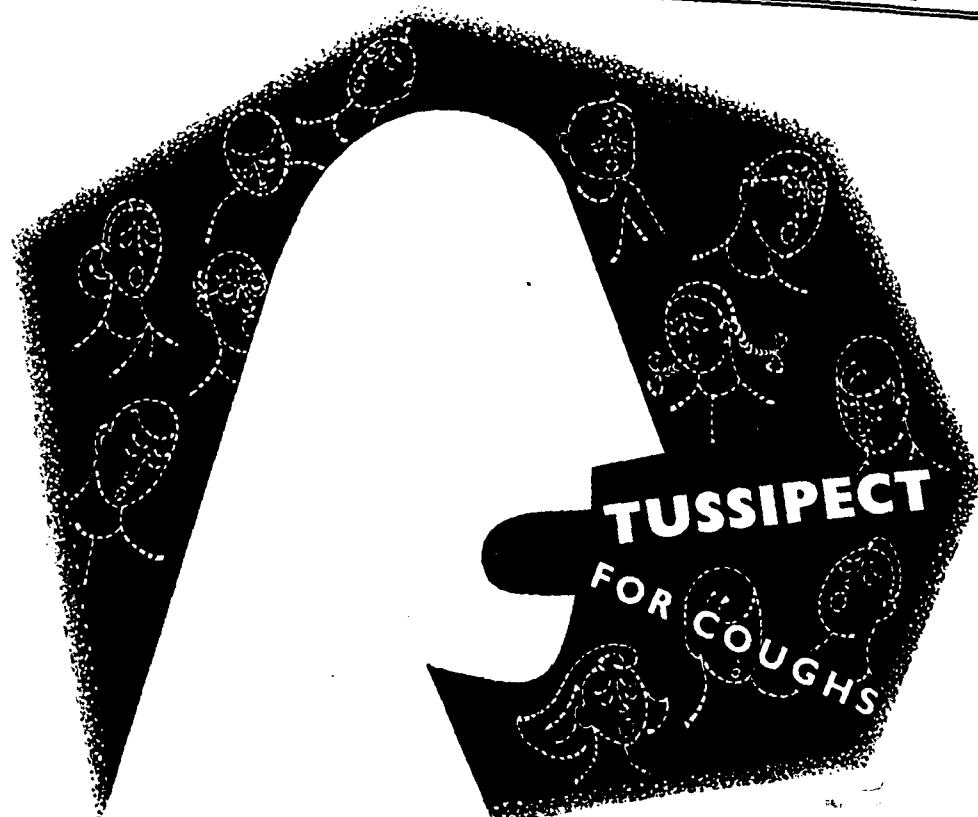
ANACIN*

ANALGESIC TABLETS

In piller-proof containers
of 32 tablets and packets
of 2 tablets each.

* Trade Mark

Manufactured and Distributed by:
GEOFFREY MANNERS & COMPANY PRIVATE LIMITED, BOMBAY
Trademark Proprietors:
WHITEHALL PHARMACAL COMPANY, NEW YORK, U.S.A.



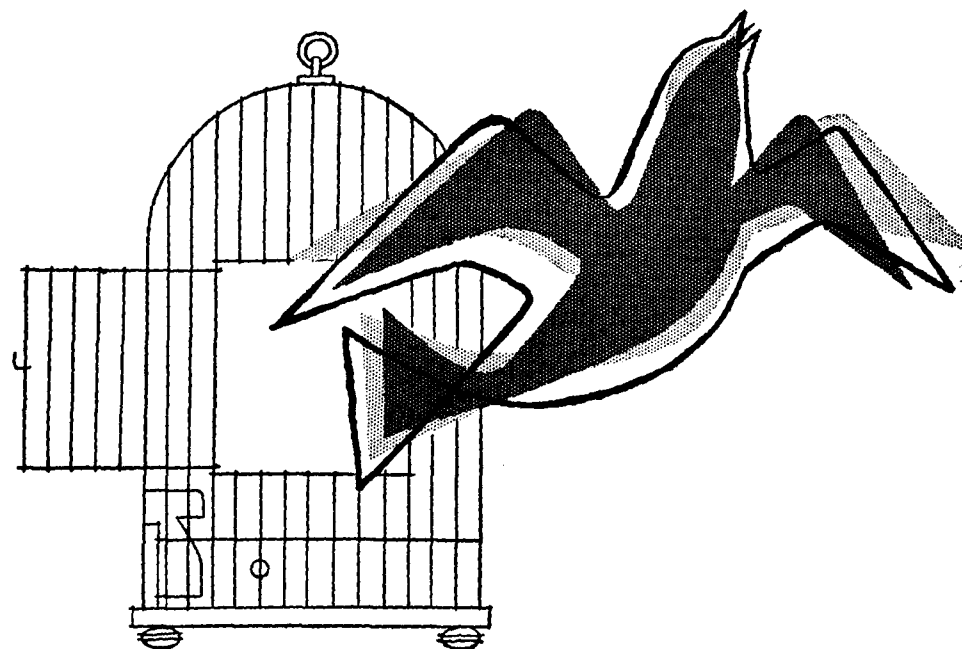
- * Soothen cough.
- * Alleviates respiratory distress.
 - * Facilitates expectoration.
- * Increases resistance to infection.
 - * Possesses antispasmodic, antiseptic and healing properties of a high order.
- * Well tolerated by invalids and children.

ORIGINAL
Beiersdorf
PRODUCT



PARRY & CO., LTD.

MADRAS • BOMBAY • CALCUTTA • NEW DELHI,



Free to breathe again . . .

succinctly expresses the relief of the asthmatic subject who uses 'Neo-Epinine' preparations. In the majority of patients 'Neo-Epinine' Compressed Products sublingually or No. 1 Spray Solution by oral inhalation will rapidly relieve the attack. The intractable case will probably require No. 2 Compound Spray Solution, which is more potent and longer acting. 'Neo-Epinine' Compressed Products, 20 mgm., are available in bottles of 25 and 100; 'Neo-Epinine' No. 1 Spray Solution and No. 2 Compound Spray Solution each in bottles of 10 c.c.

'NEO-EPININE'
ISOPRENALINE SULPHATE

—in bronchial asthma



BURROUGHS WELLCOME & CO. (INDIA) PRIVATE LTD.
P. O. BOX 290, BOMBAY-I



HERE
IS
HEALTH
FOR
YOUR
BABIES!



NAUNEHAL BABY TONIC

*Useful in the following
diseases of Children*

GENERAL DEBILITY, INFANTILE
TUBERCULOSIS, RICKETS,
INFLAMMATION OF GUMS,
WEAKNESS DURING CONVALE-
SCENCE, PELLAGRA, ARTHRITIS,
INFLAMMATION OF MOUTH,
COLDS & CATARRH.

NAUNEHAL
THE RICHEST TONIC FOR BABIES

Hamdard

DAWAKHANA (TRUST) DELHI

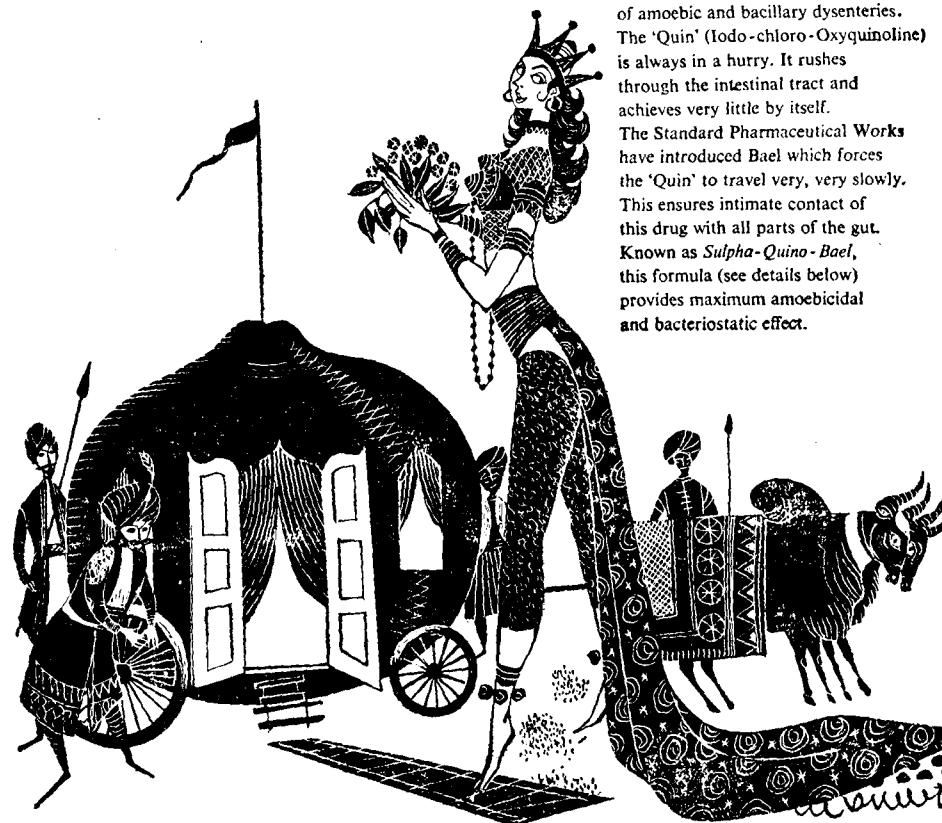
NAUNEHAL GRIPE SYRUP

*Useful in the following
diseases of Children*

CONSTIPATION, INDIGESTION,
FLATULENCE, DIARRHOEA,
DYSENTERY, TEETHING,
ENLARGEMENT OF LIVER &
SPLEEN, DISTURBED SLEEP,
INFLAMMATION OF MOUTH,
SALIVATION, ROUND WORMS
& OTHER WORMS, EXCESSIVE
THIRST.

Bring the Bael to carry the Quin*

* IODO-CHLORO-OXYQUINOLINE to you!



The picture tells a story – the story of a new formula for the effective treatment of amoebic and bacillary dysenteries. The 'Quin' (Iodo-chloro-Oxyquinoline) is always in a hurry. It rushes through the intestinal tract and achieves very little by itself. The Standard Pharmaceutical Works have introduced Bael which forces the 'Quin' to travel very, very slowly. This ensures intimate contact of this drug with all parts of the gut. Known as *Sulpha-Quino-Bael*, this formula (see details below) provides maximum amoebicidal and bacteriostatic effect.

Each spoonful measure, as supplied inside
each carton, contains :

Sulphanilamide	—	0.067	gm
Sulphathiazole	—	0.067	gm
Sulphaguanidine	—	0.067	gm
Iodo-chloro-Oxyquinoline	—	0.2	gm
Baked Bael Powder	—	1.1	gm
Isaphgul Powder	—	0.2	gm
Magnesium Carbonate	—	0.2	gm

**SULPHA
QUINO
BAEL**

Now available in Granules

Standard Pharmaceutical Works Ltd. Calcutta 14



That
Tingling-Tongue



You will find the tongue
is tingling after your fastidious
patients have taken the first
dose of Panlyn

Each
average tea spoonful
(5 c.c.) Contains :

Vitamin A	5000 I.U.
Vitamin D	500 I.U.
Thiamine Mononitrate	3 mg.
Riboflavin Soluble	3 mg.
Pyridoxine Hydrochloride	1.5 mg.
Nicotinamide	30 mg.
Ascorbic Acid	75 mg.
Acetyl Methionine	5 mg.

... Vitamins with a palate-pleasing-taste

PANLYN

TRADE MARK

Perfectly Homogenized, Water Dispersible & Stable.

Supplied in 2 oz. & 4 oz. phials

THE CALCUTTA CHEMICAL CO. LTD. CALCUTTA-29.

The Antiseptic

A Monthly Journal of Medicine and Surgery

Published on the 6th of every month

Founded by the late Dr. U. RAMA RAU in 1904

Editor: U. KRISHNA RAU, M.B., B.S., M.L.A.

Associate Editor: U. VASUDEVA RAU, M.B., B.S.

Editorial & Publishing Office: 323-24, Thambu Chetty St., Madras-1

Annual Subscription: Rs. 7-8-0. Foreign—Rs. 10—Post Paid

Vol. 53

DECEMBER, 1956

No. 12

Original Articles

VIRAL HEPATITIS (ACUTE INFECTIVE HEPATITIS)*

K. N. GOUR, M.D., M.R.O.P. (Ed.), F.B.F.P.S.G., D.C.H. (Eng.), D.P.H.,

Professor of Medicine, Medical College, Agra

ACUTE infective hepatitis is a very widespread disease and has been reported from practically all parts of the world. It may occur sporadically or in epidemic form or may become pandemic when it would become a global problem. We know that gamma globulin prepared from pooled sera prevents the occurrence of the disease; it shows that the infection is certainly very widespread.

It is a disease of human beings; neither animals nor insects suffer from the disease. Hence it has not been possible so far to transmit the virus experimentally to animals.

Mode of spread.—The virus of infective hepatitis is present in the stools and also in the blood. Hence its mode of spread is from the stools to man and for this reason the 'intestinal-oral circuit' becomes most important and flies also stand to be incriminated in the transmission.

Kauffman¹⁰ reported a small outbreak—which was probably food-borne and transmitted by a cook—in which 50 cases occurred among 90 people. Broodrile reported an outbreak which occurred in a small boarding school through the use of common cups and cutlery; the domestic staff who used different utensils and had a separate mess, did not suffer from the disease.

The water from a well, which was contaminated by a leaking sewer was the cause of an outbreak in a sanatorium at Halbmass, as reported by Neefe and Stokes¹. Polluted water can thus be a source of infection.

* Paper read at XXXII All-India Medical Conference, Jaipur, 1955.
Specially contributed to the ANTISEPTIC.

Mode of onset.—The disease is a generalized systemic infection with a predilection for causing liver injury. Probably the liver suffers even from the very beginning and most of the prodromal symptoms might be due to the resulting liver injury.

In the majority of our cases, the onset was insidious and the prodromal symptoms were mostly gastrointestinal, anorexia, abdominal discomfort, slight pyrexia (99°F to 100°F) and a mild icterus appearing after 4 or 5 days. In a few cases the onset was ushered in by severe abdominal pain, resembling intestinal colic. In some cases, in which it started with a high temperature of 102°F to 103°F , jaundice appeared much earlier *i.e.*, in 2 or 3 days. Some patients showed practically no prodromal symptoms and were carrying on their routine work till some one drew their attention to the coloration of the conjunctivæ or till they themselves happened to look into a mirror and observe an icteric tinge in the eyes. In a few, there were symptoms attributable to hepatitis but no jaundice. Thus we see that the mode of onset was not uniform but very variable.

Symptoms and signs.—In mild cases, the patient complains of malaise, headache, lassitude, anorexia, nausea or vomiting, discomfort or pain in the abdomen specially noticeable in the epigastric and right hypochondriac regions, aches and pains in the body, a temperature of from 99°F to 102°F or even 103°F and there may also be a feeling of chilliness or mild rigor.

In some cases the severe abdominal pain may simulate an attack of biliary colic. These symptoms may be present for a few days before any icteric tinge is seen in the conjunctiva. This is the pre-icteric stage.

Then bilirubin appears in the urine, the colour of which deepens and the conjunctiva and the skin show an yellowish tinge when the icteric stage is reached. The symptoms present in the prodromal stage may increase, as also vomiting and pain; the pain may become more localized in the right hypochondriac region. Jaundice gradually deepens and the liver may become palpable and tender. Constipation or diarrhoea may be present. The stools may be clay-coloured.

In very severe cases, the jaundice may become more profound. Hemorrhages may occur in the skin and gums or in some internal organ—pulmonary or gastrointestinal; the patient becomes apathetic, listless and comatose.

Course of the disease.—This varies in different individuals. Some may have a mild uneventful course, and recover in about 5 to 6 weeks' time. In others, the disease takes a prolonged course and if not handled properly may take several months to subside, and in some the patient is left with a palpable firm liver with anorexia abdominal discomfort, slight anemia, fatigue on sustained physical or mental effort and slight jaundice—a state of chronic ill-health.

Diagnosis.—In the early stages of the disease when there is fever, abdominal discomfort etc., without any jaundice it has to be differentiated from:—(a) malaria; (b) enteric fever; (c) sandfly fever; (d) dengue; (e) gastro intestinal disease *e.g.*, gastro-enteritis, appendicitis, dysenteries etc; and (f) influenza.

When jaundice has appeared, it has to be differentiated from jaundice caused by other causes.

The blood count may be normal or may show leucocytosis. In some cases there may be leucopenia. Icteric index is increased and in severe cases may reach 100 units or even more. The urine shows the presence of bile-pigments and bile-salts.

Liver function tests.—In the early stage the bromsulphalein test becomes abnormal and later on the cephalin-cholesterol flocculation test and thymol-turbidity test show abnormality.

TREATMENT.—*General*.—Rest and diet are sheet anchors in treatment. *Rest*.—The patient should have absolute rest both physical and mental; symptoms then subside rapidly, and recovery is hastened and is complete. He should not be allowed to get up till the symptoms have completely subsided *i.e.*, till the temperature has become normal, his appetite has returned, his abdominal discomfort has disappeared, there is no longer any pain or tenderness in the hepatic region, the liver is no longer palpable, the urine is quite clear and free from bile-salts and bile-pigments and the serum bilirubin has returned to normal. In only such cases where the patients are very insistent and are fit to go to the lavatory, they may be so allowed; otherwise bed-pans and urinals should be provided on the bed or a commode provided by the bedside.

It should be realized that when the patient lies in the recumbent position, circulation in the liver is greatly helped and hepatic discomfort is very much diminished because there will be no dragging down such as may be caused in the erect position or to a less extent in the sitting position.

Though clinical improvement is noticed early the pathological changes take a long time to disappear; as will be seen from the presence of cellular infiltration for quite a long time after the patient has shown clinical improvement and the liver function has corrected itself.

No definite, hard and fast rule can be laid down about the period of rest which should be observed, and each case must be judged on its own merits. The period of rest cannot be measured in days or weeks, at least 3 months being necessary in the average case. He should not be allowed to do any heavy work, before this period is over. We must also realize that the liver has suffered by an acute inflammatory disease and a diseased organ requires sufficient rest till the activity of the disease has completely subsided and the

functional activity of the liver has been restored and the pathological change has corrected itself. By following this regime relapses can be prevented, the duration of the disease shortened, and the disease made to run an uneventful course without complications or sequelæ. In all cases, where complete rest was observed, the duration of the disease was shortened and no complications occurred. On the other hand, those patients who were up and about, doing heavy work during the prodromal stage suffered from a severe form of the disease, the course of which was a stormy and more prolonged one.

Diet:—Darmandy observed that though a high protein and low-fat diet (proteins 200 g., carbohydrates 400 g., fat 40 g.) had been advised as more suitable and beneficial, no difference was noticed as compared with controls.

In our country, protein-deficiency already exists and so it is essential that we should have sufficient proteins in the diet. A high protein-diet may not act as a restorative but it would certainly act as a preventive in the causation of hepatic injury.

All the 24 cases in our series of infective hepatitis recovered. Beattie reported that on dietetic measures alone the patient's stay in the hospital was reduced by as much as 37%.

Further, a suitable diet should contain not only enough proteins but must also provide enough calories such as would be derived from a high carbohydrate diet.

It has been customary from very ancient times to prescribe a fat-free diet, but though fat-metabolism is disturbed in this condition it is not necessary that the diet should be entirely free from fat. A little fat is not harmful, rather will it be an advantage as providing a large number of calories.

Hence, the diet to be recommended to these patients should have a high-protein, high-carbohydrate and low-fat content.

At the beginning of the disease and in mild or moderately severe cases, a light diet supplemented with fruit juice and glucose drinks may be advised for a few days. In cases where the appetite is poor, glucose can be given freely by the mouth. For the rural population and for those who cannot afford, *gur*, sugar, sugar-candy, or sugar-cane juice by the mouth may be advised instead of glucose. A few days later, a diet consisting of 400 to 500 g. of carbohydrates, 80 to 100 g. of proteins and 30 to 40 g. of fat may be given. A low fat diet can be obtained from skimmed milk and milk from which cream has been removed, *matha* and curds from which the cream has been taken off. Curds can be given freely as these are rich in casein, which contains lipotropic factors.

Many patients do not relish and so refuse skimmed milk; such cases may be given boiled milk from which the top layer of cream has been removed. A little fat will do no harm.

Patients in a weak state of health prefer liquids and semi-solids to solids because they can be taken more easily; this aspect should therefore, be kept in mind.

Feeding by the intravenous route.—In severe cases where there is complete loss of appetite and severe gastrointestinal upsets like vomiting, the intravenous administration of 100 or 150 cc. of a 25% solution of glucose once or twice a day, is to be recommended.

Glucose in normal saline 1½ to 2 pints may be administered by slow drip once a day to patients who do not take in adequate quantities of water by the mouth. If there is much dehydration, this may be given twice a day. A few days' administration of glucose and normal saline may help the patient to such an extent that they would then, be able to take some nourishment by the mouth. Patients who cannot take anything by mouth for several days, may be given protein hydrolysates along with glucose by the intravenous route.

Alcohol should be forbidden. Hartfall has mentioned the deleterious effects of alcohol in all stages of the disease; in the incubating stage, it might provoke an attack; and in mild cases, it might worsen or prolong the attack or might cause a relapse.

Lipotropic factors.—There is ample evidence from the results of animal experiments to suggest that diets deficient in the lipotropic factors, predispose to liver damage and that when these are supplied, damage does not occur and can be prevented.

Opinions differ on their value in the treatment of infectious hepatitis. Some workers observed that they had no effect, on the severity and duration of the disease, nor on the incidence of relapses.

We gave methionine to six patients—2 tablets twice a day and no change was observed in the decline of icteric index from that of the controls, though there was a comparatively better sense of well-being than those who did not get these vitamins and liver extract etc.

Vitamins are helpful, especially the Vitamin B complex which can be given by mouth in the form of tablets—2 tablets twice a day or in the form of Elixir, 2 tea-spoonfuls twice a day. In those who are unable to take by mouth, it can be administered parenterally by the intravenous or by the intramuscular route.

When the patients have severe anorexia or when they are taking nourishment poorly or when they are not convalescing satisfactorily, liver extract 2 cc. may be given I.M. on alternate days, with or without Vitamin B complex.

Vitamin C may be given orally or may be given intravenously when glucose or saline is being administered by this route.

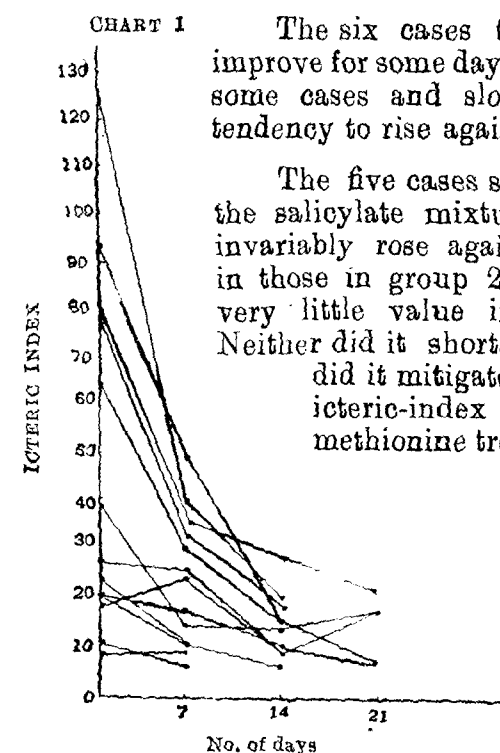
Drugs:—It is difficult to assess the value of drugs in a disease which has a tendency to cure by itself, and which *per se*, causes very few deaths.

Twenty-four cases with suitable controls were studied to assess the value of Achromycin. These were divided into 3 groups:—(i) 13 cases were given achromycin capsules, one capsule 4 times a day for 8 days; (ii) six received methionine tablets, 2 tablets 3 times a day; and (iii) five served as control, by getting only the ordinary salicylate mixture.

The diets in all these cases were the same:—a high carbohydrate, high protein and low fat diet.

The duration of the illness, the severity of the disease, and the icteric index were taken as the criteria (*i.e.* clinical and biochemical) in assessing the value of the antibiotic.

In the 13 cases on Achromycin therapy, the temperature came down rapidly, and the symptoms of anorexia and gastrointestinal upsets improved (in 12 cases). The improvement was noticed within 4 to 5 days of the administration of the drug. The icteric index fell rapidly and in only one case there was a tendency to rise again. (See Chart 1, below).



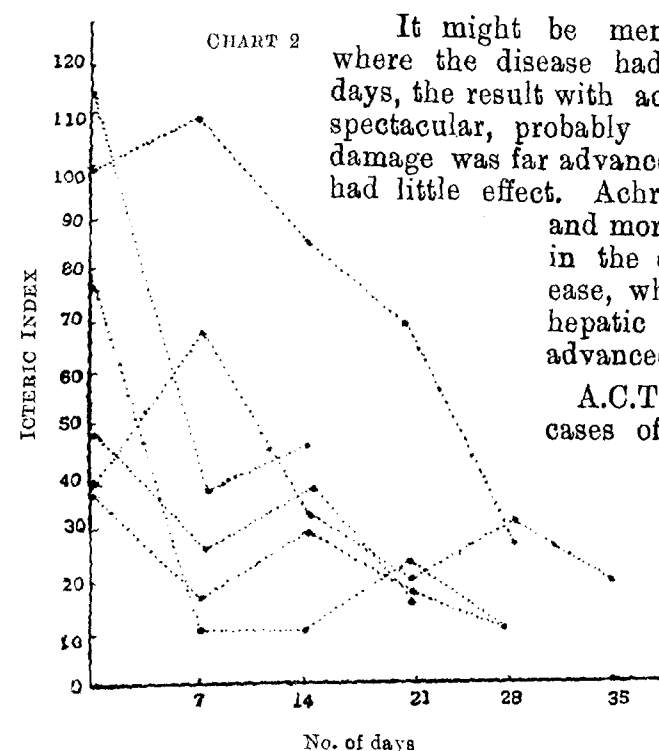
The six cases treated with methionine did not improve for some days, the icteric index fell rapidly in some cases and slowly in others with an invariable tendency to rise again. (See Chart 2, p. 891).

The five cases serving as control were given only the salicylate mixture. The icteric index fell but invariably rose again. (See Chart 3, p. 892). just as in those in group 2, showing that methionine is of very little value in the treatment of this disease. Neither did it shorten the duration of the illness nor did it mitigate the severity of the disease. The icteric-index decline was the same in the methionine treated and in the control groups.

The duration of the illness was considerably reduced in the cases treated with Achromycin, 2 to 3 weeks being the average duration, while cases treated with methionine took 3 to 5 weeks for recovery (See Chart 4, p. 893). The control cases took 3 to 4 weeks for the icteric index to fall to normal values (See Chart 3, p. 892). The number of cases treated is no doubt too

small to admit of definite conclusions being drawn but it is certainly suggestive that Achromycin had definitely drawn but it is certainly in alleviating the symptoms, in shortening the length of illness and in lowering the icteric index rapidly.

Complications were not encountered and the convalescence was uneventful in all our cases.



It might be mentioned that in cases where the disease had persisted for some days, the result with achromycin was not so spectacular, probably because the hepatic damage was far advanced and the antibiotic had little effect. Achromycin yielded better and more encouraging results in the early stage of the disease, when the viraemia and hepatic damage had not far advanced.

A.C.T.H. was used in only 2 cases of our series and was found to be practically of no value.

Administration of saline:—In a few cases, non-surgical biliary drainage was helpful. 2 drachms of Mag sulph, dissolved in $\frac{1}{2}$ to 1 oz. of water was given on empty stomach, and the patients asked to lie on

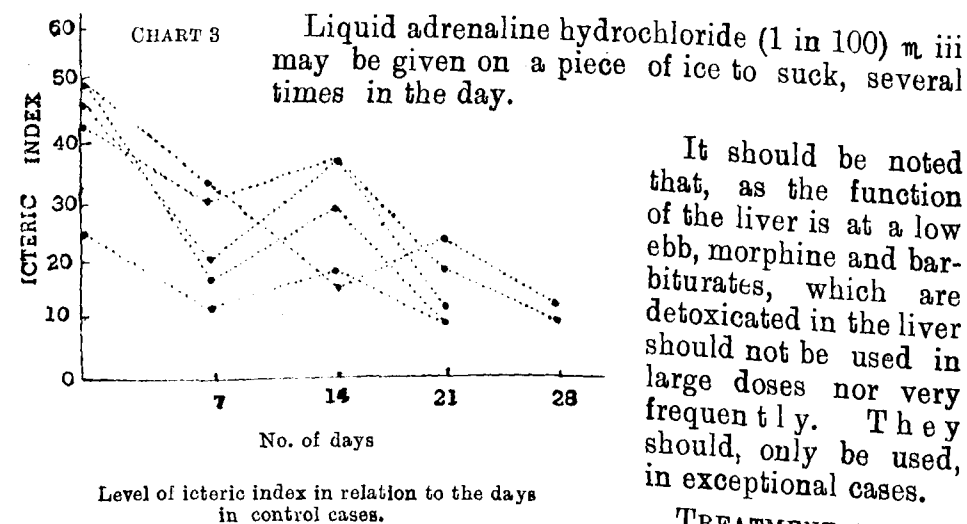
their right side for half an hour. The concentrated saline on reaching the duodenum draws the bile from the biliary passages. One patient stated that about half an hour after taking the saline purgative he felt a sensation in the right hypochondriac region as if something was being withdrawn by a syringe. The biliary passages are relieved of the stagnated bile by this method and the whole biliary tree is thus cleared up.

SYMPTOMATIC TREATMENT:—*For pain:*—Pethidine may be given by mouth. Trasentin one tablet twice a day; pethidine one tablet twice a day; Spasminon one tablet twice a day; and in very severe cases pethidine may be administered subcutaneously. If this fails to relieve the pain, morphine gr. $\frac{1}{4}$ may be administered subcutaneously.

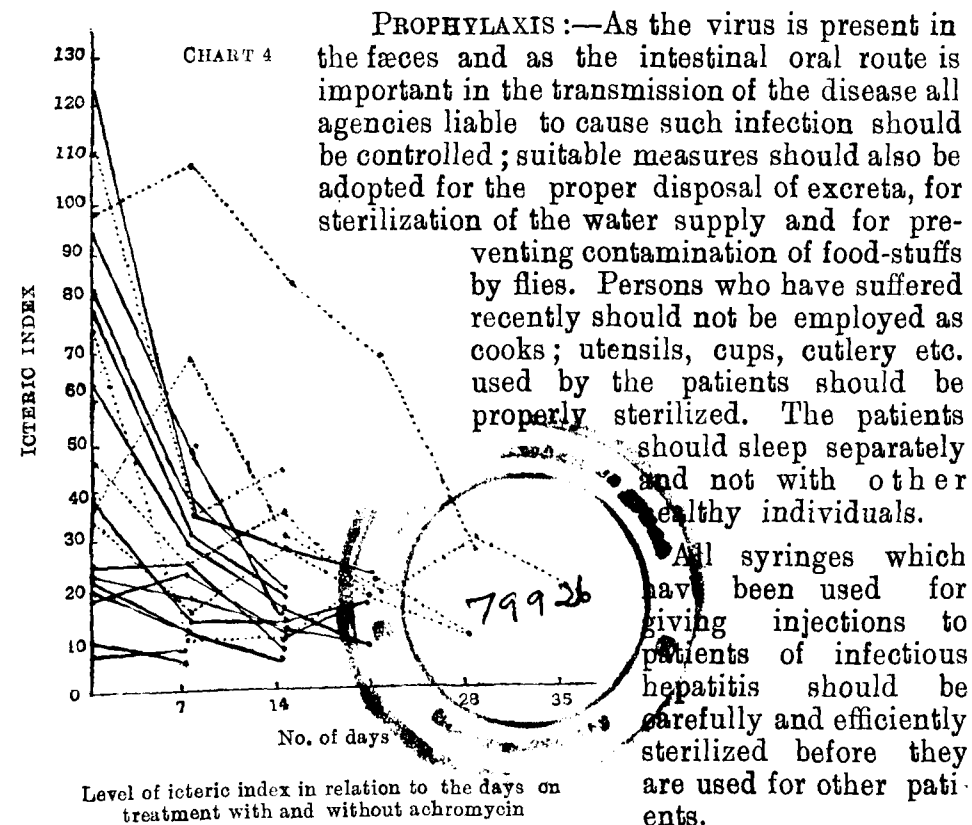
For constipation:—Mag sulph and Soda sulph, two drachms of each in an ounce of water may be given.

For nausea and vomiting:—Fractional doses of calomel may be given. A grain of calomel with gr. xv of Sodi bicarb must be divided in 6 parts and one part given every $\frac{1}{2}$ hr. till six such doses

have been given. Hydrargyri *cum* creta gr. iii with Sodi bicarb gr. xx is divided into six parts and one part given 3 times a day for an adult. The dose should be proportionately reduced in the case of children.



For marked anaemia:—Injection of liver extract and vitamin B-complex and blood-transfusion may have to be resorted to.



practically all the cases there was an increase in the icteric index and in the symptoms a few days after starting the treatment; (6) five control cases took 3 to 4 weeks for recovery and periods of exacerbations were frequent; (7) methionine is of very little value in the treatment of this disease, as it neither shortens the length of the illness nor lessens the severity of the disease; (8) A.C.T.H. was found to be of no avail in this disease; and (9) Achromycin was more effective in the early stages of the disease *i.e.*, in the stage of viraemia and before hepatic damage had progressed.

In this series of cases Achromycin was decidedly better as evidenced by the symptomatic improvements in the fever, loss of appetite and rapid decline of previously raised icteric-index and also by the shorter course of the disease as compared with the control cases or where only methionine was used.

It is not possible to say yet how Achromycin produces the beneficial effect; probably it has anti-viral properties, acting directly on the virus or it might be exerting its beneficial effect by acting on the superimposed secondary bacterial infection in the upper gastrointestinal tract (the duodenum etc.).

This group of antibiotics is certainly superior to sulphonamides or penicillin which have been found to be of little or no value in infective hepatitis.

Acknowledgement.—My grateful thanks are due to Dr. H. N. Bhatt, M.B., F.R.C.S. (Ed.), D.M.R. & E., Principal and Superintendent, Medical College, Agra for according permission for this investigation and to publish the results.

I am thankful to my House Physician Dr. Zia-ul-Islam who helped me in the investigation and I am also very grateful to the Lederle Laboratories for supplies of the Achromycin used in these cases.

REFERENCES:

1. Beaumont, G. E. and Dodds, E. C.—Recent Advances in Medicine.
2. Beattie, J., (1943-44)—Royal College of Surgeons of England, Scientific Report, 79: London.
3. Bockus, H. L., (1950)—Postgraduate Gastro-enterology.
4. Broadbille, H. S., (1952)—Lancet, 339.
5. Conn, H. F.—Current Therapy.
6. Davidson, L. S. P., (1952)—Principles and Practice of Medicine.
7. Darmandy, E. M., (1945)—B.M.J. 795.
8. Dunlop and Davidson, L.S.P., Mc. Nee, J.—Medical Treatment, D.M.
9. Hartfeld, (1944)—B.M.J., (ii) 21.
10. Kauffmann, G. G. and Hevens, W. B., (1952)—J.A.M.A., 149: No. 11, p. 993.
11. Medical Annual, 1950.
12. Neefe, J. R., Stokes, J. (1945)—J.A.M.A., 128: 1063.
13. Mc. Nee, J., (1953)—Medical Annual.
14. Practitioner, (1949), 182.

VALUE OF ANTENATAL EXERCISE

C. W. F. Burnett, West Middlesex Hospital, Isleworth, England, recommends individual tuition of the patient by the physician before delivery rather than impersonal instruction of large classes of expectant mothers.

Analysis of 2,475 deliveries showed no significant difference in length of labour, complications of pregnancy or incidence of lacerations, forceps extractions, or premature delivery between exercised and unexercised women. Exercises may somewhat influence amount of pain during labour; however, objective confirmation is lacking.

Either purely physical or purely psychologic preparation for labour is likely to be unsatisfactory. Results are probably best when the patient trusts the attendant.—(*Modern Medicine*, July 15, 1956).

PIPERAZINE ADIPATE IN THE TREATMENT OF ANKYLOSTOMIASIS AND ITS EFFECTS ON THE LIVER, BONE-MARROW AND KIDNEYS *

M. N. BHATTACHARYYA, B.A., M.B., D.T.M., D.C.H., M.R.C.P.,

AND

S. D. BARUA, M.B., B.S.,

Dept. of Clinical Medicine, Assam Medical College, Dibrugarh

Introduction.—The use of Piperazine as an anthelmintic against round-worm and thread-worm has been dealt with in several communications in recent years, (Fayard 1949, Mouriguard *et al* 1951, Turpin *et al* 1952 quoted by White 1954 and Dunn 1955), but we find very few communications on its value in hookworm infections. Dunn (1955) found that Piperazine hydrate (Anteper) and Piperazine adipate (Entacyl) were useless against hookworm; medical literature on "Antepar" admits this view; but "Entacyl" has been claimed to be effective against hookworm. A large number of inpatients in the hospital attached to the Assam Medical College, Dibrugarh suffer from hookworm disease associated with profound anaemia and since the liver is likely to be at a disadvantage in an anaemic patient with a possibility of fatty changes, one is always on the lookout for an effective anthelmintic against hookworm, which will be nontoxic to the liver at the same time. No hepatotoxic effect of Piperazine is known to have been reported; White and Stenden (1953) and Sime (1953) observed transitory neurological symptoms. In this context an attempt was made by us to assess the value of Piperazine adipate (Entacyl) as an anthelmintic against hookworm and judge its effects if any on the liver, bone-marrow and kidneys.

Material.—Patients suffering from hookworm anaemia were admitted into the M.W.II of the Assam Medical College Hospital; some of them had pitting oedema also on the lower extremities. Those patients whose aetiological factor for anaemia was found to be hookworm infestation, were included in the study. During this period of therapeutic trial, the patients were given an iron tonic mixture containing 20 grains of *Ferri et ammon citras* per ounce or iron tablets with Vitamin B₁ (T.C.F.) one tablet thrice daily each tablet containing 195 mg. of Ferrous sulph exsic., .05 mg. of copper, .05 mg. of Manganese citrate and 1 mg of Vit B₁, along with one multivitamin tablet thrice daily. The patients had the ordinary hospital diet reinforced with $\frac{1}{2}$ seer of milk and one egg daily. The oedematous patients received the drug and diet without salt and a diuretic mixture containing Pot. citras, Pot. acetat 15 gr. each, with Extr. Punarnava liq. m 60 per ounce thrice daily along with other drugs. No restriction on their activity was imposed. Since the action of the drug against hookworm in the above dosage schedule was found

* Specially contributed to the ANTISEPTIC.

to be far below expectation in 9 out of 10 consecutive cases further trial with the drug was abandoned.

Method.—The patients were not subjected to any previous preparation for anthelmintic treatment *e.g.* no restriction of diet and no purgation. Estimation of hookworm ova in the stool was done by Stell's method modified by Napier (1946) before treatment and on the 4th, 8th and 11th days after starting treatment. Piperazine adipate (Entacyl) was administered 2 tablets (300 mg. each) thrice daily for seven days. Haemogram, estimation of blood protein, vanden Bergh reaction, hippuric acid test, and Takata-Ara reaction were done before and after the course of treatment.

Findings.—During the course of medication, no untoward signs and symptoms were noted. The observations, recorded with regard to egg count, liver function, haemogram and urine examination, are furnished in statements 1, 2 and 3, on pages 897 to 899.

Discussion.—*Egg count*:—It was found that the number of eggs in the stool continued to decline even after the cessation of the medication. In this series, though the course of treatment was for 7 days, the egg-count on the 11th day was lower than that on the 8th day. Except in 2 cases, in one of which there was a reduction of 100% and in the other a 71.4% reduction on the 8th day, the differences in egg-count, 3 days and 7 days after medication was not appreciable. Examination of stool on the 11th day showed the complete absence of hookworm ova only in one case; there was more than 50% reduction in 5 cases and less than 50% reduction in 4 others. Piperazine adipate is therefore, not an effective anthelmintic against hookworm—an observation which is in conformity with that of Dunn (1955). There was no difference in the results of treatment after 3 and after 7 days' continuous medication.

Liver function:—A reduction in total plasma-protein with a reduced albumin and a relatively increased globulin may occur in liver diseases, as well as in certain other conditions including many nutritional deficiencies, (Stewart and Dunlop 1949). Increased amount of blood bilirubin with a positive vanden Bergh reaction may occur in hepatitis and some extra hepatic diseases. To use the hippuric acid test for the detection of liver diseases necessitated the vindication of healthy kidneys and when Sodium benzoate is used orally its absorption from the gut must also be ensured. Takata-Ara reaction alone may not reveal any signs of liver damage even when some may be present. In view of the great reserve power of the liver, it is necessary to do at least three types of tests for the detection of hepatic dysfunction *viz.*, one based on the excretory function, one on detoxicating function, and another on protein metabolism (Stewart and Dunlop 1949). We have assessed the values of all the tests before and after medication *viz.*, blood bilirubin estimation vanden-Bergh reaction (excretory function), hippuric acid test

('detoxicating' function), and blood protein and also Takata-Ara reaction and in some protein metabolism function. We did not find any hepatic damage consequent on the administration of piperazine adipate.

Haemogram.—*Anæmia*:—Haemoglobin estimation and R.B.C. count did not show any deterioration; on the other hand some improvement was noticed in all but three cases. Two cases showed a rise in haemoglobin by less than 50% and 5 by 100% or more. The degree of anæmia in cases of ankylostomiasis is not proportionate to the hookworm load (Bhattacharyya 1955, Hynes, Ishaq, Marris and Varma 1946 quoted by Patwardhan 1952); the quality and quantity of the diet play a greater role in precipitating hookworm disease. Hookworm becomes an important deciding factor in the production of anæmia only in people living on a marginal or submarginal diet. "It has been repeatedly shown that anthelmintic treatment without iron administration will effect little if any immediate improvement in the anæmia; in many cases it is possible to bring the blood level up to normal by iron administration alone" (Napier 1946). The rise of haemoglobin in 7 out of 10 cases is due to the improved dietary in

TABLE I
Egg Count

Case No.	Patient's name, age, sex, and date of admission	Egg-count per gram of stool			
		Before treatment	4th day	8th day	11th day
1	P, 6, m, 5-2-'55	1,000	600	600	400
2	D, 13, f, 19-3-'55	9,000	5,000	4,600	3,400
3	B, 10, f, 3-5-'55	3,600	3,600	3,400	3,400
4	S, 32, m, 3-5-'55	3,400	3,200	3,200	2,400
5	E, 18, m, 12-5-'55	35,000	32,000	20,600	10,200
6	D, 34, m, 10-6-'55	3,600	3,200	2,600	2,400
7	G, 45, m, 8-8-'55	38,800	38,400	38,400	38,200
8	B, 30, m, 7-7-'55	3,800	2,200	2,000	1,400
9	K, 10, f, 8-11-'55	4,600	4,400	nil	nil
10	B, 18, m, 5-1-'56	15,600	11,200	3,200	2,200

TABLE II
Liver Function: A—Blood protein

Case No.	Total protein per cent.		Albumin per cent		Globulin per cent.	
	Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment
1	6.5 gm.	6 gm.	4 gm.	3.8 gm.	2.5 gm.	2.2 gm.
2	5 gm.	6 gm.	2.8 gm.	4 gm.	2.2 gm.	2 gm.
3	6 gm.	6 gm.	4 gm.	4 gm.	2 gm.	2 gm.
4	5 gm.	5 gm.	2.8 gm.	2.8 gm.	2.2 gm.	2.2 gm.
5	5 gm.	6 gm.	2.8 gm.	3.2 gm.	2.2 gm.	2.8 gm.
6	5.5 gm.	6 gm.	3.2 gm.	4 gm.	2.3 gm.	2 gm.
7	5.5 gm.	5.5 gm.	3 gm.	3 gm.	2.5 gm.	2.5 gm.
8	5 gm.	5.5 gm.	2.8 gm.	3 gm.	2.2 gm.	2.5 gm.
9	6.5 gm.	6 gm.	3.5 gm.	3.4 gm.	3 gm.	2.6 gm.
10	6 gm.	6.5 gm.	3.8 gm.	4 gm.	2.2 gm.	2.5 gm.

TABLE II

B—Liver Function Tests

Case No.	Excretory function				Detoxicating function Hippuric acid test				Flocculation test Takata- Ara test	
	Blood bilirubin		Icteric index		vanden Bergh test		After giving 6 gm. of Sodi benzoas		Before treat- ment	After treat- ment
	Before treat- ment	After treat- ment	Before treat- ment	After treat- ment	Before treatment	After treatment	Before treatment	After treatment		
1	.1 mgm %	.20 mgm %	6	6	Direct -ve Ind. Wkly Positive	Direct -ve Ind. Wkly Positive	1.02 gm of Sodi benzoas as benzoic acid	0.99 gm of Sodi benzoas as benzoic acid		
2	0.3 mgm %	0.3 mgm %	5	3	Direct -ve Ind. Wkly Positive	Direct -ve Ind. Wkly Positive	2.5 gm of Sodi benzoas as benzoic acid	2.4 gm of Sodi benzoas as benzoic acid		
3	.15 mgm %	.15 mgm %	6	6	Direct -ve Ind. Wkly Positive	Direct -ve Ind. Wkly Positive	1.9 gm of Sodi benzoas as benzoic acid	2 gm of Sodi benzoas as benzoic acid		
4	.1 mgm %	.15 mgm %	6	6	Direct -ve Ind. Wkly Positive	Direct -ve Ind. Wkly Positive	2.5 gm of Sodi benzoas as benzoic acid	2.8 gm of Sodi benzoas as benzoic acid		
5	.15 mgm %	.12 mgm %	6	6	Direct -ve Ind. Wkly Positive	Direct -ve Ind. Wkly Positive	2.5 gm of Sodi benzoas as benzoic acid	2.7 gm of Sodi benzoas as benzoic acid	Mode- rately positive (+ +)	Mode- rately positive (+ +)
6	.5 mgm %	.20 mgm %	10	6	Direct -ve Ind. Wkly Positive	Direct -ve Ind. Wkly Positive	2.2 gm of Sodi benzoas as benzoic acid	3.6 gm of Sodi benzoas as benzoic acid	Wkly posi- tive (+)	Wkly Posi- tive (+)
7	.20 mgm %	.25 mgm %	6	12	Direct -ve Ind. Wkly Positive	Direct -ve Ind. Wkly Positive	2.2 gm of Sodi benzoas as benzoic acid	1.9 gm of Sodi benzoas as benzoic acid		
8	.15 mgm %	.2 mgm %	5	6	Direct -ve Ind. Wkly Positive	Direct -ve Ind. Wkly Positive	1.85 gm of Sodi benzoas as benzoic acid	2.1 gm of Sodi benzoas as benzoic acid		
9	.15 mgm %	.1 mgm %	6	6	Direct -ve Ind. Wkly Positive	Direct -ve Ind. Wkly Positive	.7 gm of Sodi benzoas as benzoic acid	1.9 gm of Sodi benzoas as benzoic acid		
10	.10 mgm %	.12 mgm %	5	6	Direct -ve Ind. Wkly Positive	Direct -ve Ind. Wkly Positive	2.3 gm of Sodi benzoas as benzoic acid	2.2 gm of Sodi benzoas as benzoic acid		

that an extra seer of milk, and one egg a day were given to each patient, and to the iron therapy, it may not have anything to do with the reduction in egg-count, which is not very great.

TABLE III—Haemogram

Case No.	Hæmoglobin %	R.B.C.		M.C.V.		M.C.H.		M.C.H.C.		C.I.		W.B.C. T. Count		W.B.C. (Differential Count)			
		Before treatment		After treatment		Before treatment		After treatment		Before treatment		Before treatment		Before treatment		After treatment	
		Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment	Before treatment	After treatment	Poly.	Lympho.	Mono.	Eosino.
1	50% 7.25 gm	3.9 mil	3.1 mil	72 cu μ	92 cu μ	23 rr	26 rr	32%	27%	.8	.8	5,500 cmm	7,500 cmm	65%	24%	38%	6%
2	15% 2.17 gm	1.2 mil	1.3 mil	77 cu μ	95 cu μ	18 rr	27 rr	27%	29%	.6	.6	5,700 cmm	6,200 cmm	60%	22%	24%	5%
3	10% 1.45 gm	.8 mil	.8 mil	74 cu μ	86 cu μ	13 rr	24 rr	24%	29%	.6	.6	7,400 cmm	5,700 cmm	42%	45%	35%	7%
4	25% 3.625 gm	3.5 mil	1.6 mil	80 cu μ	88 cu μ	23 rr	25 rr	27%	27%	.7	.8	5,550 cmm	6,500 cmm	52%	32%	32%	5%
5	40% 5.8 gm	2.5 mil	2.5 mil	82 cu μ	80 cu μ	23 rr	23 rr	26%	29%	.8	.8	7,200 cmm	5,200 cmm	40%	28%	31%	6%
6	85% 12.325 gm	4.5 mil	4.5 mil	90 cu μ	94 cu μ	23 rr	27 rr	28%	29%	.9	.9	6,700 cmm	6,200 cmm	56%	31%	27%	8%
7	15% 2.17 gm	1.2 mil	1.2 mil	75 cu μ	86 cu μ	18 rr	19 rr	24%	22%	.6	.6	5,200 cmm	4,200 cmm	53%	32%	40%	8%
8	30% 4.36 gm	2 mil	2 mil	85 cu μ	86 cu μ	21 rr	26 rr	25%	29%	.8	.8	6,500 cmm	5,700 cmm	56%	31%	32%	7%
9	75% 10.875 gm	4.1 mil	3.7 mil	88 cu μ	86 cu μ	27 rr	26 rr	30%	29%	.9	.8	7,200 cmm	6,200 cmm	56%	31%	33%	5%
10	90% 4.35 gm	2 mil	2 mil	75 cu μ	84 cu μ	21 rr	25 rr	29%	27%	.7	.8	6,500 cmm	7,200 cmm	64%	20%	35%	10%

Leucocytes:—The total and differential count of W.B.C. before and after treatment did not show any change to indicate leucotoxic effect.

Piperazine adipate is hence non-toxic to the bone-marrow when given as in the above dosage schedule.

Kidney function:—None of the cases showed albuminuria after medication; there was therefore, no renal damage due to piperazine administration.

Summary.—1. Piperazine adipate (Entacyl) as an anthelmintic was tried against hook-worm in a dosage of 2 tablets three times a day for patients above six years of age administered for a period of 7 days; it is of doubtful value and cannot be recommended for routine specific treatment.

2. There is no significant advantage noticed in the administration of the drug for 7 days over that for three days.

3. For a few days after the cessation of medication the egg count in the stool continued to show a decline.

4. No signs and symptoms of toxicity referable to the liver, bone-marrow, kidneys were encountered.

Our thanks are due to the Superintendent, Assam Medical College Hospital, Dibrugarh for permission to report on these cases.

REFERENCES:

1. Bhattacharyya, M. N. (1955)—*The Indian Practitioner*, 8: 819.
2. Dunn, T. Lewis, (1953)—*Lancet*, 1: 593.
3. Fayard, C. (1949), Mouriguand *et al* (1951), Turpin *et al* (1952), Quoted by White, R. H. R. (1954)—*Lancet* 2: 315.
4. Napier, L. E. (1946)—*The Principle and Practice of Tropical Diseases*. Macmillan and Co. Ltd., New York.
5. Patwardhan, V. N. (1952)—*Nutrition in India*. The Indian Journal of Medical Sciences, Bombay 4.
6. Sims, S. R. (1953)—*Brit. Med. J.*, 2: 1432.
7. Stewart, C.P. and Dunlop, D.M., (1949)—*Clinical Chemistry in Practical Medicine*, 3rd Edition, Edinburgh, E & S Livingstone Ltd.
8. White, R. H. R. (1954)—*Lancet*, 2: 315.
9. White B.H. R., Standen, O. D. (1953)—*Brit. Med. J.*, 2: 1272.

ERYTHROMYCIN IN COMBINATION WITH TRIPLE SULFONAMIDES IN THE TREATMENT OF ACUTE GONORRHOEA IN THE MALE

At the Harlem Hospital, New York, 140 males with acute gonorrhoea were treated with erythromycin combined with three sulphonamides, sulphadiazine, sulphamerazine, and sulphadimidine (sulphamethazine). The drugs were given in tablet form, and in the four treatment schedules used the total dose of erythromycin ranged from 0.6 to 2 g., and that of the combined sulphonamides from 1.5 to 3 g., this total dose being administered in equal amounts of 6-hourly intervals. Of the 140 patients, only 93 returned for follow-up examination. The best results were obtained with a dosage of 2 g. erythromycin and 3 g. of the sulphonamides, 24 out of 26 patients being cured. It is suggested that the sulphonamides increase the activity of the antibiotic because the cure rate with 1.2 g. erythromycin and 3 g. of the sulphonamides was the same as that obtained in a previous investigation with 2 g. erythromycin alone. Only three patients in the series experienced minor toxic reactions—one had nausea and two had loose stools.—(*Antibiot. Med.*, 1: 450, via *British Journal of Venereal Diseases*).

Vi-Daylin

TRADE MARK

(Homogenized mixture of vitamins A, D, B₁, B₂, B₆, B₁₂, C and nicotinamide, Abbott)

Each 5-cc. teaspoonful contains:

Vitamin A 3000 Int' l units

Vitamin D (Viosterol)

800 Int' l units

Thiamine

Hydrochloride 1.5 mg.

Riboflavin ... 1.2 mg.

Ascorbic Acid ... 40 mg.

Vitamin B₁₂ Activity 3 mcg.

(by microbiological assay)

Nicotinamide ... 10 mg.

Pyridoxine

Hydrochloride ... 1 mg.

In a palatable mixture

Alcohol not more than 1/2% v/v

Supplied in 3 oz., 8 oz. and 16 oz. Bottles

ABBOTT LABORATORIES
(INDIA) PRIVATE LIMITED

G.P.O. Box 1334, Bombay

Iodex
Regd.
the ideal non-staining
IODINE OINTMENT

relieves pain and swelling

Made in India by : **MENLEY & JAMES, LIMITED**
(Incorporated with limited liability in England) 141 FORT STREET, BOMBAY
Sole Distributors in India: **PHARMED LIMITED** P.O. Box 1185, Bombay

XP45IND

INVESTIGATION AND TREATMENT OF HETEROPHORIA *

B. K. DHIR, M.S., D.O.M.S. (London),
Reader in Ophthalmology, I/c. Orthoptic Centre,
M. G. M. Medical College, Indore

HETEROPHORIA is the tendency of the extraocular muscles to deviate from their normal relative position. Thus there is a tendency for the visual axes of the two eyes to deviate from the normal, but in the interest of binocular single vision, the axes of the two eyes are not allowed to deviate from the normal by the excessive action of the extraocular muscles. This excessive action depends upon two factors *viz.*, the neuromuscular power of various ocular movements and the strength of the fusion faculty.

If both the factors are sufficiently strong and active, the presence of heterophoria causes no symptoms. On the contrary, if one or both are weak, then symptoms arise. In symptomatology, it has been found that symptoms, like difficulty in judging the position of objects, difficulty in changing focus, and blurring of print, in addition to headache, are pointers to the presence of heterophoria. In a series of 75 cases of heterophoria with symptoms, headache was found to be present in every case. Next came blurring of print and difficulty of judging the position of objects.

If a routine examination of muscle balance is made in every case of refraction, quite a few cases turn out to be having heterophoria with symptoms. In such cases, the mere prescription of lenses will not result in an amelioration of the symptoms. In such cases the following routine examination is carried out at our centre, in addition to correction of the error of refraction :—

1. Grade of fusion.—It is found out on synoptophore. In our series of 75 cases, all but three had stereopsis. If this is not present, it must be developed first and then alone orthoptic exercises should be started.

2. Range of fusion.—This is also tested on synoptophore. It was invariably found to be of low degree. A very common range was +12 to -2.

3. Cover test.—Though very simple, this test is of very great help. Each eye is to be covered in turn. Not only deviation of the covered eye is to be noted, but also the quickness or slowness of its return back on removal of the cover. A quick recovery carries with it a good prognostic value.

4. The Maddox hand frame has been used for recording the amount of heterophoria for distance. It is a very convenient bit of apparatus. Not only the degree of heterophoria could be noted but also any suppression if present. The patient may have difficulty or even inability to see the red line.

* Specially contributed to the ANTISEPTIC.

5. The Maddox Wing is used to measure the amount of heterophoria for near. At the first test, the patient invariably has difficulty in locating the arrow, which, in the horizontal direction, is found by him to be changing in position. After a little practice, the patient is able to give correct answers.

6. Livingstone's binocular gauge has been used for measurement of both convergence and accommodation. Any figure higher than 10 cm. (e.g. 14 cm.) in a young adult is taken to mean that convergence is less.

Before starting the treatment, it should be carefully assessed if the patient would derive benefit by orthoptic treatment. Proper lenses should be prescribed, if required. Lenses have been known to reduce the amount of heterophoria, but it is rare that they alone can eradicate the symptoms. General bodily health of the patient must be normal. It is useless to give orthoptic treatment to a person, who has a chronic infection like chronic sinusitis. It is also useless to try this treatment in neurotic and highly emotional persons.

Suppression or lower grade of fusion, when present, must be treated first; the patient should not be above the presbyopic age.

TREATMENT:—It appears reasonable that when a patient has exophoria, the only treatment required is to improve the power of convergence, so that the tendency to deviation outwards may pass off. But it has been found that the best results are obtained if fusional reserves are increased in all directions. The patient should be taught effortless convergence and divergence in cases of both exophoria and esophoria. Vertical vergence may also be exercised in hyperphoria, but the results have not been very encouraging.

It has been found that six to twelve exercises per patient on the synoptophore were required to make him symptom-free. Each exercise consists of gradually increasing ductions, so that ultimately we could get the patient to about 35 degrees of adduction and 6 to 9 degrees of abduction. These exercises last for about 20 minutes at each sitting and are carried out twice or thrice weekly. In carrying out adduction, it has been noted that at the first exercise the inducing of accommodation by putting concave lenses in the lens holder of the synoptophore goes a long way in producing the necessary convergence. The patient learns to converge and further use of concave lenses is hardly required.

I have never felt the necessity of prescribing prisms except in cases of hyperphoria or presbyopic age.

In hyperphoria, even of low grade, exercises have seldom given satisfactory results. Fortunately, cases of hyperphoria are very few. Prescription of prisms is productive of good results. The only home exercises that have been prescribed are the production of physiological diplopia for distance and near work.

Three illustrative cases are given below:—

Case reports.—(1) *Case of exophoria*:—K.A., 21 years; female; teacher. *Symptoms*:—Headache and blurred vision on near work—2 years' duration. R 6/6, L 6/6. No error of refraction. Maddox Rod: Exo 10; Maddox Wing: Exo. 14; Grade of Fusion: Stereopsis; Range of Fusion +13 to -10.

TREATMENT:—12 orthoptic exercises on alternate days resulted in:—Maddox Rod: Exo. 2. Maddox Wing: Exo. 4. Range of Fusion +36 to -6. *Symptoms*:—Relieved as reported two months after the close of treatment.

(2) *Case of esophoria*:—M.S., 32 years; male; clerk. *Symptoms*:—Headache, blurred print and difficulty in focusing of six months' duration. R 6/6, L 6/9. No error of refraction; Maddox Rod: Eso. 5; Maddox Wing: Eso. 8; Grade of Fusion: Stereopsis. Range of Fusion +16 to -1.

TREATMENT:—Ten exercises given on alternate days resulted in:—Maddox Rod: 0; Maddox Wing: 0; Range of Fusion +30 to -6. *Symptoms*:—Relieved as reported two months after the close of treatment.

(3) *Case of hyperphoria*:—R.D., 27 years; male; businessman. *Symptoms*:—Intense headache and lines of print do not appear straight. R. 6/18, L 6/18, R 6/6, L 6/6 with glasses. Glasses: R-1.5 D cyl axis: 30; L-1.5 D cyl axis 150; Maddox Rod: Hyper 3; Maddox Wing: Hyper 3.

TREATMENT:—Prescription of prisms. 3° prism base up in L.E. incorporated in glasses.

RESULT:—Symptoms relieved as reported one month after incorporation of prisms in glasses.

Acknowledgement.—I am grateful to Principal B. C. Bose and Professor Wagle, who encouraged me to write this article.

THE REHABILITATION OF HEMIPLEGIC PATIENTS

Little attention has so far been paid to rehabilitation of hemiplegic patients on account of their often advanced age, the deterioration of their mental capacities, and the recurrence of hemiplegic attacks. In 10 patients the stellate ganglion was blocked with procaine, and chlorpromazine was given. The results were good. The patients felt partially relieved of the weight of the paralyzed extremities, and movements were more articulated. In patients with cerebral thrombosis intravenous injection of heparin rather than of chlorpromazine should be given. The patients were shown how to move their extremities while lying or sitting on the bed. The patients were able to move the affected extremity by pulling on wires connected with pulleys. The author experimented with a "walking frame" similar to the ones used to teach children how to walk. The patients were introduced into the frame and with some help or by themselves were able to move around. These simple devices can make the oedema disappear. They can prevent decubitus ulcers and prolonged hospitalization. One patient, who had been bedridden for a long time, was able, through this treatment, to walk again. The effect is psychologically as well as physically beneficial. The patients were able to return to some activities as integral parts of society.—(R. Berto. *Minerva Med.*, 47: 494-496, Feb. 21, 1956, Italy., via *J. of Am. Medical Assoc.*).

TREATMENT OF RECURRENT UROLITHIASIS WITH ASPIRIN

The rate of recurrence of urinary calculi is high, and it is only in a minority of patients that the cause can be found and treated—by, for example, removal of a parathyroid adenoma or relief of obstruction. In the majority, when no such cause is discovered, prophylactic treatment can be given to prevent supersaturation of the urine with stone-forming substances. The excretion of such substances in the urine can be reduced by restricting their intake or by impairing their absorption, by giving, for example, aluminium hydroxide gels to take up phosphorus before it can be absorbed from the gut. Their concentration in the urine can be kept low by drinking more. Finally, the solubility of stone-forming substances may be increased by various methods, the most familiar being by alteration of the pH of the urine—calcium phosphate and magnesium ammonium phosphate being more soluble in acid urines, and cystine and uric acid in alkaline ones. I. Mandl, A. Grauer, and C. Neuberger showed that calcium phosphate was more soluble in aqueous solutions when glucuronides were present. Substances of metabolic origin as well as certain drugs are excreted in the urine conjugated to glucuronides, of which small amounts are normally present in the urine, and E.L. Prien and B.S. Walker have recently reported on the treatment of patients with recurrent calcium-containing stones by utilizing the increased urinary excretion of glucuronides which follows the administration of aspirin. They gave 2 g. of powdered aspirin daily to 19 patients who had recurrent stones composed of calcium phosphate or mixtures of calcium phosphate with calcium oxalate or magnesium ammonium phosphate. Urinary infection was present in 16 of these patients, and chronic pathological changes in the upper urinary tract in 6. In addition to the salicylate therapy the patients were urged to drink large quantities of fluid, though not milk, and a simple low-calcium diet was prescribed. Pyelographic studies were carried out on all the patients before treatment, and investigations to exclude such causes as hyper-parathyroidism were carried out. The output of urinary glucuronides before treatment ranged from 0.2 to 0.9 g. per 24 hours, and during treatment from 0.6 to 2.2 g. per 24 hours. Later, salicylamide in the same dose was used, and was found to produce a greater increase in the excretion of glucuronides than aspirin.

This treatment seldom had ill effects, but several patients reported gastric discomfort or heartburn with aspirin, though salicylamide was better tolerated. Activation of a duodenal ulcer occurred in one patient. No new calculi appeared, nor was there any increase in density or size of existing stones, in 17 of the 19 patients who were observed for at least eighteen months. In 2 patients treatment failed, but in 1 of these the increase in urinary glucuronides was small. In addition Prien and Walker report that encrustation of indwelling catheters with phosphatic deposits was reduced by this therapy. They are careful to make only modest claims for the effectiveness of this form of treatment, for the assessment of different methods of treating recurrent calculi is notoriously difficult, not only because of the uncertainty inherent in the appraisal of any prophylactic therapy, but also because the natural course of calculus disease is unpredictable and treatment has to be continued for relatively long periods before any expected benefits can become apparent. Indeed, none of the therapeutic measures so far advocated has gained universal acceptance, though few have been completely rejected.

Treatment with aspirin or salicylamide has certain advantages. It avoids dietary deprivations, is simple to apply, and should be well tolerated by the majority of patients provided that it is not given to those with peptic ulcer and the recommended dosage is not exceeded. Even so, this form of prophylactic treatment is still in the experimental stage and further carefully controlled studies will have to be carried out before its wide adoption can be recommended.—(Edit.: *B. M. J.*, Sep. 15th 1956).

OCCLUSIVE ARTERIAL DISEASES OF THE LEG*

N. K. RANGARAJAN, M.B., B.S.,
R. G. Kar Medical College, Calcutta

THE basic cause of occlusive diseases of the leg is not well known, even though many suffer from chronic pain in the leg as a result of arterial diseases. Most of the arterial diseases we come across fall into two main groups: (1) senile arterial degeneration (2) thromboangiitis obliterans or Buerger's disease. There are of course also other causes which cause obliteration of the arterial lumen.

A. Senile obliterative arteritis.—Most patients belong to this group. The lesion is certainly degenerative, affecting the medial and internal wall which causes narrowing of the lumen. This may amount to complete occlusion, and the peripheral circulation may be interfered with to a greater or less extent. These changes are seen mostly in old people. Sometimes calcified rings are formed in the middle coat producing a beaded appearance of the large branches. Fortunately collateral circulation is good in these cases. In rare cases the main vessel changes are not well marked, but muscular branches seem to end abruptly; in these cases collateral circulation is poor and muscular wasting is prominent.

B. Secondary thrombosis of the popliteal vessel.—It is common complication of senile arteritis; trauma may be a precipitating factor. Constant extension and flexion of the knee joint may be a probable cause. Usually the upper limit of the thrombus formation is the level of the condyles of the femur.

C. Secondary femoral thrombosis.—Usually the thrombosis begins at the region of the adductor opening and traverses proximally up to the opening of the profunda femoris. The aetiology of this is the same as for secondary popliteal thrombosis.

Primary thrombosis of the popliteal artery.—This is a very rare condition seen in athletes, the cause for which is not known; trauma may probably be the aetiological factor. This condition is sometimes met with in cases of posterior dislocation of the knee joint.

Juvenile obliterative arteritis.—The lesion starts in the small arteries of the foot generally and extends proximally. There is usually a fungus infection of the foot associated with it. Fungal toxin producing endothelial changes may be a factor in causing the disease. The lesion is usually bilateral and periods of remission and exacerbation are seen. This has a great resemblance to Buerger's disease.

Thromboangiitis obliterans.—This is an inflammatory lesion affecting the vessels and is never degenerative. Young males are the victims. Females are usually exempt possibly due to the high oestrogen content of their blood. This disease is seen commonly among Russians and Polish Jews.

*Specially contributed to the ANTISEPTIC.

The actual ætiology is not known; excessive smoking is stated to be one of the exciting factors. These patients are allergic to tobacco proteins. There is progressive affection of both arteries and veins. There is inflammation of the venous wall; subsequently it becomes thick and cord-like. The lesion of the artery starts simultaneously with the vein. The lesion of the artery is not continuous but segmental. The tunica intima shows proliferation of the endothelium and occlusion of the lumen. There is atrophy of the tunica media and the elastic lamina shows reduplication. The inflammation affects the tunica adventitia, and later on leads to periarterial fibrosis, entangling the veins, arteries and nerves. The pain is usually due to pressure on the nerve.

Clinical investigation.—*History*:—The age, sex, nationality, tobacco-habits should all be ascertained.

Intermittent claudication:—John Homans says, "If you take the trouble to ask any patient with gangrene of the leg, you will always obtain a history of intermittent claudication". Claudication is a peculiar discomfort the patient experiences when he walks and should not be confused with the feeling of tiredness. The pain is characteristically felt over the calf muscles, or sometimes over the anterior tibial group.

During walking metabolites are built up in the muscle, and act as stimulus for vasodilatation. If the blood supply to the part is adequate the metabolites are removed at the same rate as they are produced. But if the blood-supply is inadequate the metabolites accumulate and exceed the pain threshold, causing claudication.

Claudication may be of 3 grades:—

Grade I:—After walking some distance the patient complains of the onset of pain, but on continuing to walk, the pain gradually disappears. In this group of cases the power of the vessels to dilate is good.

Grade II:—The intensity of pain becomes steady as the patient continues to walk, but with effort, he can still continue the walking.

Grade III:—The blood supply to the part is poor, the patient develops pain after walking a short distance and is compelled to halt absolutely. Coldness and numbness may be complained of.

Physical examination.—*INSPECTION*:—The lower limbs should be fully exposed; pallor of the limb is usually seen in threatened gangrene. If there is any gangrenous area, its site, extent and colour should be noted. The limb above the gangrenous area should be inspected for colour, congestion, œdema, or muscular wasting. Wasting of the fatty pads and toes and roughening of the nail suggest popliteal thrombosis.

PALPATION:—*Local change in temperature*:—The part is cold over the gangrenous area.

Examination of blood vessel:—Palpate the dorsalis pedis, posterior tibial, popliteal and femoral. When examining the condition of the arterial wall should be noted.

General examination.—The cardio-vascular system should be thoroughly examined. In senile arterial degenerative cases the heart may be enlarged and arteries may be thickened.

Special examination.—The patient lying on the examining couch, has his leg raised above the heart level. Immediate blanching of foot is diagnostic of main-vessel-block. If the skin turns pale slowly, there is no main-vessel-block.

Oscillometry:—Readings are taken above and below the knee and above the ankle. Oscillations are diminished in an arterio-sclerotic limb and are very much reduced below the main-vessel block.

X-ray examination.—In arterio-sclerosis when there is calcification a straight film may be useful to locate the site of the lesion. Some cases may require angiography.

TREATMENT:—The choice of treatment depends on various factors:—(1) *Age*:—The younger the patient the greater are his chances of deferring amputation while in old subjects with arterio-sclerosis, and hypertension, the prognosis is bad. (2) *Nutritional state of the limb*:—Depending on the blood supply of the limb, prognosis varies. If the nutrition to the limb is very poor, it will be difficult to bring back the circulation by any means, and in such cases amputation will be required. (3) *Causative arterial condition*:—Patients with diffuse obliterative arteritis are usually hypertensive; danger to life as a result of hypertension, in the form of coronary thrombosis, cerebral accidents etc., is more common, and in such cases sympathectomy is contraindicated.

Secondary thrombosis of the main vessels increases risk to the limb. At first there is a phase of ischæmia; afterwards collateral circulation develops. The thrombus may advance and block the opening of the collateral vessels. In these cases an attempt should be made to increase the blood supply to the limb.

Juvenile thromboangiitis carries a bad prognosis; fungus infection should be eradicated. Lumbar sympathectomy should be carried out.

Associated diseases:—Diabetes mellitus, mild or moderate, worsens the prognosis, persistent hyperglycæmia is a source of constant irritation of the endothelium of the blood vessels which leads to proliferation of the endothelium causing gradual obstruction. Hypertension also complicates the picture.

METHODS OF TREATMENT:—Improvement of the blood-supply and relief of pain are aimed at.

Lumbar ganglionectomy:—The object of this procedure is to improve the blood supply to the part. But unfortunately all cases are not suitable for this treatment. Usually good results are obtained if the vasomotor index $\left(\frac{\text{Rise of skin temperature} - \text{Rise of mouth temperature}}{\text{Rise of mouth temperature}} \right)$ is more than three. But if vasomotor index is less than 1.5 sympathectomy is useless.

The approach to the lumbar ganglion is extraperitoneal. The first, 2nd and 3rd ganglia are removed. It is important to remove the 1st because unless it is removed complete denervation of the whole limb cannot be effected. But some surgeons do not agree to this as the removal of the 1st ganglion may lead to sterility. Results of this operation are good in 60% of cases and the mortality is very low (0.1%).

Para-vertebral block with phenol:—In those cases where sympathectomy cannot be done owing to the poor general condition, injection of 10% solution of phenol may be tried.

Vasodilator drugs:—Recently many drugs have been tried with the idea of obtaining peripheral vaso-dilatation. Drugs which block the higher centres and Rauwolfia and ganglion blocking drugs like hexamethonium should not be used. The lowering of blood-pressure increases the risk of thrombosis. Imidazole derivatives (Priscol), Ergot derivative (Hydergine) and mandelic acid esters (Cyclo-spasmol) are used. For short term treatment, priscol and hydergine are useful but for long term treatment Cyclospasmol is used.

Good results are obtained by the use of vitamin E. It has to be used for a long time. Improvement in the nutritional state of the limb is striking.

Arterial grafting:—The idea is good but the results are not very good. Anyhow we may expect better results with the further developments in the technique of arterial grafts.

Relief of pain.—External popliteal neurectomy:—In grade III patients where some pain-relieving measures may be adopted; popliteal neurectomy is found to be good. In those cases where claudication is limited to the anterior-tibial group of muscles, popliteal neurectomy gives good results.

Tenotomy:—This is done in cases where the pain is restricted to the calf muscles. The tendo-achilles is cut 2" above its insertion. The operation is easy, and can be done under local anaesthesia; the patient can get up on the following day and walk about without the pain. Now-a-days tenotomy is done in a slightly modified form. Only the tendon of the gastrocnemius muscle is cut sparing the soleus and plantaris. In these cases the patient can walk about without any difficulty which usually results from complete tenotomy.

THE TREATMENT OF TYPHOID FEVER BY A COMBINATION OF ANTIBIOTICS*

M. G. PRABHU, M.D.,

Additional Professor of Medicine, Madras Medical College
and Physician, Government General Hospital, Madras,

AND

D. S. KUMARASWAMI, B.A., M.B., B.S.,

Honorary Assistant Physician, Government General Hospital, Madras

[INTRODUCTION.—By way of introduction, it may be stated that many diseases are now treated not by a single drug, but by a combination of drugs; e.g., the treatment of syphilis with penicillin and bismuth, of malaria with quinine and mepacrine and of amoebiasis with emetine and chloro-and/or iodo-quinolines. Even antibiotics may be combined as in the case of streptomycin and dihydrostreptomycin, in the treatment of tuberculosis. Working on a similar analogy a combination of chloramphenicol and tetracyclin was tried in the treatment of typhoid fever. Preliminary trials were conducted, subsequent to the trials with chloramphenicol alone¹ and later tetracyclin² alone in the treatment of typhoid fever (already reported).

Material and methods.—The combination of chloramphenicol and tetracyclin was tried in the treatment of 13 unselected cases of typhoid fever admitted into a medical unit of the Government General Hospital, Madras during the period, 25-11-'55 to 21-2-'56. In every case *S. typhosum* was isolated from the blood, and all cases were followed up for a period of 4 months after discharge from the hospital.

Of these, 11 were men and 2 were women; ten were in the 11 to 20 and three in the 21 to 26 age groups.

They were admitted with some of the following complications: viz., tachycardia; tachypnoea; bed-sore; lobar consolidation, and low blood-pressure.

Seven of these thirteen cases were of the mild variety while the other six were hypertoxic.

General treatment.—The general treatment consisted of bed-rest, fluid diet, maintenance of fluid-balance, by the oral or parenteral routes, administration of vitamins and relief of symptoms as outlined previously.

Antibiotic treatment consisted of a combination of 750 mg. each of chloramphenicol and tetracyclin per day and 250 mg. of oral chloramphenicol alternated with 250 mg. of oral tetracyclin at intervals of 4 hours till the temperature came down to normal.

*Specially contributed to the ANTISEPTIC.

S. No.	Age in years	Sex	Blood culture for S. typhosum	Widal reaction	WBC/cmm	Clinical condition on admission	Type	Day of fever when specific therapy was started	Time taken to become afebrile	Total tetracyclin	Total chloramphenicol
1	17	M	+	1 in 400	4600	Tympanitis abscess heel	Mild	9th	4 days	6 G	6 G
2	23	M	+	1 in 200	4000	—	Mild	10th	3 days	8 G	8 G
3 (i)	13	M	+	1 in 400	6400	Tympanitis	Mild	13th	4 days	6 G	6 G
3 (ii) Re-lapse I	13	M	+	1 in 100	9400	Tympanitis	Mild	5th	5 days	7 G	7 G
3 (iii) Re-lapse II	13	M	+	1 in 400	8600	Tympanitis	Mild	4th	4 days	8 G	8 G
4	15	F	+	1 in 400	5800	Delirium ++ Tympanitis	Hyper toxic	9th	8 days	11 G	11 G
5	26	M	+	1 in 100	11800	Delirium, hurried respiration, tachycardia, tympanitis, +++ bed sores, bronchitis	Hyper toxic	9th	14 days	19 G	21 G
6	22	M	+	1 in 400	10600	Tympanitis	Mild	11th	4 days	7 G	7 G
7	12	M	+	1 in 400	5800	—	Mild	7th	3 days	5 G	5 G
8	10	F	+	1 in 400	11200	Delirium tympanitis	Hyper toxic	10th	9 days	10 G	10 G
9	19	M	+	1 in 400	15400	Pneumonic consolidation of right upper lobe; delirium; tympanitis; dehydration	Hyper toxic	15th	10 days	11 G	11 G

Complica- tion	Weight		R.B.C.		H.B.		Response	Remarks
	On ad- mission lbs	On dis- charge lbs	On ad- mission million 3/mm	On dis- charge million 3/mm	On ad- mission %	On dis- charge %		
Nil	92	86	4.2	4.4	80	86	Good	—
Had slight temperature for 5 days during con- valescence	116	112	5.2	4.8	94	88	Good	—
Nil	56	62	4.1	4.0	80	76	Good	Relapsed on the 13th day of stopp- ing the antibiotics. <i>Refer serial 3 (ii)</i>
Nil	70	62	4.2	3.5	78	72	Good	Relapsed for the second time on the 16th day of stopp- ing the antibiotics. <i>Refer serial 3 (iii)</i>
Nil	—	—	—	—	—	—	Good	1 g. each of the two antibiotics was given during pyre- xial period
Nil	70	75	3.8	4.1	76	84	Good	On the 2nd day of therapy the deli- rium ceased; but tympanitis contin- ued for 10 days. 2 pints of 5% glu- cose saline given during delirium for 2 days
Diarrhoea ; arthritis of right knee	—*	144	4.2	3.7	78	64	Satis- facto- ry	Tympanitis was troublesome throughout the fe- brile period. Diar- rhoea controlled in 2 days. Arthritis cleared up in a week's time. Given i.m. chlorampheni- col for 3 days. 2 pints of 5% glucose saline for 6 days as the pt. was highly toxic and delirious
Nil	78	76	4.2	4.0	82	71	Good	—
Nil	52	50	3.8	3.2	62	54	Good	—
Nil	54	58	3.6	3.2	56	50	Satis- factory	2 pints of 5% i.v. for 1st 2 days
Hydropneu- mothorax of right side	—*	72	3.2	3.0	58	48	Satis- factory	2 pints of 5% glucose daily for 2 days

* Too ill to be weighed on admission

S. No.	Age in years	Sex	Blood culture for S. typhosum	Widal reaction	WBC/cmm	Clinical condition on admission	Type	Day of fever when specific therapy was started	Time taken to become afebrile	Total tetracyclin Total chloramphenicol
10	20	M	+	1 in	5600	B.P. 80/50; delirium; hurried breathing	Hyper toxic	9th	4 days	8 G 8 G
11	12	M	+	1 in 400	6200	Delirium tympanitis;	Hyper toxic	12th	9 days	10 G 10 G
12	15	M	+	1 in 400	7400	—	Mild	12th	4 days	5 G 10 G
13	17	M	+	1 in 400	6000	—	Mild	9th	4 days	6 G 12 G

On the first day of convalescence the dosage was reduced to 500 mg. of each of the two antibiotics per day, 250 mg. of chloramphenicol alternated with 250 mg. of tetracyclin 6th hourly. From the 2nd to the 10th convalescent day, the antibiotic cover was maintained with 250 mg. each of chloramphenicol and tetracyclin per day.

Response of mild cases.—To this combined antibiotic therapy was uniformly good. The temperature settled down to normal in 3 to 5 days. After the institution of combined antibiotic therapy no further complication was observed except relapse in a single case (*serial No. 3*). The total quantity of antibiotics varied from 6 to 8 g. except in the last two cases where a modified dosage scheme was followed on account of relapse in case No. 3.

Response of toxic cases.—Was also satisfactory in spite of delirium and one or more complications. In this group one patient had infective arthritis as a complication and another pneumonitis. These complications did not call for additional treatment but resolved on the combined antibiotic therapy. The time taken by this group to become afebrile was from 4 to 14 days and the total quantity of antibiotics administered varied from 8 to 19 grams.

There was no mortality in this series.

One case (*serial No. 3*) relapsed on the 13th day after stopping the antibiotics and *B. typhosum* was isolated during the relapse. The relapse was very mild and the same course of combined antibiotic therapy was repeated. The convalescent cover of combined antibiotics, 250 mg. b.d. was continued until the 10th convalescent day with a view to preventing relapse. This patient relapsed for the second time on the 16th day of stopping the combined antibiotics (*serial No. 3*). During the second relapse, *B. typhosum* was again

Complication	Weight		R.B.C.		H.B.		Response	Remarks
	On admission lbs	On discharge lbs	On admission million 3/mm	On discharge million 3/mm	On admission %	On discharge %		
Nil	90	83	4.8	4.2	65	55	Good	2 pints of 5% glucose saline for 5 days
Nil	48	46	4.1	3.8	68	60	Satisfactory	2 pints of 5% glucose saline on the day of admission
Nil	74	76	4.8	4.0	90	75	Good	In these two cases, the dosage of chloramphenicol and tetracyclin was modified in the ratio of 2:1
Nil	73	75	4.8	4.2	80	70	Good	

isolated in blood-culture. The course continued to be very mild and the case responded to a repetition of the same dosage schedule.

In view of two relapses occurring in the same case, it was inferred that the dosage of chloramphenicol was inadequate and therefore, the proportion of the antibiotic was altered by increasing the chloramphenicol content and the combination of 2:1 (chloramphenicol:tetracyclin) was tried in 2 other cases (*serial No. 12 and 13*). The response was satisfactory. No relapses occurred in these cases, in a follow-up for 4 months.

Comments.—It has been established that chloramphenicol is the antibiotic of choice in the treatment of typhoid and its bacteriostatic, bactericidal and antipyretic actions are superior to those of any other antibiotic. But it has no effect on the nutritional status of the patient who lost weight and became emaciated during the course of typhoid fever treated on chloramphenicol alone.

Comparative and controlled studies of the effects of chloramphenicol and tetracyclin separately on typhoid fever had shown that tetracyclin-treated patients were less toxic more cheerful, showed general clinical improvement, maintained their weight and there was no emaciation although the duration of pyrexia was not cut short. They were easier to feed, not requiring tube feeding and the nutritional status continued to be good during the course of fever. These beneficial effects of tetracyclin were sought to be combined with the bacteriostatic, bactericidal and antipyretic actions of chloramphenicol in this study.

Blood-studies did not show any evidence of aplastic anaemia in any case receiving the combined antibiotic therapy. It has been noted by doctors in the West^{3,4,5,6} that prolonged treatment

with massive doses of chloramphenicol could lead to aplastic anaemia, presumably due to the nitro-benzene radical in the chloramphenicol molecule.

No case of aplastic anaemia however, occurred in our chloramphenicol-treated cases, in the lighter dosage we employed.

The combination with tetracyclin further reduced the total chloramphenicol requirements in a case of typhoid fever and hence the possibility of aplastic anaemia developing is more remote. It is suggested that further clinical trials should be conducted with a combination of chloramphenicol and tetracyclin in the revised proportion 2:1, in order to confirm these results.

Follow-up.—All the cases were followed up for a period of 4 months after discharge from the hospital. Only one case had relapsed as mentioned above, hence the altered proportion of the 2 antibiotics was proposed.

Summary and conclusions.—Eleven cases of proved typhoid fever have been treated by a combination in equal proportions of chloramphenicol and tetracyclin. After the institution of combined antibiotic therapy no further complications were observed.

Clinically, the results were excellent, only one case relapsed twice, and the proportion of chloramphenicol was therefore, inferred to be inadequate. The proportion was modified, increasing the chloramphenicol content in 2 cases, which received the enhanced chloramphenicol dosage in the proportion of 2 chloramphenicol: 1 tetracyclin, though the daily total antibiotic was kept the same. The results were excellent.

These 2 cases have not relapsed during a follow-up of 4 months.

The results of the combined antibiotic therapy was found to be superior to those obtained with either antibiotic employed alone.

Acknowledgement.—My thanks are due to the Dean, Government General Hospital and Madras Medical College, who placed at my disposal 1000 capsules of Achromycin brand of tetracyclin supplied by Messrs Lederle Laboratories, (India) Ltd., for these clinical trials.

REFERENCES:

1. Prabhu, M. G.—*Jour. Ind. Med. Assoc.* 25: 4, Pp. 122-125.
2. Prabhu, M.G., (1956)—*Antiseptic*, 52: 10.
3. Hodgkinson Robert, (1954)—*Lancet*, 6: 285.
4. *Year Book of Drug Therapy*—53-54 page 50.
5. Wilson, E. and Harris M. S. (1952)—*J.A.M.A.*, 149: 231.
6. *J.A.M.A.*, 1952, 149: 914.

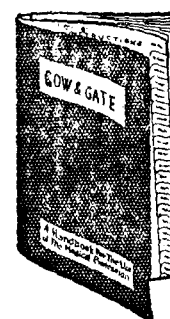
FAVOURABLE EFFECT OF ASPIRIN IN HEAT STROKE

Aspirin was used for the treatment of about 300 cases of heat stroke (men, women and children). The body-temperature of many of the patients was 42.2°C. (108°F.) and they showed other symptoms such as exhaustion, dry reddened skin, dry tongue, moderate tachycardia and tachypnoea. With the exception of those patients who were in a shock state, perspiration had ceased in all cases when body control of the temperature had failed. When aspirin was given, perspiration recurred and a general improvement set in. In addition to the aspirin treatment the patients were wrapped in a wet cloth covered with pieces of ice. Aspirin acted on the temperature regulation centre and at the same time as a peripheral vasodilator.—(*J. Kansas Med. Soc.*, 56: 426, 1955).

Balance
is important



Cow & Gate Milk Food is finely balanced and fortified to meet the exact needs of babies in India. Each consignment is specially manufactured and packed in the fresh coolness of the English countryside, and every tin is dated to protect the consumer.



Half Cream Cow & Gate for young and delicate babies is now freely available, and also a variety of Foods for special conditions in infancy, which are fully described in the Medical Handbook.

Available on application to:

COW & GATE LTD.
MEDICAL AND RESEARCH DEPARTMENT,
GUILDFORD, SURREY, ENGLAND

VERSATILITY

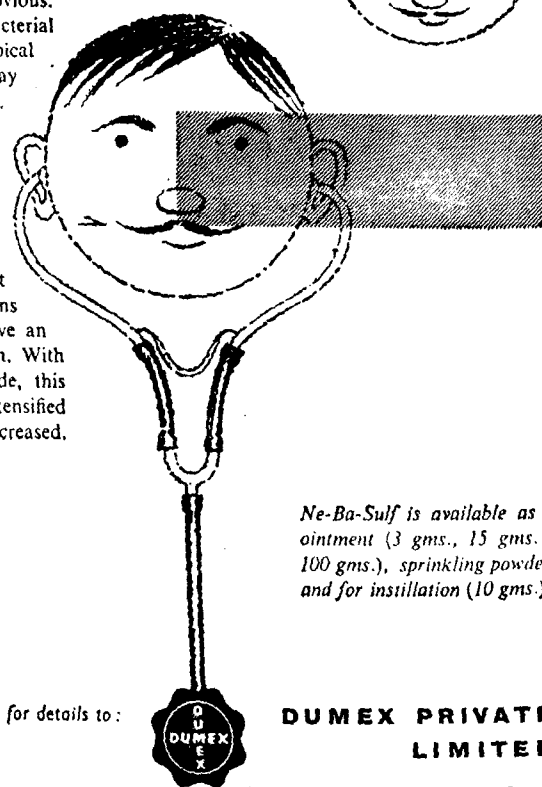
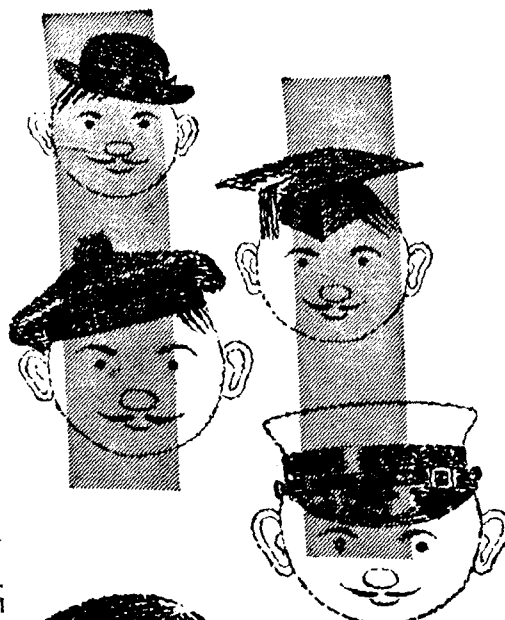
NE-BA-SULF GIVES YOU NEW VERSATILITY IN TOPICAL THERAPY

Ne-Ba-Sulf is an extremely effective combination of Neomycin, Bacitracin and Sulfacetamide, which while extending its antibacterial activity to almost all Gram-positive and Gram-negative pathogens, leaves you free from the complications of bacterial resistance and hypersensitivity.

The importance of this is obvious. Body tissue sensitization and bacterial resistance often caused by the topical use of potent systemic antibiotics may even preclude their use systemically.

Hence medical opinion is now definitely in favour of restricting topical use of antibiotics to those which are NOT used systemically.

Neomycin and Bacitracin fill this bill to a nicety. They almost never cause sensitivity reactions and in combination have an extremely broad spectrum. With the addition of Sulfacetamide, this range is not only intensified but further increased.



Ne-Ba-Sulf is available as ointment (3 gms., 15 gms. and 100 gms.), sprinkling powder (10 gms.) and for instillation (10 gms.).

Write for details to:

**DUMEX PRIVATE
LIMITED**

Wavell House, Ballard Estate, Bombay-1

CARDIAC MASSAGE*

C. V. SHEVADE, M.B., B.S., D.T.M.,
District Medical Officer, Chhatarpur, V.P.

CASES have been reported in the lay press from time to time where a person came back to life as his dead body was being carried to the cremation ground or when it had already been placed on the pyre for being cremated. These cases have not however, been investigated on scientific lines.

Death may be classified as somatic or systemic and molecular; somatic death is that state of the body in which there is a complete cessation of the functions of the heart, lungs and brain which sustain life and health. Molecular death means the death of the tissue and cells individually, which takes place some time after the stoppage of the vital functions and is accompanied by a cooling of the body, the temperature of which is reduced to an equilibrium with the external world. The rate of fall of temperature is one degree per hour.

If the breathing and pumping of the heart can be restarted before molecular death has occurred, the individual can be brought to life again.

Hibernation simulates systemic death. Here there is no breathing. Circulation is at such a low ebb that it is practically non-existent. Breathing is going on through the skin only.

Death, when not caused by loss of vitality or hæmorrhage, but caused by a sudden stoppage of the heart's action due to some shock, electric, emotional or reflex (touching pleura with a needle while performing an artificial pneumothorax) comes under the category of somatic death and as such the individual may be brought to life again by heart massage provided it is undertaken soon after the shock.

Heart massage is generally connected with operations either on the heart itself or on other parts of the body. "She was dead for 50 minutes" an article which appeared in the *Reader's Digest* in June 1955 contained a very good account of the stoppage and revival of the heart during an operation on the valves of the heart. In other cases where the patient is not on the operation table, the lapse of time limits the usefulness and applicability of the massage therapy.

Cardiac massage may be called for during:—

I. White asphyxia (primarily cardiac) where the heart stops and the patient becomes white because of the anæmia caused by the stoppage of blood supply to the body; or

*Specially contributed to the ANTISEPTIC.

VERSATILITY

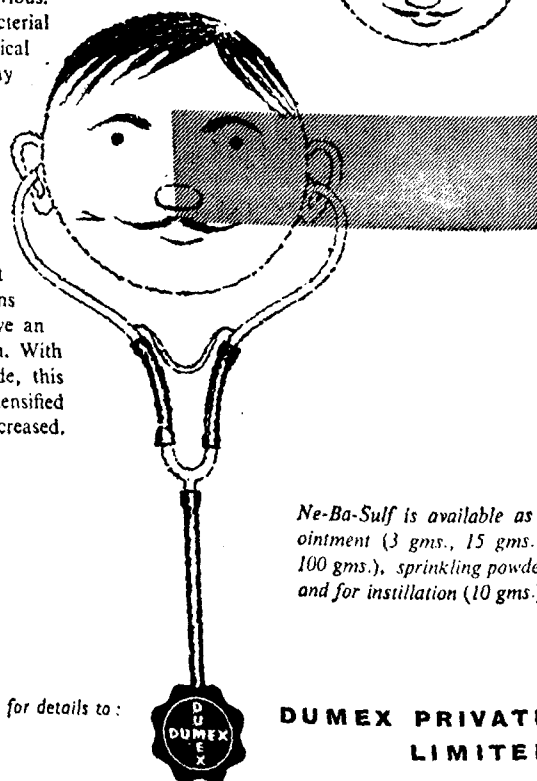
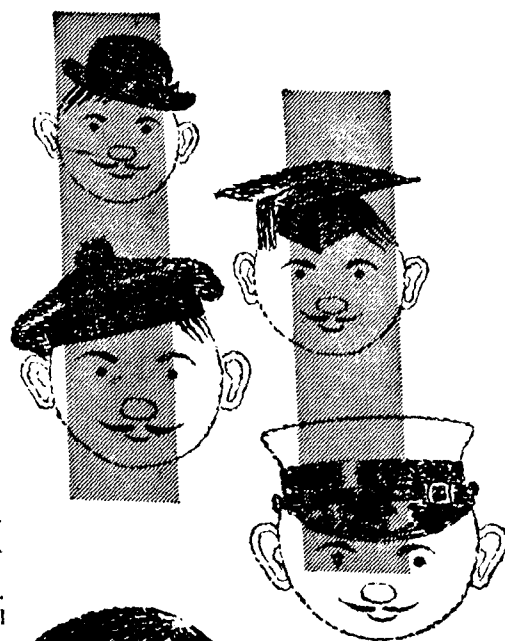
NE-BA-SULF GIVES YOU NEW VERSATILITY IN TOPICAL THERAPY

Ne-Ba-Sulf is an extremely effective combination of Neomycin, Bacitracin and Sulfacetamide, which while extending its antibacterial activity to almost all Gram-positive and Gram-negative pathogens, leaves you free from the complications of bacterial resistance and hypersensitivity.

The importance of this is obvious. Body tissue sensitization and bacterial resistance often caused by the topical use of potent systemic antibiotics may even preclude their use systemically.

Hence medical opinion is now definitely in favour of restricting topical use of antibiotics to those which are NOT used systemically.

Neomycin and Bacitracin fill this bill to a nicety. They almost never cause sensitivity reactions and in combination have an extremely broad spectrum. With the addition of Sulfacetamide, this range is not only intensified but further increased.



Ne-Ba-Sulf is available as ointment (3 gms., 15 gms. and 100 gms.), sprinkling powder (10 gms.) and for instillation (10 gms.).

Write for details to:

**DUMEX PRIVATE
LIMITED**

Wavell House, Ballard Estate, Bombay-1

CARDIAC MASSAGE*

G. V. SHEVADE, M.B., B.S., D.T.M.,
District Medical Officer, Chhatarpur, V.P.

CASES have been reported in the lay press from time to time where a person came back to life as his dead body was being carried to the cremation ground or when it had already been placed on the pyre for being cremated. These cases have not however, been investigated on scientific lines.

Death may be classified as somatic or systemic and molecular; somatic death is that state of the body in which there is a complete cessation of the functions of the heart, lungs and brain which sustain life and health. Molecular death means the death of the tissue and cells individually, which takes place some time after the stoppage of the vital functions and is accompanied by a cooling of the body, the temperature of which is reduced to an equilibrium with the external world. The rate of fall of temperature is one degree per hour.

If the breathing and pumping of the heart can be restarted before molecular death has occurred, the individual can be brought to life again.

Hibernation simulates systemic death. Here there is no breathing. Circulation is at such a low ebb that it is practically non-existent. Breathing is going on through the skin only.

Death, when not caused by loss of vitality or hæmorrhage, but caused by a sudden stoppage of the heart's action due to some shock, electric, emotional or reflex (touching pleura with a needle while performing an artificial pneumothorax) comes under the category of somatic death and as such the individual may be brought to life again by heart massage provided it is undertaken soon after the shock.

Heart massage is generally connected with operations either on the heart itself or on other parts of the body. "She was dead for 50 minutes" an article which appeared in the *Reader's Digest* in June 1955 contained a very good account of the stoppage and revival of the heart during an operation on the valves of the heart. In other cases where the patient is not on the operation table, the lapse of time limits the usefulness and applicability of the massage therapy.

Cardiac massage may be called for during:—

I. White asphyxia (primarily cardiac) where the heart stops and the patient becomes white because of the anæmia caused by the stoppage of blood supply to the body; or

*Specially contributed to the ANTISEPTIC.

[915]

II. Blue asphyxia (primarily respiratory) where there is want of proper oxygenation of the blood as the patient has stopped breathing and the lungs fail to work. Here the heart will be working but the blood supplied will be deficient in oxygen and the heart will ultimately stop pumping.

The following account relates to a case which came under my notice last year.

Babu Lal, aged 24, employed as a driver in the Collectorate of Chhatarpur District (Vindhya Pradesh) was stabbed by some one on 7th December, 1955, and was brought to hospital immediately. The stab had pierced his body through and through and the wound was bleeding profusely. A slightly oblique incised wound at the level of the insertion of the deltoid muscle 2"x1½", penetrating through upper and outer part of right arm was the wound of entrance, and 6½" below the shoulder point of the right side—on the the wound of exit was slightly oblique, incised penetrating wound 1½" x ¾" about 2" below the axillary fold and 6" below the shoulder point on the upper and inner part of the right arm—posteriorly. By not injured and that the bleeding would stop by simple packing. Sulphonamide powder was put into the wound and the wound was packed and bandaged. The patient was however, admitted into the ward for observation. A.T. serum was given, prophylactically. On the following morning it was detected that in spite of the tight bandage was therefore, taken to the operation room for ligature of the bleeding vessel.

The part was prepared. The patient was placed on the table and chloroform anaesthesia was started as the patient would not allow investigation of the wound without it. The patient took a breath, after which breathing stopped. Artificial respiration was immediately started but to no avail. On examination the pulse could not be felt and the heart had stopped beating. Intracardial injection of coraside was promptly given at the upper border of the fourth rib by the dead. The pupils were dilated. The patient was practically there was no reflex. The body had become flaccid. Every one in the theatre became anxious, and the situation was tense.

At this stage, thanks to the article in the June 1956 issue of the *Reader's Digest* and to Pyes' "Technique of Heart Massage," which we had read, the idea of opening the abdomen and massaging the heart dawned on us.

Artificial respiration was being continued and calcium and coramine intracardially had been tried. It was decided to open the abdomen and do cardiac massage, as the worst had already happened and there was nothing else that could be tried.

The technique.—The abdomen was stripped, cleaned with a little spirit and entered into with one sweep of the knife immediately beneath the xiphisternum up to four inches or so in the mid-line. The right hand was put into the abdominal cavity, the heart was reached from below the diaphragm. The heart was compressed and released alternately between the right hand and the base of the left palm, which was compressing the

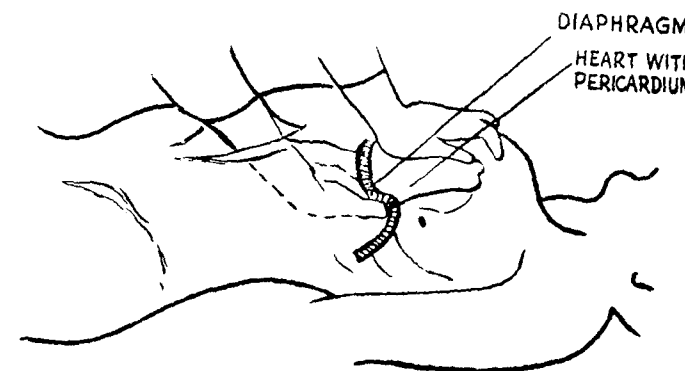


FIG. 1

Standard method of performing heart massage.

sternum (see Fig. 1). This was done in quick succession for the first half minute and then less quickly. There was no response. We then tried the Nicholson method.

The Nicholson method.—A button-hole incision was then made immediately behind the xiphisternum between the attachment of the

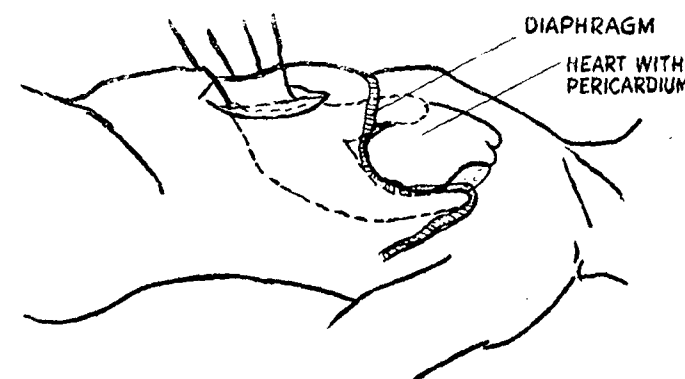


FIG. 2

Nicholson's method. A button-hole is made in the diaphragm through which the thumb is inserted.

two sides of the diaphragm. The thumb of the right hand was thrust through the opening. The heart within the pericardium was then compressed between the thumb above and the fingers below the diaphragm (see Fig. 2). This was done for about

a minute or so. The heart gave at first one or two beats, and then started beating continuously.

Colour slowly returned to the face of the patient. Massage of the heart was successful and the patient had come back to life. The abdomen was then closed by suitable sutures. The incision in the diaphragm was not repaired.

The current procedure:—We do not claim to have followed any systematic or organized plan. We did things in a haphazard fashion, as suited the circumstances and as ideas flashed across our minds. It would certainly be better if a clear-cut plan is followed in such emergencies. The following is the scheme advocated by Hamilton Bailey when the anaesthetist reports that he cannot feel the pulse:—

Is the heart beating?:—If the surgeon has access to the large arteries in an abdominal operation he will himself confirm or deny that the heart has ceased to beat. If the surgeon has no access to the larger arteries the anaesthetist, will settle the point by feeling the carotid pulse, as being the best indicator. Three quarters of a minute may be allowed to gather this information, during which the anaesthetist verifies that the patient has an unobstructed airway and breaks a capsule of amyl nitrate under the patient's nostrils.

The surgeon and the theatre sister are in the meantime sterilizing the precordial area and arranging towels.

Pricking the auricle:—As soon as the area is sterilized, the right auricle should be pricked with a needle. The needle is thrust into the third right interspace at the upper rim of the fourth rib close to the sternal border (see Fig. 3). The needle should be directed backward and slightly upwards to penetrate the right auricle.

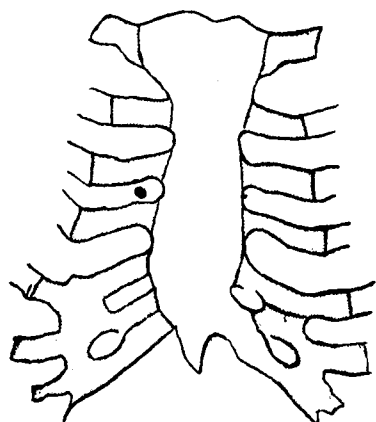


FIG 3.
Showing point for pricking
right auricle.

Cardiac massage:—Unless the response to the above stimulus is obvious and immediate, cardiac massage must be undertaken forthwith (as described above).

Posture:—The head of the patient should be kept low by tilting the operation table—thus the cortex can be kept from death by the merest trickle of blood. The anaesthetist can attend to it while the heart massage is in progress.

Artificial respiration:—Automatic respiration is highly desirable for should the heart's action be re-established not a second is to be lost in oxygenating the stagnant blood in the lungs.

Repairing the incision:—It is inadvisable to close the mid-line incision until it is certain that the patient is breathing without artificial aid. Through and through sutures are inserted by the surgeon but not tied. Sulphonamide powder is placed into the wound and the sutures are then tied.

Immediate after-care:—As soon as convenient, the blood-pressure is taken. If it is below 100 mm Hg. pr... infusion is given and nuphedrine administered.

Inter after-care:—The lungs should be kept well ventilated by intermittent administration of Co.,. Penicillin therapy should be started within the first few hours.

The cases recorded in literature provide detailed information about the time, sterilization, respiration and anaesthesia.

Time:—How long one should persevere with cardiac massage is well-illustrated by a case reported by Adams and Hand where cardiac massage was continued for no less than twenty minutes before response was obtained, and the patient recovered.

Sterilization:—An unsterilized scalpel was used by Easton who had to perform cardiac massage with his hands unwashed. The patient recovered uneventfully.

Respiration:—MacLeod's patient collapsed under spinal anaesthesia. The heart responded to cardiac massage performed for two minutes but the respiration did not become automatic till forty five minutes later.

Anaesthesia:—The heart of Grimshaw's patient stopped during the administration of Pentothal. Cardiac massage performed three minutes later led to recovery.

Cardiac massage in blue asphyxia:—In blue asphyxia the blood, though not oxygenated, is engorged in the tissues and organs and thus the cerebral mechanism is not deprived of blood and because of this the cerebral cells survive longer. The time limit for successful cardiac massage in blue asphyxia is therefore, lengthened tremendously.

Conclusion.—Somatic and molecular deaths are discussed. The technique and current plan of cardiac massage are detailed. The peculiar circumstances under which cardiac massage can be successfully performed are detailed and a case of cardiac massage performed in our operation theatre is narrated.

REFERENCES:

1. Hamilton Bailey, (1953)—Emergency Surgery.
2. Pyes Surgical Handicraft, 1950.
3. Gray Turner (1948)—Modern Operative Surgery, Vol. I, (reprint).
4. Modi—Medical Jurisprudence.
5. Reader's Digest, June 1955.

NON-SPECIFIC URETHRITIS

Auckland and Preston (Manchester) consider that a mycotic element is responsible for more cases of non-specific urethritis than has hitherto been thought. In one year the number of new male attendances at their clinic was 722 of whom 120 were suffering from gonorrhoea. The corresponding figures for females were 475 and 81. Of the cases not suffering from gonorrhoea, 30 males and 55 females showed microscopic evidence of fungous elements in urethral, prostatic or cervical secretions or in the urine. Thus 1 in 20 of all female attendances exhibited some evidence of genito-urinary fungous infection.... In a four year study of over 1600 cases of non-gonococcal urethritis, Durel *et al* found *Trichomonas vaginalis* in 12 to 15%, chlamydozoons in 4% and 'L' forms in 7.4%.—(Br. J. Ven. Dis., 30: 69 and 81, via Med. Ann., 1955).

TOXIC URETHRITIS

The idea that urethritis in the male can be caused by a toxin having its origin in the glands of Cowper, prostate or seminal vesicles and often associated with foci of infection in other parts of the body is not new.

Many writers have shown that urethritis can be associated with infection in other parts of the body. Pelouze showed that in the male associated sites of focal infection are the tonsils, the teeth and the prostate gland, and pointed out that non-specific urethritis rarely had any relation to gonorrhoea.

In an editorial on non-specific genital infection in the *British Journal of Venereal Diseases*, 29 : 121, 1953, it was stated that there can be no doubt that non-specific urethritis is a venereal disease. But Ambrose and Taylor (*Am. J. Syph.*, 37 : 1953) when studying the aetiology, epidemiology and therapeutics of non-gonococcal urethritis among the United States forces in Korea, found that though it is a disease of sexually active people it has not been proved to be venereal in origin and should not be so classified; that known forms of the gonococcus play no aetiological role in the disease; that associated prostatic inflammation is probably the most important component of the syndrome; that a possible source of infection in the upper respiratory tract was found in 66% of the cases; that although organisms were hard to find in many cases no abacterial cases were encountered, the commonest organisms being gram-positive cocci, corynebacteria, and gram-negative bacilli and that terramycin was the most effective form of therapy available, the effect being cessation of the pyuria, but with no marked effect on the prostatic infection.

Purcell considers that these writers get nearer the truth than most, though none suggest that a toxin is the principal causative agent of urethritis. It is suggested that toxins can be produced by many different organisms, the most virulent by haemolytic streptococci and staphylococci, the least virulent by some gram-negative bacilli.

Purcell associates local tenderness with the presence of toxins. Pressure on the infected glands of Cowper can produce the most intense pain. Again, tenderness of the seminal vesicles or portions of the prostate on rectal examination suggest the presence of toxins in these sites. The degrees of infection and the amount of toxin present do not always run parallel. Coliform organisms may produce prostatitis in which numerous leucocytes are found in the secretion, yet the glands are hardly tender on pressure and symptoms are minimal. On the other hand, in infection with haemolytic organisms there may only be a moderate degree of prostatitis as shown by the pus count of the secretion, yet the glands are extremely tender on pressure and clinical symptoms are prominent.

TREATMENT:—If the urethritis is confined to the anterior urethra sulphoamides and penicillin are *not* indicated. Cowperitis is treated by massaging the glands 2 to 3 times a week. This rapidly brings about a cessation of the urethral discharge and a clearing of the urine. If the prostate is involved, bi-weekly prostatic massage is advised though here cure takes longer. The treatment may have to be supplemented by dilation of the urethra and urethral irrigations.

The location and treatment of distant foci of infection is essential to cure the condition, and is always necessary if relapse is to be avoided though the difficulties of locating these foci are sometimes considerable.

The condition is almost always non-venereal, and is associated with infection in the upper respiratory tract (teeth, tonsils, sinuses) and the production of a toxin from these sites. The condition is associated with other symptoms of toxic infection—arthritis, conjunctivitis, iritis and many other symptoms. The treatment that has given the best results is local treatment of the urogenital tract and bowel. Antibiotics should be used in the presence of active bloodstream infection and when foci are being dealt with surgically.—(*S. A. Journal of Laboratory and Clinical Medicine*, June 1956).

Cases and Comments

ARSENIC ENCEPHALOPATHY

(Report of a Case)

S. CHATTERJEE, M.B., B.S., D.T.M. (Cal.), Major Ex.-I.M.S.

AND

C. M. GUPTA, M.B., B.S. (Lucknow), Meerut

TOXIC manifestations during the administration of organic arsenical compounds in the treatment of various diseases, have often been reported in medical literature; so great caution is generally exercised by physicians in giving this therapy. It is not over-dosage and bad technique that always cause the toxicity; for some times hypersensitiveness of the patient to the drugs may cause alarming toxic symptoms.

Recently, we had to deal with such a case of toxicity during administration of arsenic in standard dosage, in which serious symptoms of encephalopathy unfortunately developed, and which at one stage appeared to have the gravest prognosis. As our efforts in the case were eventually rewarded with complete recovery of the patient, we report the case for the information of the readers.

Case report.—D. K. J., a businessman, aged 29 years, felt suddenly ill on the morning of the 17th November, 1955, with a feeling of chill, bad frontal headache and generalized malaise but no fever. He came to one of us that morning and was diagnosed as a case of simple influenza, for which the usual salicylate mixture and Pulv. A.P.C. were prescribed. By evening, the headache increased in intensity, and by 11 in the night became almost unbearable. He was then prescribed one Cafergot tablet *stat* and *s.o.s.* 4 hourly till the headache was relieved. Next morning (18th November '55) one of us visited the patient as he felt more ill with slight fever (Temp. 99.4°F) and intense frontal headache. A thorough examination revealed nothing serious. His blood-pressure was quite normal (122/82). He was given an injection of 4 lakhs units of Duracillin *forte* and was advised to take steam inhalation with Tr. Benzoin Co. morning and evening to relieve the headache, as it might be due to frontal sinusitis. He was not relieved till next morning (19th Nov. '55) when he was again seen by one of us at his residence. He vomited once on that day. Nothing serious could be found to explain the intense headache. The patient was quite conscious. He was given an injection of one ampoule Dicysticin (with ½ gm. dihydrostreptomycin) and advised to take Pulv. A.P.C. *t.i.d.* The patient was not still relieved. On the following day (20th November) both of us called to see him at about 1 p.m. The relatives reported that at about 12 noon, while the patient was about to drink a glass of orange juice, the glass suddenly fell from his hand

and he went into a violent fit of convulsions and became unconscious thereafter.

On examination, the patient was totally unconscious, with dilated pupils, reacting to light but not briskly. The temperature was 99.4°F and the pulse/respiration was 120/30. The knee, ankle, and elbow jerks were somewhat exaggerated on both sides with plantar flexor response. Abdominal reflex was present. Heart and lungs were normal except for a few basal crepitations in both the lungs. The liver and spleen were normal. Even while we were sitting at the patient's bedside we witnessed the patient having a series of violent epileptiform convulsions, with successive clonic spasms one after the other, at hardly 15 to 20 minutes' intervals. Ophthalmoscopic examination of the fundus revealed pin-point hæmorrhages.

History of the present illness:—The patient was suffering from attacks of cough and cold, the cough attacks almost simulating those of bronchial asthma; he was under the treatment of one of us from the 1st November, 1955. His blood on examination, revealed eosinophilia of 19% and as such he was being given injections of Acetylarosan intramuscularly twice weekly. He had 1 cc. on 1-11-'55; 2 cc. on 6-11-'55; 3 cc. on 11-11-'55; and 3 cc. on 16-11-'55. The urine examined before the start of the therapy was normal.

Diagnosis.—With the above history of recent arsenic administration, and witnessing personally the encephalopathic symptoms described above, we diagnosed his present condition to be arsenic encephalopathy. The patient's condition being very serious he was removed to the Agarwala Surgical Nursing Home for efficient and energetic nursing and proper treatment under our direct supervision.

Investigations.—1. Blood examined on 20th November 1955 showed:—Total W.B.C. 7200 per cmm.; neutrophils 69%; lymphocytes 26%; eosinophils 4%; and basophils 1%. No malarial parasites were found.

Blood examined on 21st November showed, total W.B.C. 13,700 per cmm.; neutrophils 82%; lymphocytes 17%; monocytes 1%; and eosinophils nil. No malarial parasites seen.

Blood sugar on 22nd November was 107 mg. per 100 cc. of blood (Leitz Photocolorimeter).

On 23rd November—Blood urea was 32 mg. per 100 cc. Serum bilirubin 0.15 mg. per 100 cc. of serum (indirect). Serum protein 6.2 g. per 100 cc. of serum; albumin 4.2 g.; globulin 2.0 g.; and albumin/globulin ratio 2.1:1 (by Leitz Photocolorimeter).

2. *Urine:*—On 22nd November. The reaction was alkaline; sp. gravity 1022; sugar, albumin, acetone, bile acids and bile pigments absent; calcium sulphate—present; Urobilinogen (Ehrlich's test) negative, and chlorides—present. The reaction was alkaline on the following day; sp. gravity 1020; sugar, albumin, acetone, bile

acids, bile pigments absent. Urobilinogen test negative; and chlorides (calculated as sodium chloride) 8 g. per litre.

3. *C.S.F.*—On 21st November 1955:—Volume was 20 cc. clear; coagulum—nil; sediment—nil; sugar—present; albumin—no excess; globulin—nil; total W.B.C. 112 per cmm.; pus cells and R.B.C.—nil and a preponderance of lymphocytes.

4. *Stools:*—On 23rd November:—The reaction was alkaline; it had an offensive odour: mucus was present; *E. coli* cysts were present but no other abnormality.

Treatment.—(1) Inj. Coramine 1 ampoule 4 hourly on 20th November '55 given one at 11-20 p.m. and one at 3-20 a.m. and at 7-20 a.m. on 21st.

(2) B.A.L., B.P.—1½ ampoules (0.150 g.) I.M. 4 hourly from 6 p.m. on 20th November to 6 a.m. on 23rd November.

B.A.L., B.P.—1½ ampoules I.M. 6 hourly from 12 noon of 23rd November to 6 a.m. of 24th November.

B.A.L., B.P.—1 ampoule I.M. *b.d.* from 24th to 26th November.

B.A.L., B.P.—1 ampoule daily I.M. from 27th to 29th November.

(3) Achromycin Inj. 100 mg. I.M. at 12 midnight on 20th November.

Achromycin capsules 2 capsules (500 mg.) hourly from 21st to 26th November, and 6 hourly from 27th to 29th November.

Achromycin capsules, 1 capsule 6 hourly on 30th November and 1st December.

(4) Glucose 50% 50 cc. *plus* Redoxon forte 500 mg. inj. I.V. on 20th November. Glucose 50% 50 cc. *plus* Redoxon forte 500 mg. and Polybion 2 amp. *plus* Betabion (Vitamin B₁ Merck) 50 mg. Injection I.V. on 21st November morning.

Calcium gluconate 10% 10 cc. *plus* Redoxon forte 500 mg. and Polybion 2 ampoules *plus* Betabion 50 mg. inj. I.V. on 21st evening.

(5) Calcium gluconate 10% 10 cc. *plus* Betabion 100 mg. inj. I.V. every morning from 22nd to 29th November.

(6) Tablet Anthisan 100 mg.—One 8 hourly from 21st to 26th November. 100 mg.—One *B.D.* from 27th to 29th November. 100 mg.—One daily from 30th November to 6th December.

(7) Tablet Polybion forte—One *b.d.* from 22nd to 30th Nov.

(8) Tablet Redoxon 500 mg.—One *b.d.* from 22nd to 30th November.

(9) Paraldehyde injection 5 cc. I.M. once on 20th November at 6 p.m. and again on 22nd November at 2 a.m.

(10) Luminal injection 1 ampoule I.M. on 20th November at 2 p.m. Luminal pulv. gr. 1 on 22nd November at 11 a.m. Luminal

Date	Temperature		Pulse		Respiration		Convulsions, epileptiform with tonic spasms	Reflexes—knee, ankle, elbow jerks slightly brisk with plantar flexor	Pupils dilated, reacting to light not briskly	Ophthalmoscopic examination of fundus	Blood pressure	Liver	Lungs	Vomiting	Perspiration	Stool	Urine	General response and remarks
	8 AM	8 PM	8 AM	8 PM	8 AM	8 PM												
10th Nov.	99.4	101 at 10 pm.	—	130	—	56	Many from 12 noon to 6 p. m. at 15/20 mins. interval	Yes	Yes	Blurring of the fundus, scattered hemorrhage	120/80	No enlargement	Basal crepitations both sides	Yes once	Profuse	Once	Once passed	Unconscious since 12 noon grave condition
21st Nov.	101	101.8	120	140	46	50	Nil	"	"	Same	118/70	Same	Same but increase	No	Yes	No	"	Same
22nd Nov.	100.8	98.4	134	90	42	28	Violent one lasting about 15 mins. at 10 a.m.	"	"	Same	126/80	Same	Slight improvement	"	"	Black stool bowel wash given	"	Same
23rd Nov.	97.6	99	90	100	26	30	Nil	"	"	Same	140/85	Same	Same	"	"	once	Not passed catheter, 12/20 oz.	Semi-conscious evening
24th Nov.	98.2	99.4	96	98	26	28	"	"	Yes less dilated	Slight improvement	132/84	Tender.	Much less congestion	"	"	no	passed	Conscious from morning
25th Nov.	98.4	99.8	94	100	24	28	"	"	Yes less dilated	Same	138/80	Same	Same	"	Less	loose motions	"	Conscious but weak
26th Nov.	98.4	98	96	94	20	20	"	"	Yes less dilated	Same	130/82	Less tender.	Much better	"	No	No	Yes	Same
27th Nov.	98.4	98.8	100	100	22	24	"	"	Yes less dilated	Further clearing	138/82	Very little tender.	Same	"	"	once	"	Feels better
28th Nov.	98.2	98.4	96	90	20	20	"	"	Normal	Same	126/82	No	No congestion	"	"	"	"	Same
29th Nov.	98	97.6	90	88	20	20	"	"	Normal	No hemorrhages	128/80	No tender.	No congestion	"	"	twice	"	Much better
30th Nov.	98	98.4	84	90	20	20	"	"	Normal	Clear	126/80	No	Normal	"	"	once	"	Feels well discharge from N. home

Two groups of organic arsenic preparations are generally used in therapeutics. In both, the arsenic exists in a non-ionizable form and therefore, can be given in large doses. They are less toxic than the inorganic salts of arsenic but, do not produce the desired action immediately. The pentavalent compounds differ markedly from the trivalent in their excretion. Only a small proportion (about 15%) remains in the body after 24 hours, the greater part (about 85%) being rapidly excreted in the urine unaltered. Presumably the tissues are not capable of fixing the pentavalent compounds until they have been reduced to trivalent compounds, and this process is a slow one, slow enough to allow the kidneys, to excrete the greater part of the drug before it is reduced. The rate of excretion shows wide variation which accounts for the difference in toxicity and therapeutic activity.

According to individual variation, cases have been observed where symptoms of poisoning appeared and these effects varied from simple disturbance to grave and even fatal results.

The following factors influence the toxicity:—(i) abnormal toxicity of the drug; (ii) errors in technique; and (iii) susceptibility of the patient.

The particular case reported by us here seems to be due to special susceptibility of the patient to the drug or a sort of allergy to arsenic for the following reasons:—

(i) The patient showed toxic reactions only on the day after the fourth injection; actually two injections of full doses of 3 cc., at the two previous injections were given as reported, in 1 cc. and 2 cc. doses, and as such over-dosage of the drug can be ruled out.

(ii) The theory of cumulative poisoning due to the pentavalent arsenic preparation will not hold good, as the compound, is usually excreted rapidly.

(iii) A report was received of similar toxicity occurring at about the same time in the eldest brother of the patient, who was being treated for bronchial asthma with acetylarsan in Calcutta. He too showed a high eosinophil count in his blood. He was successfully treated in the P. G. Hospital, Calcutta. This brother developed the toxic signs and symptoms after the 5th injection. Our patient is the fifth brother in a family of 11 brothers and a sister. This coincidence of toxicity occurring almost at the same time in two brothers, in 2 different places at a distance of over 900 miles, is indeed peculiar and lends greater weight to our suggestion that both the brothers were allergic or hypersensitive to arsenic. A few other brothers and their only sister also suffer from allergic manifestations frequently. The sister was treated by one of us some time back for bronchial asthma with acetylarsan, as she too showed a high eosinophilia, but she did not exhibit any toxic symptoms.

The toxic symptoms of arsenic may be grouped into:—(i) immediate and early reactions, and (ii) severe late reactions.

Early reactions:—Prominent among these are flushing of the face, injection of the conjunctiva, oedema of the tongue and eyelids, nausea, vomiting, profuse perspiration, cough, dyspnoea and precordial pain. These symptoms are known as nitritoid reaction or crisis. Herxheimer reaction also may occur as well as a febrile reaction with chill, nausea and vomiting within a few hours of administration of the drug. There may also be severe pain all over the body. The kidneys may show evidence of damage with albumin and casts.

Severe late reactions:—In addition to the above symptoms, the cerebrum and the liver may be involved. The cerebral symptoms, i.e. the symptoms of arsenic encephalopathy appear suddenly. There is severe headache, vomiting, dyspnoea, epileptiform convulsions with clonic spasms followed by unconsciousness, suppression of urine, dilated pupils, coma and death. Three types of jaundice may also appear as toxic signs:—(a) early jaundice, (b) late jaundice, and (c) acute yellow atrophy of the liver.

For the treatment of the toxic effects in the case reported B.A.L. (B.P.) was used by us as the main antidote, supplemented by other drugs. The toxic action of arsenic is probably due to its reaction with dithiol-containing tissue proteins. B.A.L. or Dimercaprol is a dithiol compound, which is effective by competing for arsenic and thus protecting these tissue-proteins. The B.A.L. used (Boots) contained in each ampoule of two cc. 0.10 gm. of dimercaprol.

The patient was given only fluid and carbohydrate diet at the beginning of the treatment in order to protect the liver. Proteins and fats were completely withheld to start with. Betabion, the trade name of aneurine was given as it is an essential link in the utilization of carbohydrate. The oxidation of carbohydrate to carbon dioxide and water takes place normally as follows:—Carbohydrate → Lactic acid → Pyruvic acid → Carbon dioxide and water. Aneurine is essential for the breaking down of the pyruvic acid.

The possibility of the allergic factor playing a part was met by the administration of the anti-histaminic ANTHISAN. The hæmorrhagic factor was countered by the administration of calcium gluconate and Redoxon. The possibility of a virus infection or some other infective process causing high fever and leucocytosis was combated by the administration of the broad spectrum antibiotic, Achromycin and also by large doses of Vitamin C. The nutritional demands of B. complex group of vitamins in the case was tackled by the administration of Polybion from the beginning of the treatment. For controlling the convulsions and the irritability of the patient Paraldehyde and Luminal were used. To protect the liver, enough glucose was being given all the time.

The day to day sequence recorded here of symptoms before the case was diagnosed as arsenic encephalopathy will show how one can possibly miss such a grave diagnosis at the beginning.

Summary.—A case of arsenic encephalopathy following the administration of Acetylarsan, successfully treated with B.A.L. and other supporting drugs is reported. The rationale of administering the different drugs has been discussed. The possibility of allergy playing the main part in causing the toxicity is mentioned.

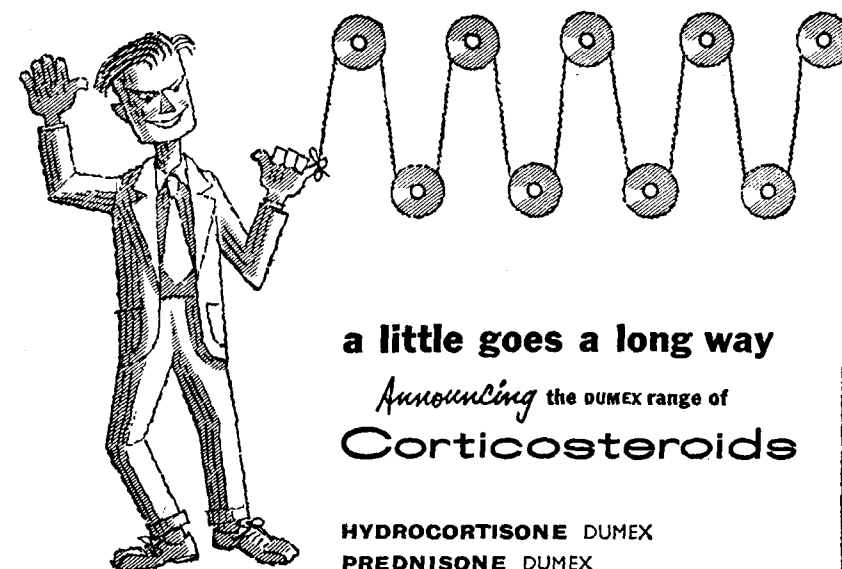
Acknowledgement.—Our thanks are due to Dr. P. C. Gupta, M.R.C.P., Civil Surgeon, Meerut, for confirming the diagnosis and for his valuable advice. We thank Dr. Susanta Sen, M.D., M.R.C.P., F.R.C.S., F.C.C.P. (U.S.A.), Physician of New Delhi for taking the trouble of coming to see our case and offering his valuable advice on treatment. Our special thanks are due to Lt. Col. B. C. Roy, A.M.C., President, Army Medical Selection Board, Meerut, for his valuable advice, and day to day guidance throughout the whole period of treatment. Our thanks are also due to Dr. M. Prakash, M.B., B.S., D.T.M., for the laboratory investigations. We thank Dr. O. P. Agarwala, M.B., B.S., and all the members of the Nursing Staff of his Nursing Home for the care they bestowed on our patient.

REFERENCES:

1. Ghosh, B.N.—A Treatise on Materia Medica and Therapeutics (latest Edition).
2. Micks, R.H.—Essentials of Materia Medica (fourth Edition).

THE TREATMENT OF TUBERCULOUS LUNG CAVITIES BY CONTINUOUS INTRAPULMONARY DRIP: A PRELIMINARY REPORT

Eight patients with cavitory pulmonary tuberculosis were treated by insertion of a rubber catheter of suitable size into the cavity to be treated and by running antibiotics in solution into the cavity, combined with cavity drainage. The solution used consisted of 1.5 to 3 gm. of isoniazid in 60 or 120 cc., respectively, which was used to dissolve 5 gm. of streptomycin, 1,000,000 units of penicillin, and 1 gm. of oxytetracycline. The total instillation was so regulated as to require eight hours, including occasional periods when the drip was shut off to give the patient a rest. Depending on the condition of the patient and response to the drip, the procedure was repeated at weekly or biweekly intervals. Sputum output increased greatly. The patients became febrile, usually by the end of the first day. This was caused by liquefaction of material within the cavity and dissemination and absorption of toxic products. Adequate amounts of antibiotics were given parenterally or by mouth, the secondary invaders previously obtained from the cavity. One gram of streptomycin was given daily together with maximum doses of isoniazid in the earlier weeks of treatment by intrapulmonary drip, and between each treatment water-sealed drainage of the cavity was maintained. Complete cavity closure was obtained in three patients. The remaining five were still undergoing treatment, but in each of these successful results were anticipated because great reduction in cavity size and sputum output had already occurred. In every patient there remained a second or third cavity yet to be treated; therefore, at present. Following this form of "medical curettage" of a tuberculous cavity, slight blood-staining of the sputum was to be expected and, apart from the necessity for reassuring the patient, was ignored.—(*Brit. J. Tuberc.*, 50: 181-186, April 1956 via J.A.M.A.).



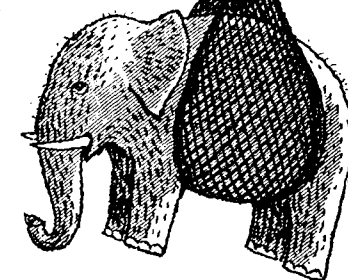
a little goes a long way

Announcing the DUMEX range of
Corticosteroids

HYDROCORTISONE DUMEX
PREDNISONE DUMEX
PREDNISOLONE DUMEX

The DUMEX range of HYDROCORTISONE preparations, in addition to Tablets and Intraarticular injection, includes preparations for topical use which are fortified with potent antibiotics like Neomycin and Bacitracin. This is because HYDROCORTISONE is not antimicrobial in action, and it is essential, therefore, to use antimicrobial agents concurrently with the hormone in infected lesions. PREDNISONE DUMEX and PREDNISOLONE DUMEX which are synthetic analogues of cortisone and hydro-

cortisone respectively, mark the onset of a new era in corticosteroid therapy, in that they are free from the usual major side effects even though they are three to five times more effective than previously used corticosteroids. Therapies with these preparations are significantly free from electrolyte and water disturbances and yet possess most potent anti-inflammatory, anti-rheumatic and anti-allergic effects.



Presentation:

HYDROCORTISONE DUMEX TABLETS—Bottles of 20 tablets, each tablet containing 10 mg. 17-Hydroxycorticosterone.

HYDROCORTISONE FORTIFIED DUMEX—Ointments—Ophthalmic (tubes of 3 gm.) and Skin (tubes of 15 gm.) each gm. containing 10 mg. 17-Hydro-

xy corticosterone, 5 mg. Neomycin sulphate and 250 units Bacitracin.

PREDNISONE DUMEX—Bottles of 10 tablets, each tablet containing 5 mg. Delta-1-cortisone.

PREDNISOLONE DUMEX—Bottles of 10 tablets, each tablet containing 5 mg. Delta-1-hydrocortisone.



Full details from: **DUMEX PRIVATE LIMITED**
Wavell House, Ballard Estate, Bombay-1

There is no question -
In coughs, whooping cough,
bronchitis, influenza and colds take

Cosome

the palatable cough syrup
for children and adults.

It does not contain Ephedrine but
the well tolerated Ephetonin
which stimulates the circulation
and relieves bronchial spasm.

Even small doses give relief.
Bottles of approx. 170 gm.

Sole Agents :
Capco Private Limited,
E. Merck Department,
P.O. Box 1652
Fort, Bombay-1

DARMSTADT • GERMANY

THE STRANGULATION OF THE SIGMOID COLON IN A MESENTERIC HOLE

M. S. VERMA, B.Sc., M.B., B.S.,
Surgeon, S. S. Hospital, Reader in Surgery, Ayurvedic College, B.H.U.,

AND

P. J. DESHPANDE, A.M.S., M.A. and Th. S.C.S.R. (Vienna)
Surgeon and Lecturer in Surgery, Ayurvedic College, B.H.U.

INTERNAL strangulation of the bowels due to developmental anomalies of the mesentery and the rotation of the gut has often been reported in literature. The common anomalies are: retromesocolic hernia, diaphragmatic hernias and congenital bands leading to such a complication. The retromesocolic may be sub-divided into: paraduodenal; paracæcal, perimesenteric and retrosigmoid varieties, according to the site of development of the hernia. Herniation and strangulation of the bowels in the lesser sac and other natural peritoneal spaces are well recognized conditions, but few authors have reported about the mesenteric rents causing internal strangulation. Hamilton Bailey mentions a case in which he found a rent in the falciform ligament of the liver and mentions the transverse mesocolon and broad ligament as possible sites of rents. In our case, we found a rent in the mesentery at the level of the duodeno-jejunal flexure causing strangulation of the sigmoid colon, which is a rare condition. Gangrene of the whole of the small intestines except the first few inches and of the large intestines up to the right half of the transverse colon was imminent due to the compression of the superior mesenteric artery by the strangulated loop. It is very unusual for the sigmoid colon to have such a loose mesentery that could be drawn up so high as to enter the mesenteric rent at the level of the duodeno-jejunal flexure.

The operative mortality in cases of internal strangulation is usually very high and Lahey says that it is more than 50%, in cases of strangulation at the level of the duodeno-jejunal flexure. In view of the abnormal features noted, a detailed report of a case which was operated by us and which had an uneventful recovery is given below :—

Case report.—B. C., a Hindu male, washerman, aged 50, was admitted to the surgical department of the S. S. Hospital, B. H. U. at 9 a.m. on 12-3-'56 with acute abdominal pain of sudden onset at 2 a.m. He had three or four vomits and had not passed any flatus, stool or urine till the time of admission. He was in great agony; on examination, the tongue was coated and dry, pulse was 96 p.m., of low volume and tension and the respiration was 22 p.m. The examination of the abdomen revealed a moderate distention limited to the central area and the right flank, moving with respiration. No

rigidity of the abdominal wall was felt but it was tender all over on deep palpation and moderately tympanitic. All the sites of the hernial orifices were normal. Peristaltic sounds were almost absent. Rectal examination revealed nothing abnormal except a few distended loops of the intestines in the pouch of Douglas.

A provisional diagnosis of intestinal obstruction was made with a potential possibility of internal strangulation. Enema gave no result. Supportive treatment by infusion of glucose-saline was instituted and the patient watched. After some time the condition of the patient showed deterioration. His blood pressure was low, 90/70 m.m. Hg. and the pulse rate had risen to 130 p.m. Distention of the abdomen had increased with complete cessation of peristaltic sounds. Immediate operation was decided upon and pre-operatively an injection of morphine gr. 1/6 and an infusion of one pint of plasmosan were given.

Operation notes.—Under local anaesthesia supplemented with light ether, the abdomen was opened by median incision. On opening the peritoneum a small amount of serosanguinous fluid escaped. Next appeared the distended loops of the small intestine which had become almost tarry black. On exploration it was found that the whole of the small intestines except the first few inches were distended and grossly discoloured. The caecum, appendix, ascending colon and the right half of the transverse colon were also discoloured. The presence of extensive vascular changes led us to suspect embolism of the superior mesenteric artery. Therefore, the root of the mesentery was explored, where a loop of the small intestines with its mesentery was forming a tight band and a portion of the large intestines was seen passing under it. The colon on the right and left side of the band was enormously distended and hence it was difficult to determine the exact portion of the large intestine which was strangulated. A finger could be passed under the band from left to right and could be seen without any covering. An attempt made to decompress the strangulated loop by pressure proved unsuccessful. The flatus tube was passed into the rectum and with only about 10" of the tube inside, its tip could be felt in the loop at the site of the strangulation which confirmed the strangulated loop to be that of the sigmoid. The flatus tube was manoeuvred to the right side of the band and decompression done easily; the strangulated loop of sigmoid was thereby reduced and the colour of the intestines started to show improvement. After reduction, the loop was found to have a long mesentery, which further confirmed that it was the sigmoid colon. After testing the viability of the intestines and confirming the pulsation in the main branches of the superior mesenteric artery, the intestines were returned to the abdomen. At this stage the condition of the patient was reported bad by the anaesthetist so the repair of the rent was abandoned and the abdomen closed quickly by through and through sutures. Veritol and an

increase in the rate of infusion brought the patient round and he was transferred to the ward.

Postoperative period.—Except for the distention of the abdomen and a few bilious vomitings during first 48 hours and blood-stained stools on the second post-operative day the convalescence was uneventful. The stitches were removed on the 10th day. The patient was discharged on the 24th day of the operation. A follow-up after 2 months showed a slight nutritional oedema for which suitable treatment was advised.

Discussion.—The following points are of interest in this case:—

1. The distended colon which was strangulated was in the general peritoneal cavity and did not have any mesenteric covering as would usually be expected in paraduodenal hernias.

2. The rent of the mesentery was clearly demonstrated by the finger passed under the constricting band over which no covering was demonstrated.

3. The rent was bounded anteriorly by the duodeno-jejunal flexure and superior mesenteric artery and posteriorly by the vertebral column and adjoining structures.

4. A loop of intestines anterior to the rent was tightly drawn over the strangulated loop.

5. The strangulated mass produced a compression of the superior mesenteric artery which threatened gangrene in the whole length of the bowel supplied by it.

Strangulations at this level which produce the compression of the superior mesenteric artery are mainly due to herniation in the paraduodenal spaces as in the fossa of Waldeyer, which itself is rare amongst the periduodenal hernias, (12% of all periduodenal hernias). It is worth noting that the boundaries of the rent in our case corresponded with the boundaries of the opening of fossa of Waldeyer. Paraduodenal hernias constitute 58% of all internal strangulations.

The other condition at this level which has the possibility of producing the compression of the superior mesenteric artery is the internal strangulation due to the presence of mesocolico-jejunal membrane which is a band of various length extending from the under surface of the mesocolon to the antimesenteric border of the proximal part of the jejunum. In this condition the strangulated loop will always be anterior to the duodenum. In our case no such membrane was demonstrated and herniation was posterior to the duodeno-jejunal flexure.

Summary.—1. A case of intestinal obstruction due to internal strangulation is described.

2. The strangulation was found to have occurred due to a rent in the mesentery, at the level of duodeno-jejunal flexures.

3. The strangulated loop was in the sigmoid colon.
4. The mass of the strangulated loop led to the compression of the sup. mesenteric artery which threatened gangrene of the gut supplied by it.
5. The case had an uneventful post-operative recovery. Very few cases of this kind have come to our notice in the available literature. We shall be glad if other readers will throw further light on this type of strangulation, from their own experience.

Acknowledgement.—Our special thanks are due to Col. J. B. Vaidya, Hon. Physician and Surgeon, S. S. Hospital, B. H. U. for his valuable help during the operation and for the subsequent follow-up of the case and to Dr. L. M. Singh, Emergency Medical Officer for conducting the case.

BIBLIOGRAPHY :

1. Bailey, Hamilton (1953)—Emergency Surgery, 6th Ed.
2. Lache F. H. and Trevor W. R. —Ann. Surg., 120: 436-443.
3. Macgregor (1946)—Surgical Anatomy, 6th Ed., pp. 52-61.
4. Burnham, Preston J.—Retromesocolic Hernias.

CLINICAL TRIALS ON A LAXATIVE PREPARATION OF PURE SENNA GLYCOSIDES*

M. T. MODI,

(From the Clinical Wards, G. T. Hospital, Bombay)

ALTHOUGH constipation is not a major malady, the general practitioner has to face it in his day-to-day practice. Many causes may be responsible for constipation. However, one important group is caused by atony of the colon. It may be due to gradual loss of the gastro-colic reflex, either due to old age, or temporarily during the post-operative period and in pregnancy. The more common types are those caused by a progressive neglect to respond to the defaecation reflex; this is due to a variety of reasons, viz., laziness, insanitary and unsuitable conditions of the privy, etc., the conditioned reflex being lost, resulting in constipation.

There is no dearth of laxatives offered in the market for the treatment of constipation. Unfortunately many of them act on the whole gastro-intestinal tract and frequently cause diarrhoea which hinders the half-digested contents of the small intestine into the caecum. The half-digested materials undergo fermentation and putrefaction and release toxins which irritate the colon.¹ Senna as a galenical preparation, has been known for ages to be a laxative agent free from the untoward reactions because it acts specifically on the colon without disturbing the upper gastro-intestinal tract. The galenical preparations of senna suffer however, from a disadvantage in that they vary considerably in their potency, and contain saponins, resins, etc. which irritate the gastro-intestinal tract. Consequently their action is unpredictable and frequently give rise to unpleasant side-effects such as griping, pains, etc.²

* Pursennid: manufactured by Messrs. Sandoz Ltd., Basle, Switzerland.

Stoll and his co-workers^{3,4} isolated sennosides A and B in a pure form from senna and found that these two glycosides are responsible for the laxative action of senna. These two glycosides have subsequently been marketed as their calcium salts in equal proportions in the preparation Pursennid.

Pharmacology.—Straub and Triendl⁵ and Valette⁶ have shown that the sennosides A and B have little or no action on the small intestine; they are however absorbed from there into the blood stream and then again excreted in the colon where they exert a specific effect on the propulsive motility. It is further stated that the aglycones of the sennosides are responsible for this action. According to Henderson,⁷ senna decreases the normal anti-peristaltic waves in the caecum and the ascending colon, thus leading to a decreased water absorption and greater bulk.

Material and methods.—Pursennid was tried in several cases of constipation met with routinely in medical wards, after excluding organic causes, faulty habits and dietetic errors, which may cause constipation. In most cases, two tablets were usually given by mouth at bed time the dose being adjusted according to the needs of the patient. Routine investigations were carried out in all cases and recorded. The time taken by the drug to act, and any side-reaction complained of, by the patient were noted.

Past history of constipation and any laxative habit were also noted. The results obtained with this preparation in 26 cases of atonic constipation, are given below:—

TABLE I

No.	Age, sex	Main ailment for which treated	Previous laxative habit if any	Onset of action	Stool and consistency	Remarks
1.	68, Male	Congestive cardiac failure, secondary to high B.P.		8 hrs.	2 semi-solid stools	Good
2.	34, Male	Mitral stenosis		7 hrs.	1 to 2 stools	Good
3.	35, Male	Constipated for 2 months, syphilitic arthritis		8 hrs.	1 to 2 stools	Good
4.	50, Male	Distention of abdomen	Mag. Sulph on and off	8 hrs.	2 to 3 stools	Good
5.	40, Male	Cirrhosis of the liver		8 to 9 hrs.	1 to 2 semi-solid stools	Good
6.	40, Male	Congestive cardiac failure due to chronic bronchitis		10 hrs.	2 stools	Good
7.	60, Male			7 hrs.	1 or 2 loose motions	Good
8.	68, Male	General debility, constipation. Stools every 3rd day		8 hrs.	1 semi-solid stool	Good

TABLE I—(Contd.)

No.	Age, sex	Main ailment for which treated	Previous laxative habit if any	Onset of action	Stool and consistency	Remarks
9.	35, Male	Cirrhosis of the liver		8 hrs.	2 stools	Good
10.	20, Female	Heaviness in abdomen	Brooklax Tabs. on and off	9 hrs.	2 stools	Good
11.	17, Female	Chronic amoebiasis, alternative constipation and diarrhoea	Mag. Sulph on and off	6 hrs.	2 loose stools	Good
12.	60, Male	Anæmia		5 hrs.	3 to 4 loose stools	Fair
13.	40, Male	Congestive cardiac failure		6 hrs.	2 stools	Good
14.	40, Male	Constipation	Senna-pod infusion	7 hrs.	2 loose motions	Good
15.	40, Male	Operated for hernia		7 hrs.	2 loose motions	Good Tablets given on 8th day of operation
16.	40, Male	Congestive cardiac failure	Brooklax Tabs.	8 hrs.	1 stool	Good
17.	45, Female	Amoebiasis, constipation and pain in abdomen		6 hrs.	2 stools	Fair
18.	70, Male	Constipation	Castor oil	8 hrs.	2 to 3 stools	Good
19.	26, Male	Pain in abdomen and constipation		10 hrs.	1 stool	Fair
20.	68, Male	Constipation		8 hrs.	2 semi-solid stools	Good

Persons who were predisposed to spastic constipation and complained of griping after Pursennid, were relieved by the administration of a belladonna mixture or by reducing the dose. The results observed in this group are given below :—

TABLE II

21.	60, Male	Congestive cardiac failure		8 hrs.	2 semi-solid stools	Good
22.	82, Male	Amoebiasis alternating diarrhoea and constipation		7 hrs.	2 stools	Fair
23.	95, Male	Constipation	Mag. Sulph	6 hrs.	1 to 2 stools	Fair
24.	80, Male	Amoebiasis alternating constipation and diarrhoea	Mag. Sulph	8 hrs.	1 to 2 stools	Good
25.	25, Male	Constipation	Mag. Sulph	8 hrs.	1 to 2 stools	Fair
26.	80, Male	Constipation	Mag. Sulph Castor oil Liquid paraffin	10 hrs.	2 to 3 stools	Fair

Discussion.—Out of 26 cases treated with Pursennid the results were good in 19 cases while the rest showed fair response. Excellent results were seen in elderly, debilitated and bed-ridden patients. In cardiac patients the drug proved to be particularly valuable because it prevented unnecessary exertion to them. Evacuation in most cases occurred within 8 hours of the administration of the drug. The majority of the patients had two stools of semi-solid consistency. The patients did not show any signs of excessive water loss. Some patients who were predisposed to spastic constipation (about 25%), complained of griping after taking the drug, which was relieved either by the administration of a belladonna mixture or by reducing the dose of the drug.

Summary.—(1) A laxative preparation (Pursennid) containing pure glycosides of senna have been tried in 26 cases. The results have been very favourable in most of them.

(2) The only side-effect noticed was griping, which occurred only in a few cases predisposed to spastic constipation. The griping was relieved either by reducing the dose of Pursennid or by the administration of a belladonna mixture following the glycosides.

Acknowledgement.—My thanks are due to Dr. N. J. Modi, Hony. Physician, G. T. Hospital for his encouragement and guidance and to Dr. M. V. Modi, Superintendent, G. T. Hospital for affording facilities in the hospital and according permission to publish this paper. My thanks are also due to Messrs Sandoz Products (Private) Ltd., Bombay, for a liberal supply of Pursennid for trial.

REFERENCES :

1. Price, (1950)—A Text Book of the Practice of Medicine; Oxford Medical Publications, 8th Edn., p. 694.
2. Goodman and Gilman; (1953)—Pharmacological Basis of Therapeutics, 2nd Edn. The Macmillan Company, New York.
3. Stoll and Becker, (1950)—Progress in the Chemistry of Organic Natural Products, 7: 248.
4. Stoll, Becker, and Kussmaul, (1949)—Helv. chein. Acta. 32: 1893.
5. Straub and Triendl. (1937)—Arch. exper. Path., 185: 1.
6. Valette, C. (1949)—Soc. Biol., 143: 74.
7. Henderson, J. (1935)—Canad. Med. Assoc., 32: 538.

IS PREMATURE BIRTH PREVENTABLE

The birth weights of 1,683 consecutive, single, live-born infants delivered after spontaneous onset of labour were determined. These birth-weights produced a normal distribution curve with an incidence of prematurity of 8.26%, 137 of the infants being premature by the criterion of a birth-weight of 5½ lb. or less. The three most commonly listed causes of premature birth, (premature rupture of the membranes, toxæmia, and of premature bleeding complications of pregnancy) were determined for both premature and full-term infants in this series. Of the 137 premature infants, premature rupture of the membranes may have caused 15 of the premature births, toxæmia 3, and placenta prævia and abruptio placentæ 10, a total of 28 premature births (20%). These complications of pregnancy do not necessarily cause premature labour. In most cases premature birth is probably not preventable. If this assumption is correct, the best hope for obstetric salvage of premature infants depends on postponement of delivery as long as it is maternally and foetally feasible in obstetric complication and, probably more important, once labour becomes established, the determination of the obstetric techniques that will deliver the premature infant with minimal damage to its vital systems.—(Obst. & Gynec., 7: 496-502, May 1956, via J. of Am. Med. Assoc.).

SEDATION WITH ANALGESIA IN OCULAR SURGERY

H. D. DASTOOR, F.C.P.S., D.O. (Oxon) ; D.O.M.S., (Lond.),
Bombay

PERFECT sedation with analgesia has been obtained by the combination of two drugs, *viz.*, Chlorpromazine* and Pethidine*. Chlorpromazine intensifies and prolongs the analgesic effect of pethidine and effectively suppresses the nausea and vomiting frequently caused by the administration of pethidine alone. Chlorpromazine has also the unique property of removing from the mind of the patient all the apprehension and fear of an operation. The combination abolishes the reflexes of pain, cough, and sneezing, and there is no retention of urine.

Both the drugs are combined and given intramuscularly with most satisfactory results. The dose of pethidine is kept constant at 100 mg. and is combined with chlorpromazine from 12 to 20 mg. up to a maximum of 25 mg given intramuscularly. Since large doses of chlorpromazine produce a fall in blood-pressure, it should be administered cautiously as per above mentioned dosage, consistent with the physique of the patient. The lower limit of 12 mg. is used for thinly-built, old patients with low blood-pressure and the maximum dose of 25 mg. for heavily-built and plethoric patients especially when such patients have a high blood-pressure. These two drugs can be combined in the same syringe and injected intramuscularly half an hour before the operation and the patient is then kept in a recumbent position. If an over-dose of chlorpromazine causes a great fall in blood-pressure, there need be no alarm as the same can be readily corrected by immediate parenteral administration of drugs like Methedrine, which raise the blood-pressure by producing peripheral vaso-constriction. Hence the usual average dose intramuscularly of 100 mg. of pethidine combined with 12 to 20 mg. of chlorpromazine gives the most satisfactory results by effecting perfect sedation and generalized analgesia. Excepting for some sedative on the previous night, no other sedation should be administered before the operation. The intravenous use of this drug has some drawbacks and no added advantage.

During and after the operation the patient remains in a relaxed condition often going into a slumber from which he can readily be aroused. The usual duration of the effect is from 3 to 6 hours and if required the same dose can be repeated every 6 to 8 hours for post-operative sedation. Such a condition during an operation is of great advantage in dealing with nervous, unruly and highly-strung patients as well as in painful diseases; this eliminates in many cases the necessity for administering general anaesthesia. Besides cataract

extractions, this mode of sedation with analgesia has been found to be of great advantage in painful eye-conditions like acute glaucoma enucleation and evisceration, etc. It is also of advantage in cough and in patients with hypertension where, with a slightly higher dose of chlorpromazine, the blood-pressure can be brought down to a safe level. In extra-ocular operations, after resting for about an hour or two the patients may be sent home without any untoward symptom. It is hardly necessary to mention that the usual anaesthesia with surface instillation, infiltration, retro-bulbar ciliary and facial nerve-block wherever necessary in different eye operations are essential requisites, as per routine practice. This technique was not used on children since general anaesthesia is necessary for surgery of the eye in children.

During the operation the patients have a feeling of getting the operation done as under general anaesthesia and the surgeon has a quiet and relaxed patient as under "Pentothal anaesthesia" with the added advantage of being able to secure the patient's co-operation whenever required. This technique has produced effective analgesia and sedation with perfect safety in ophthalmic surgery; *it must prove useful in other branches of surgery as well.*

This method of sedation has been tried in over 350 cases of various eye operations performed at the Sir C. J. Ophthalmic Hospital, (J. J. Group of Hospitals) Bombay.

TREATMENT OF ENTERIC FEVER

A Survey of 44 Cases

KISHORI LAL SACHAR, L.M.P. (U.P.),
I/c., Civil Hospital and Health Centre, Hamirpur, District Kangra, Punjab

IN September last 44 patients suffering from enteric fever were admitted and treated by me in the Civil Hospital, Hamirpur, District Kangra, Pb. Twelve of them were adult males, 23 adult females and nine children above 10 years of age. Thirtynine cases were treated with Chloromycetin, and 12 had relapses.

Five were treated with other drugs and there was one relapse. Of the 13 cases of relapses the first relapse occurred in 7 cases, a second in 4, a third in 1 and a fourth in another.

Four cases relapsed with no interval of actual apyrexia and so were continuous with the primary fever; in nine cases relapses occurred after the termination of the original fever. All cases were cured.

SYMPTOMS.—1. Headache was present in nearly all especially during the early part of the disease; constipation was extremely common and diarrhoea was observed in one case. The spleen was enlarged, in 4 cases; fever was remittent; the tongue was dry with a band of dry white fur on each side, the sides, tip and middle of the tongue being clean and red.

*The drugs used were Chlorpromazine hydrochloride (*Largactil*) 50 mg. in 2 cc. ampoules of May and Baker (India) Ltd. and Pethidine (*Uni-pethidine*) of the Uniochem Laboratories, Bombay.

INTESTINAL SYMPTOMS:—The abdomen was full and distended, a little tender but no pain was observed and no hæmorrhage. Temporary deafness was observed in 80% of the cases. The urine was scanty and dark. There were no nervous or cardiac symptoms; the complications included parotitis in 1, acute nephritis 1, periostitis of the metatarsal bones in 1, bronchitis 2, and delirium in 2.

RELEVANT OBSERVATIONS:—(1) Relapses were more common in cases treated with Chloromycetin than in those treated with other drugs. (2) It was almost a routine practice to give quinine bihydrochlor gr. 10 in 2 cc. *im.*, to every patient in order to exclude malaria, laboratory diagnosis not being possible. (3) Cases having remittent fever for 5 to 6 days and cases where the temperature dropped down to normal with the quinine injection were labelled as malarial fever. (4) Chloromycetin one Kapseal twice daily was continued in cases treated with the drug for two days after the termination of the original fever. (5) Relapses were observed, continuous with the primary fever as well as some days after the termination of the original fever. (6) Relapses were marked generally after taking any food other than milk also in a few cases where the patients got out of bed and walked a few paces. (7) Two cases were admitted, of meningitis (a) with coma (b) with coma and convulsions. They were given glucose saline (drip method) 1 pint per day for two days and Chloromycetin. Both cases recovered.

Treatment.—1. Chloromycetin one Kapseal was given every 6 hours in moderate cases and every four hours in severe cases till the temperature came down to normal; then one Kapseal twice a day for two days after the temperature became normal and Vitamin B complex (tablet or elixir) was given throughout the course of the disease to combat vitamin deficiency. The patients were given glucose water and milk diet.

My grateful thanks are due to Dr. H. S. Bawa, Civil Surgeon, for kindly allowing me to publish this case report.

THE PHYSICIAN'S AIM

The physician of today, better realizing the limitations of bacteriological and other technical aids, is experiencing the need of returning to the patient's bedside, from which medicine should never have separated itself. With the extreme swing of the pendulum too much faith has sometimes been placed on the pronouncements of the laboratory when, forgetting the importance of the clinical picture, physicians have based their activities too exclusively on laboratory criteria. For some years now physicians have tended, through ignorance of the possibilities and limitations of laboratory methods, either to place too much reliance on what came out of the four walls of the laboratory, or not to take advantage of the information that it should properly give. They tended to pay more attention to the evidence of the microscope and chemical reagents than to information obtained by their own senses from examination of the patients in the wards of the hospitals.—(A History of Medicine: from *The Annals of Allergy*, July-August, 1956).

ANAEMIA AND ANXIETY NEUROSIS

S. N. CHAKRAVARTY, M.D.,

Reader in Medicine, Lucknow, U. P.

THE normal hæmoglobin value of blood in healthy young adults has been studied by several workers, but such work has mostly been on young students in different medical colleges; they are usually very well-fed and we cannot therefore infer that our average population has 100% hæmoglobin. Also it has recently been suggested that a few nervous symptoms can be produced by iron deficiency; so we decided to investigate and confirm this finding and undertook a survey of the hæmoglobin percentage among all the people attending our out-patients' department. Only those were selected who apparently looked normal without being anemic. The first group included 100 female patients from families with an income of Rs. 100/- per month; we are continuing our study with various other groups. The results of the study of the first group are given below:—

Signs of anaemia.—Ten % of cases showed paleness of nails in contrast with normal pink face and conjunctivæ and the hæmoglobin was below 74%. One case had 80% hæmoglobin but showed a soft systolic murmur which disappeared with the treatment for anaemia; 2% had a pale face as the only sign of anaemia. Six% of cases had opaque nails but this had no constant relation with the presence or degree of anaemia.

Symptoms of anxiety.—22% cases complained of symptoms resembling those of anxiety-neurosis and their hæmoglobin was between 60 and 80%. In 50% of these cases the symptoms disappeared with the administration of hæmatinics while others required treatment for anxiety neurosis.

Findings.—(Hæmoglobin 100% = 15.5 g.)

Hb. value.	No. of persons	Hb. value.	No. of persons
100 p.c.	none	70 p.c.	36 p.c.
90 p.c.	4 p.c.	60 p.c.	33 p.c.
80 p.c.	7 p.c.	50 p.c.	20 p.c.

Conclusion.—It was confirmed that a severe degree of anaemia can exist without any physical signs and so examination for hæmoglobin should form a part of the general examination of patients. A case of mild anaemia may very often show symptoms of anxiety neurosis with no physical signs. The low hæmoglobin percentage is the ætiological factor in these cases. White and opaque nails are no index of anaemia.

The average hæmoglobin in this class of people was between 60% to 70% of normal which shows a state of nutritional deficiency; anæmia exists among members in families with an income of one hundred rupees a month; it is a potent cause of chronic ill-health and may also predispose to various other disorders.

My grateful thanks are due to Dr. Nisar Ahmad and other house physicians for their useful help.

MEDICAL ASPECT OF MITRAL COMMISSUROTOMY

In view of the surprising figures that 500 to 800 out of every 100,000 persons are affected with mitral stenosis, the importance of surgical treatment of this lesion is obvious. Mitral commissurotomy has now been performed in more than 6,000 patients in many parts of the world and is thus past the experimental stage. The over-all mortality rate is about 10%. Under very favourable conditions it is as low as 1 to 2%, but rises to about 33%, if the operation is performed during the last stages of the disease when right heart failure is present. Early results are satisfactory in about 75% of the cases, and late results seem to be equally favourable. But consistent medical treatment prior to operation and psychological factors also account for the results, in addition to surgical aspects. Although statistical evaluation of late results is still outstanding, it may be assumed that the condition existing during the first post-operative year is maintained. If mitral commissurotomy is carried out properly, recurrence is comparatively rare. The ultimate fate of the operated patient depends to a great extent on the treatment and prophylaxis of the causative rheumatic infection. Antibiotics play an important role. Although indications for the operation are not yet clearly defined, surgery should not be resorted to during the first stages of the disease, while symptoms are still uncharacteristic. On the other hand there should not be excessive delay in operating. Additional valvular defects constitute a contra-indication, if the resulting cardiovascular impairment is of the same severity as that caused by the mitral stenosis. Operation during an acute rheumatic attack should also be retained from, except in cases where circulatory failure is so pronounced as to constitute danger to life (pulmonary oedema). Whereas purely mechanical failure of the right heart does not entirely rule out operation, indications are more doubtful as regards cases with cardiac dilatation and failure due to previous or acute myocarditis. It should, however, be mentioned that commissurotomy has favourable effects on the myocardium. Cardiac catheterization and angiocardiology can generally be dispensed with for both the diagnosis and the decision whether to operate: the usual clinical, radiological and electrocardiographic methods are adequate. Early diagnosis of mitral stenosis by the general practitioner still remains the most important factor, as this gives the cardiac surgeon a chance to operate before the right heart has failed.—(Halhuber, M. J. in *Wien. Med. Wschr.*, 106: 1956 via *Germ. Med. Monthly*).

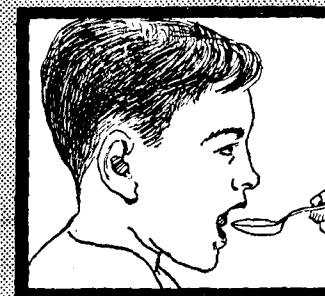
PRACTICE OF MEDICINE

The application of the principles of science to the diagnosis and treatment of disease is only one limited aspect of medical practice. The practice of medicine in its broadest sense includes the whole relationship of the physician with his patient. It is an art, based to an increasing extent on the medical sciences, but comprising much that still remains outside the realm of any science. The art of medicine and the science of medicine are not antagonistic but supplementary to each other. There is no more contraindication between the science of medicine and the art of medicine than between the science of aeronautics and the art of flying.—(The Care of the Patient: from *Annals of Allergy*, July-August, 1956).



premixed Terramycin Syrup

brand of oxytetracycline



best prescription to recovery
best taste/no aftertaste

TERRAMYCIN Clinically the best tested, best proved and most predictable broad-spectrum antibiotic for effectiveness and safety, in the best tasting, most stable and most convenient oral liquid dosage form ever achieved.

DELIGHTFUL TASTE No aftertaste. Natural fruit flavor of wild cherries. Wins patients co-operation and dosage adherence without coaxing.

READY TO USE No reconstitution, no mixing, no need for pure water, no risk of spoilage, no time lost in preparation.

NO SPOILAGE OR POTENCY LOSS Stable 2 years without refrigeration, even after opening.

Supplied: Each 5 cc. teaspoonful of NEW PREMIXED TERRAMYCIN SYRUP provides 125 mg. of well-tolerated, rapidly absorbed calcium di-oxytetracycline in an ultra-fine aqueous suspension. Supplied in bottles of 2 ounces.



World's Largest Producer of Antibiotics

PFIZER EASTERN CORPORATION
New York, Panama & Brussels.

Exclusive Distributors in India.

RAVISON PHARMACEUTICALS PRIVATE LTD.,
Post Box 1636, Bombay 1.

Trademark of Chas. Pfizer & Co., Inc.

Pharmaceutical Specialities

Original German



Priatan

Cough Syrup

Bronchial relaxant and Expectorant
for Tracheo-bronchitis and
similar spasmodic coughs

INGREDIENTS

ℓ-3,4-dimethylphenyliminothiazolidine hydrochloride
ℓ-ephedrine hydrochloride
Herbal extracts
Corrigents

Packing: Bottle of 150 g.

Toniazol

Tonic, Knoll

Physical and mental fatigue
Anorexia, low blood pressure
and rapid convalescence

Packing: Bottle of 170 g. liquid



KNOLL A.-G.

Chemical Works, Ludwigshafen-on-Rhine Germany

Sole Importers for India:

NEO-PHARMA Limited,

Kasturi Buildings, Churchgate Reclamation, Bombay I

The Antiseptic

A Monthly Journal of Medicine and Surgery

Published on the 6th of every month

Founded by the late Dr. U. RAMA RAU in 1904

Editor: U. KRISHNA RAU, M.B., B.S., M.L.A.

Associate Editor: U. VASUDEVA RAU, M.B., B.S.

Editorial & Publishing Office: 323-24, Thambu Chetty St., Madras-1

Annual Subscription: Rs. 7-8-0. Foreign—Rs. 10—Post Paid

Vol. 53

DECEMBER, 1956

No. 12

Editorials

MEDICAL RESEARCH IN INDIA

(PROSPEROUS DAYS AHEAD)

MEDICAL RESEARCH is coming into greater prominence now, and this is as it should be. At the seventh annual session of the Indian Association of Pathologists held at Mysore on the 14th November last, Mr. MANJAPPA, the State Minister for Education, emphasized the important role of pathologists in the reduction of human suffering, and pleaded for a psychological and scientific study of the popular belief among people concerning the value of prayer in curing diseases. This was the subject of a detailed study by means of questionnaires and other scientific methods by leading doctors both of medicine and of divinity in England and their conclusions were published in a lengthy report, a few months ago in the *British Medical Journal*. The report did not give unqualified support to the belief but certainly favoured resorting to prayers as a psycho-therapeutic aid to medical therapy.

Shri Dr. C. G. PANDIT, Director of the Indian Council of Medical Research who presided pleaded strongly for cohesion both within the medical science and the world at large in the study of diseases. He said, in science there were no frontiers. Science had to violate them, for it was there that the advance of knowledge took place. Diseases did not respect national boundaries and linguistic divisions. The tempo of modern transport had heightened the need for more widespread recognition of the truth that all mankind should face the problem of health as one unit, no matter where they were. He considered that there could be only one world, one future, and one destiny for man. Sri A. B. SHETTY, the new Mysore State Health Minister stressed the need to provide greater facilities for research in medical colleges, as such facilities alone decided the quality of the medical graduates and their medical acumen.

Inaugurating a session of the Scientific Advisory Board and the Advisory Committees of the Indian Council of Medical Research, in the absence of the Union Health Minister, Mr. PILLAI, Secretary of the Union Health Ministry and Vice-President of the Council, revealed the intentions of the Union Government to establish a permanent cadre of medical research workers. Said he, "we have been feeling for some time that the terms of service and the emoluments offered to medical research workers are unsatisfactory, and we are quite convinced that research should be entrusted to full-time workers, who are adequately paid, and are assured of a reasonable security of service..... We have proposed to meet the situation by establishing a research cadre, and it is my hope that before long we shall have a permanent cadre of research workers on an equal footing with the teaching cadre, enjoying the same status in the Universities as the teachers do."

Mr. PILLAI announced that the Rockefeller Foundation had granted Rs 4,50,000 for the expansion of the neuropathological unit in Bombay to conduct clinical studies of nervous diseases and that arrangements had been completed to establish a Blood Group Research Centre in Bombay. He reviewed the progress made in the Council's schemes of research on various branches of medicine, nutrition, environmental sanitation, etc., during the first five-year plan period and then outlined the fresh plans and schemes laid out for the Second Five-Year period.*

The current year marked an important milestone in the evolution of the Council. During the First Plan period the Council received Rs. 12,00,000 as grant, in addition to the annual standing grant of Rs. 12,00,000.

Under the Second Plan, a provision of Rs. 4,12,00,000 has been made for medical research, and we fervently hope that in the preparation of new plans the guiding principle would be that medical research shall be concerned not merely with the study of diseases of man, but also with the study of factors that promote his mental and physical well-being.

It is indeed a matter of sincere gratification that the Council has been laying foundations silently and unostentatiously for the promotion of health and for the growth of the spirit of scientific research. We are glad to know, in evidence of this, that this year, the Council received the largest number of research proposals ever, —nearly 300—and that therefore, Medical Research in India is well on its way to find fields yet unexplored and will eventually add to the progress of science and to the sum total of human happiness.

* A summary of these was given in a review, we published in the ANTISEPTIC for October 1956, of the Council's programme of researches during the II Five-Year period.

OPHTHALMOLOGISTS IN CONFERENCE AT COIMBATORE

THE Fourth Madras State Ophthalmic Conference was held at Coimbatore on the 20th of October 1956 and was attended by many delegates from various parts of the State. Dr. S. N. COOPER who presided over the conference regretted that ophthalmologists had not been *persona grata* with the health authorities and even with the lay people in general; conditions were however improving and their importance in the preventive and curative fields is being increasingly appreciated by the public. They are now considered as primary physicians. "Unfortunately the Governments holding the reins of the Health Department did not distinguish," said Dr. COOPER, "between ophthalmic science and ophthalmic relief. What each of them would like to see would be a district eye hospital manned by trained personnel in every district. The yardstick of the Government was the number of eye operations performed by one or the other unit, without paying any attention to the prevention of blindness which was caused by many other conditions, besides cataract. For this reason, Health Ministers have sponsored more readily eye-camps run by irresponsible individuals than helping the establishment of district eye hospitals."

In India two types of ophthalmic surgeons are required—District Surgeons who could give expert ophthalmic help to the district population (not only remove cataracts), and teachers. The functions of these two are manifestly quite different. At present the former need is being served mostly by general practitioners who also do some ophthalmic work. They know how to prescribe glasses, do minor operations and remove cataracts, etc. For lack of sufficient trained ophthalmologists this make-shift arrangement is still needed in many parts of India.

With the establishment of post-graduate diplomas, it is to be hoped that within the next few years every general practitioner who now practises ophthalmology as a side-issue will have to take a recognised diploma, however well he might be able to operate.

With regard to the second of the two issues raised by Dr. COOPER regarding highly qualified teachers, it is indeed a happy augury that some of the Indian Universities have started the M.S. degree course in ophthalmology. In most Universities this degree is insisted on as essential for teaching the subject.

After stating that the services of all doctors are necessary in treating certain types of cases, Dr. COOPER added: "In a socialist State where disparity of incomes is fast dwindling, an institution, where a collective approach to disease is encouraged, will not be difficult to create. Full-time professorships, with well-chosen personnel, will remove the disparity of importance, and so of income, between the different branches of medicine, for one is as important as the other, and can not survive without the other."

We are fully in agreement with these observations of Dr. COOPER, which are manifestly the outcome of his ripe experience and wide knowledge of men and things.

He was however, using strong language even to the point of being needlessly bitter, when he said, "The mere need for cataract operators should not be an excuse to allow half-trained people unlimited scope for operative work; in South India not only such latitude was given, but even their work was glorified!"

While we do not wish to appear to accord unqualified support or approval to the ophthalmic procedures referred to by Dr. COOPER, we have no hesitation in saying that such organized relief in various centres under some sort of control, must have resulted in suppressing or weeding out to a large extent the charlatan, quack and gouger whose unwarranted surgery and medications have been playing havoc with the eyes of the illiterate and semi-literate rural population. The need for scientific ophthalmic procedures to afford relief to those requiring the same is unquestionably great, but several hundred qualified eye doctors will be required for the purpose and till such time as we are in a position to produce this large number of medical men with the requisite qualifications, we cannot afford to cavil at organized and systematic team-work, by qualified medical men, who may lack specialized ophthalmological training.

LEPROSY CONTROL IN INDIA

ADDRESSING a Press Conference at the Hind Kusht Nivaran Sangh at Mylapore on the 23rd October 1956, Mr. RAOUL FOLLEREAU, visiting expert on leprosy, stated that India can become completely free from leprosy in 15 years if the fight against the disease continues on right lines and is launched more vigorously and effectively. Mr. FOLLEREAU who is the Founder of the Order of Charity and an international worker in the cause of Leprosy was accompanied by Dr. HEMERIJCKS, leprosy expert who had served in Belgian Congo and who has been working in this State during the past 15 months, having established in the Polambakkam area a mobile treatment service. Mr. ROGER London, French Vice-Consul in the Madras City, was also present.

"India is the first country in Asia," said he, "to take the lead in the fight against leprosy as the Union Government has, under its Second Five-Year Plan, provided for the treatment and care of people suffering from leprosy which was both a medical and social problem." Dr. HEMERIJCKS has during his 15 months' stay, rendered help to over 13,000 patients. He and other French experts who had served in Africa, have made it possible for the people of that country to envisage the elimination of the disease within 10 years. India can also do likewise if an effective and vigorous fight is launched against the disease.

Leprosy is of low infectivity; it is of the utmost importance that people suffering from leprosy should be treated from the initial stage, isolation during that infective stage being of course, necessary. But leprosy patients must not be condemned for life.

A large volume of fresh knowledge has accumulated during recent years concerning this disease which has created a firm belief that it can be mastered and has also induced greater confidence in the claims of experts, that it is not really so dangerous as was earlier supposed: this should fortify us in our endeavour to pursue a vigorous campaign to its logical conclusion. But alongside the active work of curing those afflicted and preventing contagion amongst others, there must be an educative campaign to instil into the minds of people the confidence of the experts, and to get the public to recognize that leprosy is not a misfortune which calls for the ostracizing of those afflicted, but that they also have a place in society, and deserve every help and sympathy.

It is certainly very difficult to change the habits of a lifetime and to eradicate the prejudices of several hundred years against leprosy and its victims who are loathed by all. Even to-day in the public mind the leper is seen as one clothed in foul rags, with dirty bandages on his hands and feet grovelling in the dust with fingerless hands outstretched soliciting alms from a not too sympathetic public.

We come across many such unfortunates in the streets, bazaars, bus-stands, railway station approaches, and in nearly all crowded localities in every town and no organized efforts have so far been made by the Government or civic bodies to segregate and house them with a view to treatment, rehabilitation or reclamation from their begging activities.

If any campaign to control the spread of the disease, to eradicate it from the country and more than anything to change the social attitude of the people towards these hapless victims, is to succeed the first duty of the authorities should be to remove these poor unfortunates from their present scenes of activity and place them under proper supervision and medical care in special camps with the requisite amenities for rehabilitation. The absence of many lepers in our streets will alone produce a change of outlook in people and create in them a new frame of mind towards the disease and its sufferers. Needless to add that this will be a very necessary and important step in the campaign to rid India of leprosy in the next ten or fifteen years.

In this context, we would like to add our tribute of praise and gratefulness to Dr. ROBERT COCHRANE who was Head of the Lady Willingdon Leprosy Sanatorium at Tirumani, near Chingleput, for over 25 years to whom the Government of India has awarded a citation in recognition of his devoted work in the field of leprosy in India. This citation was presented to the veteran by Mr. GOPALA

MENON, India's Consul General in New York the other day, under the auspices of the American Leprosy Association.

"There is no branch of leprology in which the impact of Dr. COCHRANE's work is not felt. His interest in leprosy relief has taken him to many lands for work among many races, but the contribution he has made during his stay in India is perhaps the most outstanding. The doctor has attained a unique position in the history of the fight against leprosy. His work in South India has contributed in no small measure to the development of a practical leprosy control programme on a national basis throughout India."

SIMPLIFIED HEPARIN THERAPY OF IMPENDING AND ACUTE MYOCARDIAL INFARCTION

It is now recognized that premonitory symptoms occur in a substantial proportion of all attacks of acute myocardial infarction. There is a definite change in the clinical picture, with increasingly severe angina and rapidly decreasing effort tolerance.

The efficacy of anticoagulant therapy in the prevention of impending myocardial infarction has been reported using oral anticoagulants alone, or after the initial use of heparin for several days. Nichol has noted the clinical impression of his group that the longer heparin is continued in the therapy of impending myocardial infarction before oral anticoagulants are given, the better are the results obtained.

The administration of heparin by Engelberg has varied somewhat as to dosage and duration of therapy. Aqueous heparin, either 100 or 200 mg. per cc. was used, although the more concentrated material is preferable when doses above 200 mg. are given. With a small needle, the drug was injected *subcutaneously* in the relatively insensitive areolar tissue just above or below the posterior iliac crest. Intramuscular injections are to be avoided, as the duration of effect is decreased thereby. Whenever possible, doses of 150 to 200 mg. were administered every 12 hours; otherwise, 300 to 400 mg. doses were given every 24 hours. It has been found that this method of administration usually affords well maintained anticoagulation. It is as efficient as the use of heparin in retarding menstruum, and is less painful and less difficult to administer. In several patients an initial dose of 100 mg. was given intravenously. Therapy was continued with heparin alone for one to two weeks (nine and a half days on the average). In all, 19 patients have been treated this manner. There were 15 men and four women, varying in age from 38 to 74 years. Five had hypertension, and three had diabetes mellitus.

The results in this series were good; two patients developed an acute transmural infarction, a diagnosis of subendocardial infarction was made in four, and in the other 13 apparently no infarction took place during therapy. Four of these 13 discontinued therapy prematurely, and in three, acute infarction or death occurred within several months. Many other actions of heparin have been reviewed which indicate its superiority over other anticoagulants in the therapy of impending and acute myocardial infarction. In 15 patients with an acute myocardial infarction, continuous anticoagulation has been maintained for the first three weeks, with concentrated aqueous heparin administered *subcutaneously* every 12 or every 24 hours. This method is simple and economically feasible, and requires few laboratory tests for control. Engelberg has given reasons why the arguments against the routine use of anticoagulants in all cases of myocardial infarction do not apply to heparin.—(Condensed from *Annals of Internal Medicine*, March 1956).

Gleanings from the Medical Press

VENERELOGY

Causes of decreased syphilis incidence.—(*Modern Medicine*, July 15, '56).

Schamberg, of the University of Pennsylvania, Philadelphia, reports that the rate of new syphilitic infections in the United States decreased by 93% between 1947 and 1954. Factors which have brought about this reduction, however, do not assure continued decline; periodic epidemics will remain a possibility until a method of immunization is developed.

Generally, syphilis is most prevalent in wartime. Increased stability and prosperity of the population since the war is partially responsible for the observed reduction in incidence.

Widespread use of penicillin in recent years has probably also contributed to the decline. Syphilis may be cured by the amount of penicillin commonly given for other diseases; use of repository penicillin preparations, which maintain high blood levels of the antibiotic for days or weeks, increases the probability of coincidental cure. Since the incubation period of syphilis is long, such medication may, in many instances, eradicate treponemes before any symptoms appear.

A third factor in the decreased attack rate is the public health campaign against the disease. Education, contact investigation, mass blood testing, and provision of free treatment have resulted in discovery and cure of many infected persons.

Public health measures must be continued and increased in order to keep the incidence low. The number of susceptible persons rises when the attack rate is low over a prolonged period of time, and physicians are less likely to suspect syphilis. Under such conditions, future epidemics of syphilis may be started by seemingly minor factors. Reduction in the use of penicillin may lead to an increase in attack rate; broad-spectrum antibiotics replacing penicillin are less effective against syphilis.

Hypertherm treatment of neurosyphilis. Methods of evaluation and prognostically important factors.—(*Acta psychiat. neurol. scand.*, 30: 529, 1955, via *British Jour. of Venereal Diseases*).

In an attempt to evaluate the results of hyperthermia in the treatment of neurosyphilis and to assess the value of its combination with penicillin therapy, the authors have reviewed 369 cases treated between 1943 and 1953 at the University Psychiatric Clinic, Rigshospitalet, Copenhagen. They do not claim that these cases were fully representative of neurosyphilis as it occurs in Denmark, as patients with severe psychic symptoms would usually be referred direct to a mental hospital. Furthermore, the authors find it extremely difficult to compare their results with those of other authors as the criteria of diagnosis, examination, treatment, and ultimate evaluation of results vary widely. To ensure a uniform standard of assessment they selected only those cases in which a psychiatric and neurological examination, an evaluation of the patient's working capacity, and an examination of the cerebrospinal fluid had been made before and at least 6 months after treatment, only 194 cases (five of which were of congenital syphilis) being retained out of the 369. Of these, only one-third had fairly severe symptoms, and only one-half were wholly or partly disabled. An assessment of each patient's condition on clinical, social, and humoral grounds was made at least 6 months after the first course of treatment (after an average period of observation of 15 months) and again after completion of treatment (after a period of observation ranging from less than 2 years to more than 10 years and averaging 4 to 5 years).

The first course of treatment consisted in hyperthermia alone in 101 cases, hyperthermia with penicillin in 73, and penicillin alone in twenty. Each course of hyperthermia consisted of about ten treatments at a body temperature of 40°C. (104°F.) for a total of 30 hrs. Each course of penicillin lasted 18 to 21 days, the total dose being at least 6,

usually 10, and in a few cases more than 48 mega units. Further courses of treatment were given as indicated by the results of the first assessment, with the result that on completion of treatment 58 patients had received hyperthermia alone, 119 combined treatment, and seventeen penicillin alone.

The conclusion arrived at is that combined treatment of neurosyphilis with hyperthermia and penicillin is in no way superior to hyperthermia alone. On clinical, social, and humoral grounds the results were fairly uniform within each diagnostic category of neurosyphilis and were generally better when treatment was started early. The authors also conclude that the prognosis can usually be determined after the first course of treatment and that further courses do not materially improve the patient's fate.

PAEDIATRICS

Rehabilitation of poliomyelitis-stricken children.—(G. Poli and M. Valle, *Minerva Pediat.*, 8: 325-329, March 17, 1956, via *J.A.M.A.*).

In Italy, 80% of the polio cases occur in infants under 2 years of age. On admission the authors advise vaccinating the infants against diphtheria and whooping cough whether or not they have been vaccinated before. Smallpox is the only infectious disease that has occurred among the infants the authors have treated for poliomyelitis. In Italy, poliomyelitis has so far been a sporadic disease. Most of these patients are brought to a physician only after they have already been stricken with paralysis. This limits the physician's task to preventing the spreading of the paralysis. The infant is kept in bed as long as possible. When necessary, barbitol or other sedatives are used. A device is used in each case to keep the blankets from weighing on the stricken joints. A slow and gentle change of position performed with the help of a nurse is allowed every three or four hours. If poliomyelitis has affected the lower joints, the knees are kept slightly flexed and the feet are kept at a right angle. Splints are never used

during the first part of therapy. The treatment changes radically after two or three weeks when there is no more danger of incurring lesions in the spinal cord. The child is taught to perform some segmental active exercises with progressive frequency. Heat is used to decrease the neurovegetative disturbances, to maintain the muscle in good condition of nutrition and of trophism, and to eliminate the pains. The age of the patient requires that a highly trained staff take the place of the mother during the infant's stay in the hospital; these patients must never be left alone. Contractures are corrected by performing passive movements in warm water. Gradual improvements are fixed with a removable splint. After final results have been achieved, a fixed plaster cast is used. Surgery is employed when contractures cannot be reduced otherwise. Surgical treatment is confined only to tenotomy or tenoplasty. Any other operation should be used only after the skeleton of the infant offers sufficient resistance.

Chronic otitis in children.—(*Modern Medicine*, July 15, 1956).

Bourdial, and Debain of Paris recommend atticotomy for chronic otitis in children. Swelling of the epitympanic mucosa is the chief factor in the condition.

With *atticotympanic mucopurulent otorrhœa*, which is most common among children under 5 years of age, perforation is located in the paracentral region or in the posterosuperior quadrant. The condition follows incompletely cured tubotympanic infections. The perforation closes if the ear does not run, but the epitympanic mucosa remains hyperplastic and polypoid, blocking the communication between the tympanic and mastoid cavities. Reactivation of infection causes pus to collect, and a second perforation often ensues. Cholesteatoma and meningitis may develop. Atticotomy by the endaural route, removing the external wall of the epitympanic cavity but preserving the ossicles, is advisable even for young children.

With *mucous or tubal otorrhœa*, a non-marginal perforation is located in the inferior quadrants of the pars tensa. Aropy or serous discharge, consisting of the secretions of the tubal, nasal, pharyngeal, tympanic, and mastoid mucosa, may persist for months despite medical treatment. Atticotomy should be done.

The perforation of *antroatticotympanic suppuration* is localized high in the subligamentar area and is always marginal. Again, mucosal hyperplasia is an important aetiological factor. Treatment consists of removal of polyps: antroatticotomy is performed if cholesteatoma is suspected. *Suppuration of the attic* is associated with perforation at the level of Shrapnell's membrane. Treatment is antro-atticotomy with removal of the incus and the head of the malleus. With *subtotal destruction of the pars tensa*, a large perforation is surrounded by a thin strip of tympanic membrane. Hearing is impaired. Cholesteatoma is common. Medical treatment suffices if the otorrhœa is mucosal or if the fundus tympani shows a tendency to epidermidalization. If the otorrhœa is mucopurulent and profuse, atticotomy is required.

The psyche as an aetiological agent in infantile eczema.—(B. J. *Psychotherapy*, Aug. 1956).

In his very exhaustive review of the available literature, Dr. Parsons has shown quite conclusively that emotional factors can and do have a very definite effect on the course of the disease and the effect of therapy in infantile eczema. The most important factor in producing this emotional trauma is an attitude of rejection of the infant on the part of the mother. Factors important in the production of the attitude are the nature of the disease itself, producing a very unsightly infant, and conflicts within the family group, such as unintentional conception, divorce and others, causing the mother to feel that the child is just an added burden.

In my opinion there has been no conclusive evidence that the psyche is an aetiological agent in infantile eczema.

In the past it seems that the psychia-

trist has tended to place too much emphasis on emotional factors as an aetiological agent, while others in the medical profession have had a tendency to completely overlook these factors. Perhaps if more paediatricians and allergists will recognize the true importance of this emotional factor, much more will be gained by combining this with the present accepted methods of treatment.

In most cases I believe that this work can be done by the paediatrician or allergist, but there may be some cases in which the mother will require more intensive psychotherapy in order to understand better and solve this attitude of rejection she has for her infant.

Lamb recently outlined five rules which I think will serve as a useful guide to physicians treating these infants and other dermatological problems. These rules are: (1) take adequate time to listen, (2) confine therapy to simple and superficial methods, (3) build up the patient's self-respect and self-confidence, (4) relieve environmental hazards, and (5) point out more mature approaches to life's problems whenever possible. In the case of infantile eczema, these rules will apply more to the mother of the patient than to the patient himself.

OBSTETRICS & GYNAECOLOGY

The influence of hormone therapy on metastatic mammary carcinoma.—(*Surgery, Gynaecology and Obstetrics*, May 1956).

In Toronto General Hospital, Canada, 330 patients have received an adequate trial of either androgen or oestrogen, or both, since 1940: 282 patients were treated with androgen, 83 with oestrogen, and 35 received a trial of both hormones. The androgen most commonly employed was testosterone propionate in oil, giving 150 milligrams intramuscularly twice weekly over a period of 10 weeks, dropping the dosage to 100 milligrams weekly if the treatment was continued longer. As an alternative, testosterone linguets, 10 milligrams three times daily were prescribed in the minority of the entire

group so treated. Those receiving oestrogen therapy were given 3 to 5 milligrams three times daily, stilboestrol, or a synthetic substitute of comparable dosage for varying periods of time, depending on the patient's tolerance.

In this survey, 35 of the 330 patients received a trial of both androgen and oestrogen, making a total of 365 responses to hormone for study.

Included in this series are 4 cases for which hormone therapy was the only method of treatment for primary or secondary disease, and 60 patients who received this treatment alone for recurrences, the primary having previously been treated by surgery.

The percentage improved by hormone treatment in the latter group is higher than in any other selection of cases in this series and the average survival is slightly longer. Thus, previous radiotherapy may prove to be a factor which helps to preclude a good response.

In summarizing, the following conclusions may be drawn from this survey and in the main are supported by the results of similar studies:—

1. The introduction of hormone therapy appears to have appreciably prolonged the survival of cases developing metastatic mammary carcinoma, as compared with untreated carcinoma of the breast.

2. A more successful response to hormone therapy for metastatic disease was noted when no previous treatment had been undertaken.

3. The pathologic type of mammary carcinoma has not appreciably influenced the response to steroid therapy in this series.

4. The response to oestrogen in this series has been more satisfactory than the response to androgen, both in percentage responses and in length of remissions.

5. In the older age group only, the response to testosterone therapy is equally as satisfactory as the response to oestrogen. Only 2 of every 5 patients in the premenopause and menopause age-group respond to testosterone.

6. Previously induced menopause does not seem to have altered the res-

ponse to testosterone therapy, but a castration by irradiation concurrent with testosterone therapy was successful in only a small minority so treated.

7. It is suggested that the response to testosterone should be tested before advising a permanent castration.

8. For osseous metastases testosterone is equally as effective as stilboestrol, but the response to oestrogen is more prolonged.

9. Oestrogen is shown to effect a better palliation than androgen for lung metastases.

10. For soft tissue metastases, oestrogen effects a higher percentage response, but the response to testosterone, when effective, is more lasting.

11. For generalized disease, oestrogen showed a higher percentage response rate, but there was no appreciable difference in the length of remissions from either hormone.

12. In this series the mean survival following testosterone therapy was ten months, and subsequent to oestrogen therapy was 11½ months.

13. A better response to hormone treatment can be anticipated if the interval between the initial control of the primary and onset of recurrence is over 2 and under 5 years.

14. A poor response to hormone therapy is expected in the presence of primary inoperable breast cancer as well as metastatic disease.

15. A study of the patients receiving a trial of the antagonistic hormones reveals the possibility that approximately 77 per cent would respond to either of the hormones.

There is sufficient evidence to suggest that oestrogen therapy should be attempted in the younger age-groups if a short trial of testosterone therapy produces an exacerbation of the disease.

Factors affecting premature neonatal mortality.—(*Jr. Am. J. Obst. and Gynec.*, 71: 1069-1079, May 1956 via *J.A.M.A.*).

Neonatal premature death was defined as the death during the first 30 days of life of any infant born alive and weighing between 400 and 2,500 gm. A study

of the factors that might influence the mortality rate of liveborn premature infants was carried out in 600 white infants, 354 of whom were delivered on a private service and 246 on a clinical service. The uncorrected neonatal mortality rate for premature infants on the private service was 14.68%, with an incidence of 5.6% of live-born premature infants. The uncorrected neonatal mortality rate of premature infants on the clinical service was 19.91%, with an incidence of 7% of liveborn premature infants. Sex, parity, and the length of gestation had no effect on premature neonatal mortality rates. The length of labour had no effect on the survival of premature infants unless it was 31 hours or longer. Episiotomy, used in the greatest number of deliveries on the private service but not in those on the clinical service, had a beneficial result on the survival of premature infants. Breech delivery with episiotomy is much more hazardous for premature infants than spontaneous cephalic delivery with episiotomy. This supports the rationale of external version when dealing with the delivery of premature infants presenting by the breech. Caesarean section had no deleterious effect on the survival of prematures. As far as sedation and anaesthesia were concerned, it appeared that some type of sedation combined with a conduction anaesthetic had the most beneficial effects on maintaining life in the premature. Premature rupture of the membranes, toxæmia, and abruptio-placentæ caused no foetal risk *per se*. On the private service the chief causes of death were as follows: prematurity combined with hyaline membrane (48.9%), congenital anomalies (21.9 per cent), and birth injuries (12.1 per cent). On the clinical service the order was prematurity combined with hyaline membrane (41.8 per cent), birth injuries (19.3 per cent), and congenital anomalies (12.9 per cent). On the private service about 88 per cent of the deaths occurred within the first 72 hours of life as compared with 73 per cent on the clinical service. On the private service, 40 per cent of the deaths of premature infants after 72 hours were caused by an infectious lesion. This was true of 44 per cent on the clinical service.

Diabetic coma and diabetes in pregnancy.—(*The Bulletin, Georgetown University Medical Centre*, July 1956).

After several case presentations Doctor Duncan of the department of medicine, Pennsylvania Hospital gave a wonderful discussion on the subject of diabetes.

Only 5% of diabetics are children. Most diabetics are diagnosed after age 40.

Diabetic females who become pregnant develop more oedema than usual and also more polyhydramnios.

Seventy per cent of mothers who had babies weighing over 10 lbs. and who were studied carefully developed diabetes. A large child, therefore, means that the mother is a diabetic or that she stands a good chance of becoming one.

Babies of diabetic mothers may have hypoglycæmia after delivery. At post-mortem examinations they are found to have hypertrophied islands of Langerhans. Some authorities on the subject do not believe in giving nourishment to these babies after birth. Doctor Duncan stated he always has.

Diabetic mothers become extremely sensitive to insulin after delivery and usually require reduction of the dose.

Doctor Duncan particularly emphasized that it is extremely rare for diabetic patients to go into diabetic coma without some acute complication, usually an infection.

In order to make the diagnosis of diabetic coma one must be alert to the possibility, do a urine sugar, and a plasma acetone test. A 4 *plus* plasma acetone test means coma. The urine acetone test may be 4+, but the plasma acetone level may be zero. It takes time for the acetone to pile up in the blood, but that is what is necessary for acidosis or coma to develop.

Dr. Duncan stressed that there are degrees of acidosis or coma. A trace of acetone in a 25% dilution of the plasma would mean mild coma, whereas a 4+ acetone in a 25% dilution would mean profound coma. Dr. Duncan used the

following routine for treatment which he arrived at through experience. He gives 100 units of regular insulin for each 4+ acetone test found as one dilutes the patient's plasma. For example, if a 4+ acetone test was still present at the 25% dilution then the dose would be 300 units of regular insulin. This would mean that the acetone test was 4+ with 100% dilution, 50% dilution, and 25% dilution. Dr. Duncan gives one-third of the dose intravenously, and two-thirds subcutaneously. He then gives 50 units of regular insulin subcutaneously every half hour until the plasma acetone reveals only a trace in the 25% dilution. Dr. Duncan stated that in his experience a 2+ acetone in the 100 per cent dilution meant that the patient was becoming sensitive to insulin, and that at this point one should stop the insulin and observe the patient.

Coma patients should receive 18 grams of saline in the first 12 hours of treatment to replace the lost sodium and chloride.

Abdominal pain is common in the young diabetic coma. The pain is due either to sodium depletion or stomach distention. If the pain does not disappear after saline administration or stomach lavage, one should suspect an acute abdomen. If the abdomen is not distended, there is no need for gastric lavage routinely.

Patients do not get into coma because of a lack of insulin and over-eating, but rather that some acute precipitating cause is present, such as infection.

Obese diabetics should not be given insulin unless acute complications are present. Rather they should be reduced and in many instances the glycosuria will disappear. The glucose tolerance curve will also become normal. These patients are not cured but controlled. They have enough insulin to take care of the carbohydrate demands of a lean body, but not enough for the fat body. Doctors who use insulin but do not reduce their patients are encouraging obesity and diabetes.

Keep pregnant females free of ketosis for this is bad for the babies. There is an increased need for insulin in the

first trimester which gradually levels off. During the last trimester there is also an increased need for insulin. If the insulin requirement goes down, be on guard, for it means that the baby is producing insulin, and after delivery, such babies run the risk of hypoglycæmia. If these babies are given glucose, usually they are out of danger by the third day.

There is a need for frequent blood sugars in pregnant females, because they usually have a low renal threshold for glucose, and urine sugars may be falsely high.

Cæsarean sections should not be routine in pregnant diabetics. Usually labour can be precipitated easily. If there has been difficulty with previous deliveries, section is indicated since diabetics cannot stand a long labour.

Treatment for toxæmias of pregnancy.—(*Schw. Und. Wsch. Gynaec.*, 141: 255, 1956).

Daily doses of 1-1.5 mg. Serpasil were given to 70 patients with toxæmia of pregnancy, this treatment being administered not only during pregnancy but to a large extent during the confinement as well. 21 of the patients were suffering from ordinary hypertension of pregnancy, 36 from renal disease of pregnancy, 8 from pre-eclampsia, and five from eclampsia, none of them had responded satisfactorily to rest in bed.

With Serpasil it was found possible to reduce the excessive blood pressure in all four groups; the average fall in pressure was 30-50 mm. Hg. (systolic) and 20-40 mm. Hg. (diastolic). The blood pressure of the patients in confinement was brought down to normal levels within 8 days. In most cases an improvement took place at the same time in the other symptoms of toxæmia, including especially albuminuria and oedema. 11% of the patients failed to respond to Serpasil or showed only an inadequate response. In agitated patients, the sedative effect of Serpasil on the psyche proved most beneficial. No side reactions affecting either the mother or the child were observed.

SURGERY

On the treatment of acute generalized peritonitis.—(*Vyestnik khir.*, 77: 17-26, Jan. 1956, via J.A.M.A.).

In addition to the standard operative and supportive measures for the treatment of acute generalized peritonitis, Propov and Filin recommend the abundant administration of a solution (developed by Popov) containing 75 parts glucose, 50 parts alcohol, 7.5 parts sodium chloride, 2 parts sodium bicarbonate, and 500 parts distilled water, to combat the shock and collapse of the severe forms. A number of other blood-replacing solutions have proved valuable, together with cervical vagosympathetic block. Pre-operative and post-operative intramuscular injections of a mixture of analgesic and ganglioplegic drugs and vitamin B₁ markedly improve the general condition of these patients. Intratracheal ether-oxygen anaesthesia including the use of curare-like agents is excellent for the operative treatment of generalized or purulent peritonitis.

Experimental studies showed that the combined use of streptomycin and penicillin gives the best results in antibiotic therapy of the condition. Given separately, these drugs are not always capable of destroying all the pathogenic bacteria in the peritoneal exudate. The least satisfactory results were obtained from administration of gramicidin. Local applications of solutions of this antibiotic are undesirable because it has toxic effects when used in massive doses and poor bactericidal activity when used in moderate doses. Repeated injections of streptomycin and penicillin via the general and intraperitoneal routes simultaneously is a satisfactory method of administration, but the authors prefer continuous drip infusion of large doses of these antibiotics dissolved in large amounts of procaine solution through one or, in the majority of patients with peritonitis, several resin tubes spaced out in various portions of the peritoneum.

The management of acute gastroduodenal haemorrhage.—(*Am. J. Surg.*, 91: 786-790, May 1956 via J.A.M.A.).

The problem of differential diagnosis of gastrointestinal bleeding resolves itself for the most part about the management of peptic ulcers, which cause at least 65% of gastroduodenal bleeding. An aggressive therapeutic programme is instituted as soon as the diagnosis is reached after complete history and physical examination. Acute blood loss is compensated for by the immediate administration of plasma, a plasma expander, or isotonic sodium chloride solution. These measures are essentially stop-gap in character until compatible whole blood is available for transfusion. Sedation plays a vital role in the treatment of these patients who tend to be nervous and anxious. Small subcutaneous doses of barbiturates are preferred for this purpose. They may be combined with atropine. Nothing is given by mouth because of the possibility of early operation. Vitamin K (20 mg.) is given immediately and continued routinely every 24 hours. During the phase of active bleeding the nurses should be instructed to note every 15 minutes any evidence of syncope, pallor, or apprehension. If control of bleeding has been attained after 18 to 24 hours, a feeding programme may be started similar to that described by Rossett and Stephenson. Emergency operation should be offered only to those patients who cannot be controlled by transfusion after their initial recovery from shock or to those who have had previous attacks of bleeding. If a patient requires over 1,500 cc. of whole blood daily or more than 500 cc. every eight hours, spontaneous cessation of haemorrhage is unlikely and operation is mandatory. Repeated syncope should indicate that spontaneous cessation of bleeding probably will not occur. This is the single most important symptom relative to early operation. High resection is the most desirable operation to control bleeding and minimize recurrence. The exclusion principle with secondary resection of the distal segment should be considered if the duodenum is involved in an acute inflammatory mass. The teamwork approach, utilizing the internist, roentgenologist, surgeon, and anaesthetist concurrently, should reduce the hospital mortality for this serious condition.

The treatment of fractures by transfixing.—(*Helvet Chir acta*, 23: 1-22, 1956 via *German Med. Monthly*).

The healing of fractures is decisively influenced by such factors as interaction between bone and the soft tissues surrounding it, the nutritional state of the connective tissue, and by the position of the fragments. Even a minor degree of displacement may have "destructive influence on the trabeculae and the endosteum and its capillaries." Secure fixation of the fragments is, therefore, important. Since optimal conditions for consolidation are present in compression fractures, treatment of fractures should aim at creating the same favourable conditions. This cannot be fully achieved with either Kuntzsch's nail or Lane's plate, but Hoffmann's "osteotaxis" ensures absolute immobility of the fragments. This technique uses a bar and transfixing screws for holding the fragments together and for adjusting the position according to requirements. The method has been successfully used for treating not only fresh fractures, but also 6 cases of diaphyseal pseudo-arthritis in which healing was considerably delayed. If there is loss of bony tissue or impairment of circulation, new growth of bone can be stimulated by grafting of bone splinters. Since a graft taken from solid bone means addition of yet another bony fragment devoid of blood supply, it is advisable to use either autoplasmic or homoioplasmic spongy bone, because the Haversian canals will promote vascularization. Such grafts, however, are incapable of supporting any weight. Complete fixation combined with grafting of highly active, *i.e.*, osteogenic, bony tissue creates the best conditions for callus formation, which is further helped by judicious physiotherapy.

Complications of treatment of severe burns.—(*Plastic and Reconst. Surg.*, 16: 31-36, 1955 via *Mod. Med.*, 15-7-1956).

Steiss, Moloney and Harper, of St. Mary's Hospital, San Francisco, note that side-effects of otherwise beneficial drugs may complicate long-term management of severe burns.

Convulsions and hypertension may result from administration of cortisone to combat shock associated with surgery. Withdrawal of the drug and sedation may be necessary. Cortisone may also mask sodium deficits in patients with extensive burns. Regular determinations of urinary sodium should be made during cortisone therapy. The sodium intake of the patient should be sufficient not only to maintain normal serum sodium levels but also to permit the excretion of 30 to 50 mEq. of sodium per twenty-four hours.

The prophylactic use of antibiotics may also cause complications. Infection, cross contamination, and superinfection with antibiotic-resistant bacteria may result from the widespread use of broad-spectrum antibiotics. Natural antagonists in the bacterial population are eliminated, encouraging resistant strains to flourish with increased virulence. Overwhelming sepsis may cause agranulocytosis after injudicious use of antibiotics. Therefore, antibiotics are best used for specific therapy rather than for prophylaxis.

MEDICINE & THERAPEUTICS

Venous angioma as the cause of cerebellar apoplexy.—(*Bulletin of the School of Medicine, Univ. of MD.*, 41: 2, April 1956).

While being far from common, primary intracerebellar haemorrhages have been reported with some frequency. The factors responsible for cerebellar haemorrhage differ in no major degree from those causing cerebral apoplexy.

The clinical aspects of cerebellar haemorrhage vary with the degree of tissue destruction and the extension of the haemorrhage, which is more likely to be ventricular rather than into the subarachnoid space.

The signs and symptoms then depend upon meningeal irritation, increased pressure within the fourth ventricle and destruction of the cerebellum itself. So headache, stiffness of the neck, vomiting, irregularities of the pulse and respiratory rates, localizing neurologic signs

and coma may be seen. When the area of hæmorrhage is small, and the pressure within the fourth ventricle is little altered, a clinical diagnosis may be made. However, coma is the overshadowing symptom, often being present at the onset, appearing as though the patient were struck down by a blow. Death, as a result of rupture into the fourth ventricle and compression of the medullary centres, occurs shortly, usually within a few hours, rarely more than 24 hours after the onset.

The role of vascular anomalies in intracranial hæmorrhage has been stressed by many writers, and a careful search for angiomatous malformations or tumours should be made when an otherwise unexplained intracranial hæmorrhage occurs. These are, on occasion, not easy to demonstrate, and the lesion itself may be lost in the area of hæmorrhage.

The classic venous angioma is a cone-shaped lesion, the base in contact with the leptomeninges, and the apex extending toward the ventricle. Within the brain there is a tangled mass of large vessels resembling veins, separated by thin layers of nervous tissue; less often, the vessels are more sparsely distributed through the involved area. Most of the vessels structurally resemble veins. The vessels are usually irregular and bizarre in shape. The walls are relatively thin, but may show prominent variation. Scattered vessels may present thick walls, and others may reveal marked irregularity within the circumference of a single vessel. The vessels themselves consist of a single layer of endothelium occasionally associated with a delicate elastic membrane, resting on connective tissue which forms the principal mural element. A few muscle fibres may appear, but a prominent muscular layer does not occur in vessels regarded as venous in nature.

The criteria for distinguishing between arteries and veins are not easy to apply; indeed, within a single vessel, the wall may look like that of a vein in one area, and resemble that of an artery in another. It may be impossible, on occasion to ascertain whether the vessels are veins or arteries.

Albuminuria in congestive heart failure.—(*Circulation*, 13: 329-333, March 1956, New York, via J.A.M.A.).

The question whether albuminuria in a patient with congestive heart failure is a reflection of independent renal disease or simply one aspect of the heart failure was investigated in the light of the clinical records and autopsy findings of all the patients at the Mayo Clinic for whom a diagnosis of congestive heart failure had been made during their final illness in the period from 1948 through 1953 and in whom autopsy had been permitted. Four sets of data were obtained covering (1) the various types of heart disease as determined at autopsy; (2) the histological renal findings, which revealed either a renal disorder or normal kidneys; (3) the presence and grades of albuminuria; and (4) gradations of heart failure. These data were derived independently, and then, after all the data had been accumulated, the comparisons were made. Four grades of heart failure were recognized in each of the following disease classification: (1) mitral-valve disease, with or without aortic stenosis; (2) coronary arterial disease, with or without hypertension; (3) isolated aortic valve disease; (4) hypertensive heart disease; (5) myocardial hypertrophy of unknown cause; and (6) miscellaneous. Albuminuria was graded according to the standards established by the section of clinical pathology of the Mayo Clinic, which define grade 1 as representing from 5 to 20 mg. of albumin per 100 cc. of urine; grade 2, 30 to 50 mg.; grade 3, 60 to 90 mg.; and grade 4, over 100 mg. The cases (212 in all) were divided into two groups on the basis of the histological findings in the kidneys of each patient; clinically obvious causes of albuminuria had, of course, been eliminated in each case. Group 1 consisted of 161 cases in which the kidneys were either normal or contained lesions of such a nature as not to be responsible in themselves for albuminuria, and group 2 consisted of 51 cases in which the renal lesions might have been responsible for albuminuria. Only the cases in group 1 were used in making the major comparisons in this study.

Albuminuria may be an integral part of the syndrome of congestive heart failure; it was found in 141 (88%) of the group 1 patients. Analysis of the figures showed that the distribution of albuminuria was about equal in the various types of heart disease when heart failure existed and that the degree of albuminuria tended to parallel the degree of heart failure. A fairly close correlation was also found between the degree of albuminuria and the degree of hypertension as revealed by study of the eyegrounds in 21 hypertensive patients. No correlation, however, could be discerned between the degree of albuminuria and either (1) the systolic or diastolic blood pressure values, (2) the known duration of elevated blood pressure, (3) the grades of haematuria, or (4) the blood urea values. No one type of renal lesion was predominantly associated with any one type of cardiac lesion. The severity of the albuminuria discussed in this study is shown by the fact that, although albuminuria associated with cardiac insufficiency is usually said to have a protein content of less than 5 mg. per 100 cc. of urine, the two grades found most often in this series were grade 1, with from 5 to 20 mg. per 100 cc., and grade 2, with from 30 to 50 mg. per 100 cc.

The treatment of allergic diseases with the steroid hormones.—(*Annals of Allergy*, July-August, 1956).

A survey was made of 417 patients with various allergic disturbances who received as primary treatment, parenteral, oral, and local steroid hormones. The series of cases treated over a period of three years included 102 cases of bronchial asthma, 113 cases of contact dermatitis, seventy-three cases of atopic eczema, forty-seven cases of inhalant allergies (or allergic rhinitis), seventy-two cases of acute and chronic urticaria and drug reactions, and ten cases of poison ivy.

The results of treatment in each of several categories are detailed. Parenteral ACTH was the drug of choice in 95% of these cases, both the aqueous and the gelatin solutions being used. Hydrocortone ointment in 2.5 per cent strength was used topically in the

dermatologic cases.

Methods of treatment:—In the several cases of status asthmaticus, the patients were hospitalized and given aqueous ACTH in doses of 20 units per 500 cc of 5% glucose in water. The dose varied from 20 to 80 units in twenty-four hours, depending upon the age and the condition of the patient and the response to treatment. This was given at the rate of twenty-five to forty drops a minute. Following initial favourable response to the intravenous medication, ACTH was given intramuscularly in from 80 to 160 units daily for another twenty-four to forty-eight hours. Then, the parenteral use of the drug was greatly reduced or discontinued, and the patient was placed on the oral medication of steroids.

In the treatment of those patients with acute urticaria, drug reactions, and poison ivy dermatitis who were hospitalized, aqueous ACTH in 20 to 40 unit doses by intravenous drip was used for the first twenty-four hours in the manner previously described in the treatment of those with asthma. Within a period of some hours, most of these patients were so much improved that intramuscular treatment was instituted for the remainder of the hospital stay, followed by oral steroids where necessary. The dosage again varied according to the severity of the condition and the rapidity of the response to intravenous medication. In addition to the parenteral ACTH and oral steroids (20 to 60 units a day), hydrocortone ointment, 2½ per cent, was prescribed for local application.

The treatment of ambulatory patients with contact dermatitis and acute and chronic urticarias consisted of initial injections of 80 to 160 units of aqueous ACTH for the first twenty-four to seventy-two hours, followed by gradually reduced amounts of the ACTH, in gel, until improvement warranted change to oral medication.

Thus various allergic disturbances were treated over a period of three years with the steroid hormones by parenteral, oral, and local means. All were on ambulatory treatment, except seventy-eight of this group who required hospitalization for intervals of one to

seventeen days. Thereafter, these were placed on ambulatory treatment except for several periods of relapses each (for the patients with status asthmaticus).

Of the total number, 283 (67.6 per cent) had good response to treatment; seventy-nine (18.9 per cent) had fair response; and 45 (13.5 per cent) had poor or unsatisfactory results. In other words, 362 (86.5 per cent) obtained a considerable degree of relief.

Side reactions occurred in thirty-six (8 per cent) of the patients, with recovery in all following cessation of parenteral treatment.

The following conclusions appear justifiable:—

1. After careful allergic management itself, the steroid hormones have proved to be a primary adjunct in the relief of a certain percentage of allergic diseases

2. The steroids have given symptomatic relief in certain patients who have failed to respond to allergic management alone or to allergic treatment plus conventional drug therapy.

3. The steroids have given symptomatic relief to patients prior to and in preparation for allergic management.

4. In our hands, parenteral hormone therapy has given more rapid relief of symptoms in status asthmaticus, acute urticaria, drug reactions, poison ivy dermatitis, acute atopic and contact dermatitis, than any other conventional drug therapy to date.

5. Oral steroid hormones have not proved as efficient as the parenteral therapy in the initial treatment of symptoms, but have been valuable maintenance therapy until allergic management alone or allergic management plus conventional drug therapy could be instituted.

6. Side reactions and sequelae have been sufficiently frequent and severe as to limit the use of steroids to those patients which need immediate relief from acute and severe symptoms not controlled by allergic management alone or plus conventional drug.

7. Careful observations of all patients under steroid therapy should be maintained at all times.

8. There have been no deaths in our series of patients while under treatment with the steroids, and all side reactions and sequelae ceased with withdrawal of the hormone.

9. Steroid therapy treats symptoms only and should not be substituted for good allergic management.

Herpes zoster.—(*The Bulletin, Georgetown University Medical Centre*, July 1956).

Herpes zoster is a common systemic disorder with predominant dermal and neurologic manifestations caused by a virus closely related if not identical with the virus causing varicella (chicken-pox). The predominant pathologic lesion is in one or more posterior spinal ganglia or cranial sensory ganglia and their corresponding sensory dermatomes. This explains the characteristic skin lesion and pain always present. Pathologic features of lesser and variable nature involves the anterior and posterior horn cells, the leptomeninges, and peripheral nerves. These latter findings explain the occasional occurrence of muscle weakness or palsy, pleocytosis of the spinal fluid, and sensory loss. Rarely a myelitis, meningitis, or encephalitis may occur.

Herpes zoster begins with a systemic response: fever, anorexia, lassitude, moderate or so slight as to be overlooked. Then from 1 to 4 days (rarely as long as ten days) there are sensory phenomena of one or more skin dermatomes.

1. **Herpes zoster ophthalmicus:**—From involvement of Gasserian ganglion the lesions of the ophthalmic division of the V cranial nerve are five times as common as over the maxillary or mandibular branches. If the naso-ciliary branch is involved, lesions go down the nose and in the eye. Eye lesions are rare without nose lesions. Always call an ophthalmologist to treat the eye complications because of the danger to the sight. Oedema of orbital tissues, iritis and iridocyclitis, and corneal ulcerations may occur. Palsy of the 3rd cranial nerve and occasionally of the 4th and 6th may occur.

2. **Glosso-pharyngeal and vagal zoster:**—This type involves the jugular and

petrossal ganglia. Because these two ganglia are adjacent, they are often involved in some combination together but may be afflicted separately. The vesicular rash is likely to be on the palate, back of tongue, epiglottis or faucial tonsils, and occasionally in the external ear.

Palatal weakness, dysphonia, difficulty in swallowing, loss of gag reflex, etc., may occur. Occasionally 9th and 10th nerve lesions may accompany lesions in other cranial nerves. There is usually ear or deep pharyngeal and/or laryngeal pain. Hiccoughs, nausea, vomiting, and bradycardia may occur. The diagnosis depends on the recognition of the total picture and the vesicular rash in the distribution of the 9th or 10th cranial nerves. Examination by laryngeal mirror is necessary at times.

3. *Syndrome of herpes zoster of urinary bladder*.—Rarely herpes zoster with dermal involvement in the buttocks area may be associated with vesicular lesions in the bladder. The latter involvement may cause severe dysuria and urinary frequency with hæmaturia, etc., if the vesicles rupture. There are reports on record of transient bladder paralysis with herpes zoster in the gluteal and sacral region. It has been suggested that bladder vesicles may occur alone.

4. *Bilateral herpes zoster*.—The rarity of bilateral cases is indicated by individual case reports in the literature. Contrary to general superstition, bilaterality does not necessarily indicate a fatal prognosis.

5. *Motor complications (paralyses) with herpes zoster*. Although not too common, both upper and lower motor neuron paralysis may occur, facial palsy being the commonest of the latter group. This may be due to either anterior horn cell or peripheral motor nerve involvement. There has been discussion whether forme fruste of herpes zoster without a rash occur. If so, they would look like polio or peripheral neuritis.

Bronchial asthma.—(*G.P.*, February 1956).

The term "bronchial asthma" applies to any condition characterized by par-

oxysmal bronchospasm in which the sputum contains eosinophils. Two types are recognized; extrinsic asthma, which occurs in younger individuals, usually with either a family history or other stigmas of the allergic state; and intrinsic asthma, which begins in middle or later life and is not preceded by other allergic manifestations. In the first type, circulating antibodies or positive skin reactions to one or more antigens can be demonstrated. In the second type such a connection cannot usually be established. The therapy of the acute attack is little affected by the type of asthma; the long term management differs somewhat from one type to the other.

The principal agents in the relief of an acute asthmatic attack are bronchodilators. To the list of those discussed above should be added the subcutaneous administration of epinephrine 1:1000, and the intramuscular injection of epinephrine in oil 1:1500.

A word of caution is in order. A nocturnal attack of bronchial asthma may be distinguished only with the greatest difficulty, if at all, from an attack of cardiac asthma before the development of intra-alveolar oedema in the latter gives rise to the tell-tale moist rales. Even if rales are present, they may be due to bronchiectasis. If there is any possibility of confusion, the use of aminophylline intravenously avoids the hazards of giving epinephrine to a patient with left ventricular failure or morphine to a patient with bronchial asthma as a result of a mistake in diagnosis.

When the attack fails to respond rapidly to broncho-dilators but persists for hours or days, additional measures include the use of expectorants, including detergent mists, such as Alevaire, and large doses of potassium iodide, since much of the bronchial obstruction, particularly in intrinsic asthma, is provided by the extremely tenacious, rubbery sputum. Substitution of helium for nitrogen in the inspired gas makes ventilation easier. Infection, if present, is treated with adequate doses of an appropriate antibiotic. Sedation is provided by paraldehyde, or by rectal ether in oil (but never by morphine). In des-

perate cases it is said that general anaesthesia with ether will interrupt status asthmaticus. When the status has been cleared by means other than epinephrine, it will usually be found that the latter drug is again effective in treating acute attacks.

The use of cortisone, hydrocortisone, corticotrophin, prednisone and prednisolone in severe refractory bronchial asthma has been reported successful. The last two, according to recent reports, have the largest therapeutic margin between relief of bronchospasm and production of oedema. The danger of masking the spread of infection with these agents must be borne constantly in mind by those who use them.

Long-term management.—In the extrinsic form, meticulous attention must be paid to the identification of allergens by means of the history, skin tests, food elimination tests and so on. The allergens, when identified, should be removed from the environment if possible. If this is not possible, desensitization is necessary. Even if not specifically incriminated by skin test, exposure to common allergenic substances such as house dust should be minimized by keeping the house as free as possible of dust, damp-induced molds, pets, feather or Kapok pillows, and so on.

More than the usual care should be taken to avoid respiratory infections, which often precipitate attacks. If colds are found to produce asthma in a given patient with considerable frequency, the routine administration of 0.5 cc. of epinephrine in oil intramuscularly at the beginning of each infection may abort many asthmatic attacks.

The incidence of bronchiectasis in bronchial asthma may be greater than is often suspected. If bronchiectasis is

sufficiently localized to be resectable, and the associated emphysema is not so far advanced as to preclude operation, pulmonary resection may on occasion greatly reduce the severity and frequency of asthmatic attacks.

Diet for the older patient.—(*Bulletin New York Academy Medicine*, April 1956, via *Current Medical Digest*, July 1956).

Sound nutrition for the elderly differs only slightly from that of the younger adult. The principal differences are:—

1. Fewer calories, and, because of the need for fewer calories, activity somewhat above the maintenance level should be encouraged. Such activity will also stimulate the peripheral circulation, strengthen bones, and improve gastrointestinal activity.

2. A smaller proportion of calories should be contributed by fat and a larger proportion by protein, though current and future researches may indicate that it is the saturated fats which should be consumed in smaller amounts as distinguished from unsaturated fats.

3. Dietary modifications, necessitated by poor dentures, low income, inadequate cooking facilities and poor appetite are often required.

4. Lastly, and probably most important, physicians and others respond best to disability, disease, deficiency, and distress. We must learn to respond equally well to prevention, protection, preservation, and the improvement of health, both personal and public. For these are the principles which, if applied prior to advancing age, will make that period healthier and happier. And here proper nutrition is of greatest importance.

Books Received

A Concise Book of Medicine—By AKHIL BOSE, M.B., B.S., 95 E. Dharmatolla Street, Calcutta 13. Price Rs. 14/-

"Bhojan and Swasthya" (Hindi)—By Dr. B. B. RAI, M.B., B.S., Bareilly, U.P.

"Injection" (Hindi)—Medical Pusthak Bhavan, Asok Bhavan, Gola Dina Nath, Banaras.

Peaceful Uses of Atomic Energy. Vol. 11—By United Nations. M/s. Orient Longmans Private Ltd., Calcutta 13.

New Pathways in Cellular Pathology—By CAMERON, Pp. 90. M/s. Orient Longmans Private Ltd., 36a, Mount Road, Madras 2. Price 16 sh.

To The Editor, The ANTISEPTIC, Madras

Dr. S. G. Desai, M.B., B.S., Jamkhandi wants to know a sure remedy for the toxic symptoms due to antibiotics such as penicillin, omnamycin, terramycin etc. He himself had left sided vestibular pain, ataxic gait, sleeplessness, digestive trouble and partial retention of urine. His blood pressure was 140/85; urine was normal; no albumin.

Answer:—Penicillin may cause allergic manifestations. Streptomycin may produce vestibular disturbance and Terramycin may produce a deficiency of B-Vitamins. It is difficult to explain the ataxic gait and the retention of urine on the basis of toxic reactions to antibiotics. The letter does not say why the antibiotics were employed and what the clinical diagnosis was at the commencement of the treatment. A thorough neurological examination and investigations should be carried out to

exclude any organic disease in the nervous system.

[The above answer is from a specialist in Madras].

Dr. Sohan Lal Maniktala, of Bahl in the Punjab wants to know the therapeutic difference between the Liver Extract (parenteral) prepared from proteolysed liver and that prepared by extraction and fractionation method.

Answer:—Proteolyzed liver extract is more often used orally than parenterally. Any brand of liver injection is effective in megaloblastic anaemia by virtue of its cyanocobalamin content. The crude extract where the process of extraction is stopped at a particular stage usually contains only 1 to 2 micrograms of cyanocobalamin.

It should be stressed that liver extract is used quite unnecessarily for iron deficiency anaemias.

[The above answer is from a specialist in Madras].

News and Notes

Employees' State Insurance

Medical Care for Families

The Government of India have decided to extend the medical care under the Employees' State Insurance scheme to families of insured persons.

The co-operation of the State Governments is being sought to implement the decision as early as possible in the next financial year.

Another 30 lakhs are likely to benefit when the medical care is extended to the family. The scheme now covers over ten lakhs of employees in 39 centres in the country. It will ultimately cover over 90 lakhs including families when implemented all over India.

The Employees' State Insurance Act passed in 1948 applies to all employees earning not more than Rs. 400 per month and working in factories using power and employing 20 or more persons. The scheme is being implemented all over the country in phases.

Insured persons under the scheme are already paying the full contribution of about two and a half per cent of

their wages under the Act, while employers have been paying less. Though under the Act the employers' contribution can be fixed up to five per cent of the total wage bill they have been required to pay only 1½ per cent in the implemented areas. The rate of employers' contribution in the non-implemented areas has, however, been only three-fourth per cent.

With the proposed extension of the medical care to the families of the insured employees the rates of contribution from employers are now to be raised to two and a half per cent and one and three-fourth per cent in the implemented and non-implemented areas respectively. The increased rate of employers' contribution will, however, still be below the ceiling permissible under the Act.

The valuer, appointed by the Corporation to make a valuation of its assets and liabilities in 1954, estimated that these rates would provide enough funds for the Corporation to meet its share of the cost of medical care for insured persons and their families.

Development Plans of the Madras State Government Medical Department

The progress of development schemes relating to the Medical Department was among the subjects reviewed by the State Development Committee, in its second day session held on October 9, states a Government Press Note.

The scheme for upgrading the training school for nurses in the Stanley Hospital, Madras, in accordance with the scheme formulated by the Trained Nurses Association of India has been put into operation. Fifty students have been admitted for the Pharmacy course in Madras Medical College, Madras, from July 1. The Unified Technicians' Course is also to be implemented in the King Institute, Guindy. The course is of two years' duration and 12 candidates are to be admitted each year. During the year 1956-57, five officers are to be deputed abroad on a study tour to United Kingdom and the continent.

The opening of three leprosy subsidiary centres at Ponnani in Malabar District, Vriddachalam in South Arcot District and Paramankurichi in Tirunelveli District has been sanctioned. Twenty-eight Primary Health Centres in National Extension Service Blocks are to be opened during the year 1956-57. Out of this, the opening of 20 centres has already been sanctioned. The first batch of 66 additional pupil Maternity Assistants sanctioned for undergoing training has been admitted in various training centres in the mofussil with effect from July 1, 1956, and they are at present undergoing training in Midwifery. The construction of a new hostel for men students of the Madras Medical College has been sanctioned by the Government. It is expected that the students could be admitted in the hostel from early 1957.

Control of malaria:—In respect of the Public Health Schemes, the National Malaria Control Programme, which was started during the First Five-Year Plan, is being continued during the Second Five-Year Plan period also. The control of Malaria had nearly been achieved during the First Five-Year Plan period itself except in a small

pocket in Salem District, where control operations were started comparatively later. During the Second Plan period, it is programmed to undertake the eradication of Malaria as distinct from 'control' of Malaria. One hundred and twenty Maternity and Child Health Centres are to be opened in 1956-57. Out of this, 90 centres have already been opened.

Nobel Prize for Medicine

Joint Award to 3 Heart Specialists

This year's Nobel Prize in Medicine has been awarded to a West German and two Americans. They are:—Dr. Werner Forssmann, of Badkrueznach, and Prof. Andre Cournand, and Prof. Dickinson W. Richards (Junior), both of New York.

The joint award marks their discoveries in the fields of heart catheterization and pathological changes in the circulatory system.

Dr. Forssmann pioneered a technique of getting inside information of the heart by an extraordinary operation which he performed on himself in 1929.

He opened an artery in his own arm and inserted a catheter. When he had pushed it as far as the shoulder, his colleagues stopped him for fear that he would kill himself. He waited till he was alone, then repeated the experiment, pushing the tube until it entered the right chamber of the heart. Then he walked into the X-ray department, and had it photographed.

Dr. Forssmann, 52, repeated the operation on himself using a fluoroscope.

Prof. Cournand, in New York, began to search for means of using the catheter to ascertain the oxygen content and pressure changes taking place inside the heart. He and his helper and colleague Prof. Dickinson Richards then began to work out what these observations meant in terms of diagnosis and treatment.

During the war they used the method widely in treating wounded soldiers suffering from shock.

More Medical Colleges for Madras State

Mr. A. B. Shetty, Health Minister told Pressmen on 14-10-'56 that

another Medical College in Madras State might be located at Coimbatore.

The citizens of that place had promised monetary contributions, and the Government Arts College buildings also had been offered for housing the Medical College there.

Regarding the location of a Medical College at Tanjore, the idea had been given up as there had been a lack of initiative, and also no offer of financial contribution. However, under the Second Five-Year Plan the Union Government proposed to establish five or six more Medical Colleges in India, and Tanjore might have one.

Registration of Patient and proprietary Medicines

Last Date Extend to December 31, 1956

With the coming into force of the Drugs (Amendment) Act 1955, labels of patent and proprietary medicines should display in the prescribed form and in a manner readily intelligible to the medical profession, the true formula and the list of ingredients contained in them.

The Central Drugs Laboratory has accordingly stopped the registration of patent and proprietary medicines with undisclosed formulæ. Registration certificates in respect of patent and proprietary medicines with undisclosed formulæ issued by the Central Drugs Laboratory prior to the coming into force of the Drugs (Amendment) Act, 1956, became inoperative after the Act came into force.

Manufacturers and importers are accordingly advised that the labels of patent and proprietary medicines should be changed to comply with the provisions of the Drugs Act, 1940 as amended by the Drugs (Amendment) Act, 1955.

Preparations and Inventions

Distaquaine V Tablets

There are many oral Penicillin preparations available; any new addition to their number should therefore possess a definite advantage over its predecessors. The Distillers Company (Biochemicals) Limited now offer what is virtually a new antibiotic, 'Distaquaine' V tablets (Penicillin V Crystalline, Free Acid; Phenoxyethyl Penicillin). 'Dis-

Originally, time was allowed for the purpose upto September 30, 1956 after which date the provisions of the Drugs Act, 1940, as indicated above, were to be strictly enforced. The trade have since represented to the Government of India requesting for some more time. On a consideration of this representation the Government of India have decided to allow time upto December 31, 1956 to the trade to get ready for conforming to rules. No further extension of time will be given thereafter.

Post-graduate Training in Public Health Fellowships Offered Under Colombo Plan

Fellowships have been offered for Post-graduate training in various Commonwealth Countries in Public Health, Medical and allied subjects under the Colombo Plan. The facilities offered are for practical training as distinct from purely academic training.

Candidates should be at least graduates in the particular field and they should have sufficient experience to enable them to receive training. They should be below 45 years of age. The age limit is relaxable up to 48 years in exceptional cases. They should be employed under State Governments, Local bodies or non-governmental voluntary organisations.

Applications should be submitted through the State Governments in all cases, on the prescribed forms, obtainable from the Secretary to the Government of India, Ministry of Health, North Block, Central Secretariat, New Delhi. The last date for the submission of applications to the State Governments is December 20, 1956.

taquaine' V tablets are stable in gastric acid and provide consistent blood levels considerably higher than those obtainable with other oral forms of Penicillin. In many cases they are a satisfactory alternative to parenteral therapy. Bottles of 30 tablets each containing 60 mg. of Penicillin V Crystalline Free Acid are available from the Sole Distributors—Imperial Chemical Industries (India) Private Limited.

Rumalaya

for Rheumatic and
Rheumatoid
Disorders
Arthritis and
Neuritis

BIBLIOGRAPHY:

1. Bansod, M. V., The Treatment of Rheumatism & Arthritis with Indigenous Drugs, 'The Antiseptic', 1955, 6, 451.
2. Krishna Murty, G., A Study of Balsamodendron Mukul compounds in the Treatment of Rheumatic Disorders,—'The Indian Practitioner', 1955, 8, 825.
3. Bansod, M. V., Use of Ancient Indian Drugs in the Treatment of Rheumatic Diseases,—'The Advance of Medicine', 1956, 2, 164.
4. Krishna Murty, K. R., Acute Rheumatic Fever,—'Medical Digest', 1956, 4, 297.
5. Krishna Murty, G., Rumalaya, a Balsamodendron Mukul compound in the Treatment of Rheumatic Disorders.

COMPOSITION:

Each tablet contains in grains:

Mahayograj Guggul	.. 2.5
Ext. Maharasnadi Quath	.. 1.0
Swarna (Gold) Bhasma	.. 0.05
Shilajeet (Sun-refined)	.. 0.25
Shankh Bhasma	.. 1.0
Ext. Moringa pterygosperma	.. 0.25
„ Pristimera grahamii	.. 0.1
„ Rubia cordifolia	.. 0.2
„ Tinospora cordifolia	.. 0.15
„ Tribulus terrestris	.. 0.25

from THE HIMALAYA DRUG CO.,
251, D. Naoroji Road, BOMBAY-I (India)

makers of the world's pioneer Rauwolfia Hypotensive—SERPINA

'DETTOL' for Protection



- Disinfection of instruments.
- Washing and disinfecting hands.
- Pre-operative skin disinfection—and wherever there is danger of infection.

Write for FREE 'DETTOL PRODUCTS' Booklet.

ATLANTIS (EAST) LTD., P.O. Box 664, Calcutta-1



the finest substitute for breast milk

Purity . . . digestibility . . . nutritional completeness: these are the qualities that count most in a supplement or replacement for breast milk. And these qualities are well exemplified in GLAXO. For Glaxo is much more than just powdered milk. It is really balanced, digestible nourishment and a triumph of purity. These are the reasons why:

GLAXO is heat dried by the special roller process, which, besides killing any pathogenic bacteria in the raw milk,

modifies the feed so that it forms in the child's stomach a light, feathery curd similar to that of breast milk. There is added iron, to offset any tendency to infant anaemia . . . vitamin D for strong bones and teeth.

In short, whenever it is necessary to supplement or replace breast milk, there is no finer choice than Glaxo. On all counts, Glaxo approaches as near to healthy breast milk standards as modern dietetic knowledge can make it.

SUNSHINE

Glaxo

In 1 lb. and 2 lb. tins.

Packed in sealed, air-tight containers, Glaxo remains pure and fresh whatever the climate

GLAXO LABORATORIES (INDIA) PRIVATE LIMITED
Bombay • Calcutta • Madras • New Delhi

BOROSIL**LABORATORY GLASSWARE**

SUCH AS

FLASKS, BEAKERS, CONDENSERS, MEASURING
FLASKS, MEASURING CYLINDERS, PIPETTES,
and any special apparatus made to design
PENICILLIN VIALS, VACCINE BULBS
WHITE & AMBER.

ALL OTHER APPARATUS &
EQUIPMENTS MANUFACTURED
TO CLIENTS' DESIGN

Industrial & Engineering Apparatus Co. Private Ltd.,
Chotani Estates, Proctor Road,
Grant Road, BOMBAY-7

Telegram: "BINOD" Telephone: 144

BEST QUALITY

Absorbent

COTTONWOOL

WIDELY & SUCCESSFULLY USED

Available in 1, 1/2, & 1/4 lb. packings

BORIC COTTON & LINT CLOTH

Enquiries Solicited

MANUFACTURED BY

THE BINOD MILLS CO. LTD.,
UJJAIN M.B.,

CONTRACEPTIVES

FOR FAMILY PLANNING

	Each	Dos.
French Paragons	Rs. 0 4	Rs. 2 12
H.W. Sheaths	0 8	4 8
Silk Paragons	0 8	5 8
Health Paragons	0 12	8 8
Silk L. Paragons	1 0	11 8

	Each
Rubber Vaginal Sheath-Pessary	Rs. 2 0
Neurelene Jelly Tube	2 4
Whirling Spray Syringe (IMPROVED)	
For Vaginal douching	10 8

HEALTH & CO. (A.M. Dept.)

1st Floor, Opp. Majestic Cinema,
GIRGAUM, BOMBAY-4.

For CHOLERA

There is

CHOLRAGON

Tested in hundreds of Cholera cases with success,
is valuable for Diarrhoea and allied stomach
complaints. The following is one of our many
testimonials.

We treated hundreds of cases with this wonderful
remedy for the last 10 years and we are pleased to say
we have been successful in every case.

MOTHER AIMIE. The Convent, Dacca

A bottle for clinical use sent per V.P.P. for Rs. 1-4-0

Apply Dept. A

PIXIE PRODUCTS,

27, CAMAC STREET, CALCUTTA-16

Doctors Prescribe:

(1) UBIKS COUGH SYRUP

for Coughs, Colds & other similar
diseases of the Respiratory system.

**(2) UBIKS ELIXIR
VITAMIN B COMPLEX**

for B. Vitamins deficiency.

UBIQUE CHEMICAL LABORATORY PRIVATE LTD,

12-A, Latu Babu Lane, Calcutta-6.

CALVIT

for General Debility etc.

(Cal. Gluconate with Vitamin C)

Each 5 cc. ampoules contains: 10% cal-
cium gluconate and 100 mg. Vitamin C and
each 10 c.c. ampoules contains 10% calcium
gluconate and 200 mg. Vitamin C.

Packing: Box of 6, 12 and 100 ampoules

Wanted: Stockists & Agents everywhere.

**BENGAL HEALTH
& CHEMICAL WORKS LTD.,**

2, HARI MOHAN ROY LANE, CALCUTTA-15

Introducing

ELIXIR

EUGADINE

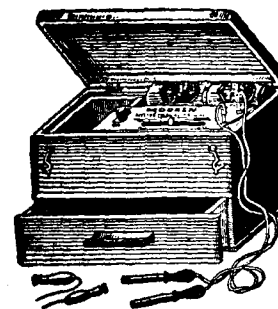
Available in 12 oz. cartons

Universal Drug House Ltd., 10, Braunfeld Row, CALCUTTA-27

A palatable & pleasantly flavoured
PIC-ME-UP & TONIC PAR EX-
CELLENCE. It increases appetite
& effective in pregnancy, pre-tuber-
culosis & convalescence. It can
be used in all seasons and in cases
where cod liver oil is indicated.

Electric magne-
tic machine for
the treatment
of Gout, Rheu-
matism, Para-
lysis, and other
Nervous Disea-
ses, in teak-
wood case.

Revolving does not
need Battery or Ele-
ctricity Rs. 60/-
with Dry Battery
Cells Rs. 20/-



J. L. LORD & CO., Lajpat Rai Market, DELHI-6

KONVOY

High Class German Syringes

Equal to American quality All Glass
Lour & Lour Lock Indelible Markings—
First Grade Glass.

Surgeon's Suture Needles of

proved quality—Stainless Steel—All
sizes and varieties. English Make, in
packets of 6. Price: 2-8-0 per pkt.

Chinese Silk Twisted — German

Make No. 1 to 6. Price: 17-12-0 per doz.

M. C. DALAL & CO.,

100, Nainiappa Naick St., MADRAS-3.

P. O. Box No. 2346

Phone: 4511

Gram: ACETONEB

Order for your copy now itself

Dr. U. Rama Rau's
Hand-Book

on

Revised

by

U. Krishna Rau,
M.B., B.S.

Price Re. 1 or sh. 2

per copy for any edition
postage 7 As. extra per copy.

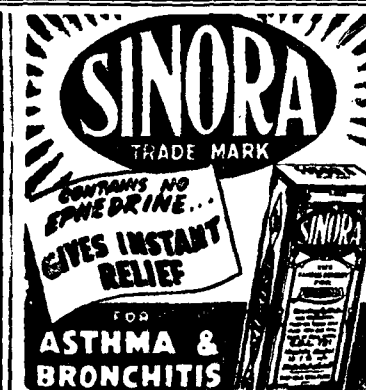
SRI KRISHNAN BROS.,

323-24, Thambu Chetty St., Madras-1.



B. A. & BROTHERS,

Bombay 2 * Patna * Calcutta * Gauhati



Agents:
HAMILTON
DAVIS & SONS
P.O. Box
No. 2085
Bombay.

Stockists:-
DADHA & CO.
Nyniappa
Naick St.
Madras.

APPAN & CO.
Appah Bldgs.
286, N.S.C.
Bose Road,
Madras-1

Recommended & Used
by DOCTORS

**JIVDAYA
NETRA PRABHA**

(Ayurvedic Regd.)

Is indicated in acute and Chronic
Conjunctivitis & Superficial Ulcers
of the Cornea having short duration.

Price per bottle Rs. 1/10 Postage extra
Rs. 1/6 upto 3 bottles.

JIVDAYA NETRAPRABHA KARYALAYA

Victoria Mill Compound, Gamdevi,
BOMBAY-7

'AURO - NEUROL'

Ideal Gold & Phosphocithin Restorative-Tonic for
IMPAIRED SEX VIGOUR, NERVOUS AND PHYSICAL EX-
HAUSTION, LOSS OF VITALITY & GENERAL DEBILITY
The wonderful combination that you will approve, appreciate
and PRESCRIBE as innumerable doctors do.

Each Ounce of 'AURO NEUROL' represents:

Leothin 1 Gr. Nuclein	1/2 gr.
Sodium Glycerophosphate	8 gr.
Calcii Glycerophosphate	4 gr.
Manganese Glycerophosphate	1/8 gr.
Yohimbin Hydrochloride	1/8 gr.
Liq. Auri et Arsenio Bromide	5 minims.

Price:—Rs. 5/- for 4 oz. Bot.

Detailed Literature and Every day Use Medical &
Surgical Goods Price List on Request.

P. N. VORA & CO.

Varjivan Mansion, 62, Princess St.,
P. O. Box No. 2089, BOMBAY-2.

ANTIPHLOZONE POULTICE

To Subside inflamma-
tions and Stop pain,
To relieve swellings,
To localize infections.

CURRENT SINCE 1931.

Manufacturers
The ZONE CHEMICAL Co., BOMBAY-4

EFFICIENT
ANALGESIC

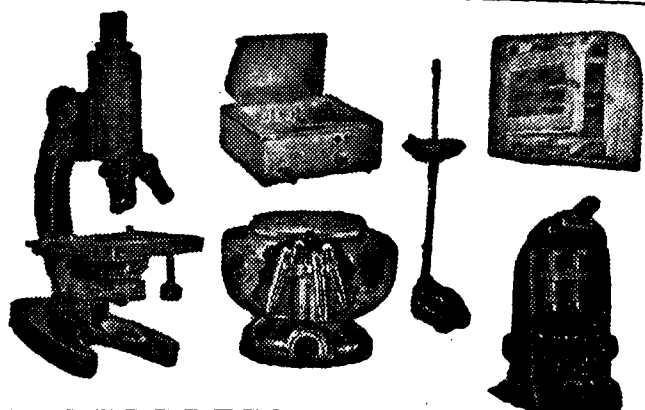
AND
ANTIPYRETIC
TABLETS & POWDERS

ASEPTICUS COMPANY, G. P. O. Box 560 (A), Bombay 1.

ASTHMA?

TRY
OROCRINE
LINE OF
TREATMENT

PARTICULARS FROM
ASEPTICUS CO.



Fresh Arrival of
German
MICROSCOPES

- Colorimeters
- Ovens and Incubators
- Centrifuge Machines
- Serological Water Baths
- Weighing Machine for Weight and Height
- Haemometers Etc.

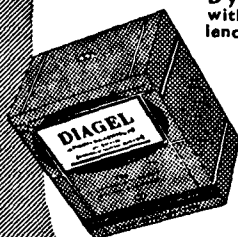
D. SHAH & COMPANY,
24, Sardar Griha Buldng.,
Lohar Chawl, BOMBAY-2.

ACUTE or CHRONIC
DYSENTERY?

A combination of
Pepsin, Diastase,
Bael and Ishagul
with or without
Iodo-chlor-hydroxy quinoline;

INDICATED IN:

Dyspepsia
with Flatu-
lence, Chro-
nic Con-
stipation,
Mucous
Colitis,
Chronic
Amoebi-
asis, etc.



DIAGEL

Specialities
of **ALARSIN** research

Tablet
R.COMPOUND
For Arthritis, Rheumatism, Gout, &
Allied Disorders.

Tablet
LEPTADEN
In Absence or Efficacy of Insulin

Tablet
MYRON SILVER COMPOUND
Checks Symptoms of Leucoderma.

Tablet
SILEDIN
For Mental Disorders.

House of apothecary research.

ALARSIN PHARMACEUTICALS
(INDIA) PRIVATE LTD.
POST BOX NO. 14, BOMBAY 1.

EXCOL

Ointment

For
Dry Eczema, Psoriasis, Ring-worm
or any dry and scaling type of
skin-diseases.

ANTIFUNGAL
ANTIPARASITIC
ANTIBACTERIAL
AND
KERATOLYTIC.

BRONKOL Private LTD.

25, Indra Biswas Road,
CALCUTTA-37

LIVAFOLBIN

Two c.c. contains:

Liver Extract	...	50 gm.
Folic Acid	...	7.5 mg.
Vitamin B12	...	25 mcg.

Indicated in:

Acute pernicious anemia, Macrocytic
Anemias, Sprue.

Subnormal growth in children is reported to
respond to Vitamin B12. Increased appetite were
noted in the patients treated and also for the function-
ing of bone marrow.

Dosage: To be injected intramuscularly 2 cc. daily,
or alternate days as directed by the physicians.

Packing: 2 c.c. amps and 10 c.c. & 30 c.c. R.C. phial

CALCIDOXON
(Calcium Gluconate with Vitamin C)

Five c.c. contains	Ten c.c. contains
Calcium Gluconate 10%	10%
Vitamin C 100 mg.	200 mg.

Indicated in:

Pregnancy, lactation, periods of rapid growth,
febrile conditions, old age convalescence and
debility states, in Haemorrhagic & development
of teeth and bones.

1 ampoule to be injected daily or alternate days
intramuscularly or intravenously as directed by
the physician.

MANDOSS DRUGS LTD.

221/2, Strand Bank Road, CALCUTTA-1.

'ROSBAY' a reliable Product for

FILARIA

The Antiseptic, Sept., writes:

"Rosbay is a combination of Tr. Rosebay
with radio-active element.....It is indi-
cated in Filariasis.....It contains no anti-
mony, arsenic or any vaccine and in cases
where these have failed, Rosbay may be
tried with advantage."

For literatures apply to:

ROSBAY & CO.,

POST BOX 11418, CALCUTTA.

LEUCODERMA

Int. & Ext. medicines Rs. 8-4-0.

Dr. B. Gopal Rao, B.Sc., M.B.,

Bangalore:—"Used in cases of Leuco-
derma and found very efficacious."

LEPROSY

45 days' Int. & Ext. medicines Rs. 12-8

Dr. M. Mohabab, Gandhi, C. P.—

"Work marvellously for Leprosy."

V.P. and other charges extra.

BEHAR CHEMICAL WORKS, BHAGALPUR.

**THYMOCIN**

FOR QUICK RELIEF

FOR THE TREATMENT OF
PYORRHOEA, TOOTH ACHE,
TOOTH DECAY AND OTHER
DISEASES OF GUMS
AND MOUTH.

Gargle, spray, rinse
or spread on tooth
brush or on finger tips.

T.M. THAKORE & CO.

43, CHURCHGATE ST. BOMBAY 1.

VALIDOL

Valerianic acid ester of menthol

Pro vides prompt relief in all states of nervous irritation and exhaustion.

- Ideal synergism of sedative and stimulant effects.
 - Not habit-forming.
 - Well tolerated.
- Can be given with safety to children and during pregnancy.

Indications:

Anxiety, irritation, or nervous depression. Travel sickness. Menstrual and menopausal nervousness. Cardiac and gastric neuroses (palpitation, spasms).

Validol camphoratum is endowed with a more marked analeptic potency, while in Bromvalidol the sedative qualities are preponderant.

Vereinigte Chininfabriken
ZIMMER & CO., G.m.b.H., Mannheim-Waldhof
(Germany)

Sole Importers and Distributors in India:

PANNALAL BROS.,

44-45 EZRA STREET, CALCUTTA-1

For Successful Treatment of IMPAIRED LIVER

Prescribe

MECHOL

A Combination of Methionine,
Choline, Folic Acid and
Vitamin B₁₂

Reinforced with:—

DIASTASE & PEPSIN

ZEAL PHARMACEUTICALS,
84, Belgachia Road,
CALCUTTA-37.

Distributors at:—

ANDHRA, BEHAR AND DELHI

"HEALTH" NEUROLECITHIN

A Unique Nerve Tonic

to combat rundown conditions due
to deficiency in Phosphorous, Cal-
cium, Sodium, Potassium & Iron.

Composition:

Vitamin B ₁	9 mgm. or 3000 I.U.
Sodium Glycerophosphate	8 gr.
Calcium	4 gr.
Potassium	4 gr.
Strychnine	1/60 gr.
Lecithin	1/16 gr.
Alcohol	10% v/v

Available in:

6 fl. oz. and 12 fl. oz. phials.

**INDIAN HEALTH INSTITUTE
& LABORATORY LTD.**

DUM DUM CANTT. (WEST BENGAL)
Madras Depot: 4/149 Broadway, Madras 1

A New Approach to DIABETES MELLITUS of

MATURITY ONSET TYPE

NAWOJAS

—AN ORAL THERAPY—

Introduced by:—

INDRA LABORATORIES

127, MAHATMA GANDHI ROAD, BOMBAY 1

References:—

1. "The Role of Ayurvedic Medicines in the Treatment of Diabetes Mellitus"—Indian Journal of Medical Sciences—Vol. 6, No. 2, Feb, 1952, pp-117-136.
2. "Review of Diabetic Cases Treated with Ayurvedic Medicine"—"Special Therapeutic Number" of the Indian Medical Review
3. Journal of the Indian Medical Profession, "Recent Advances in Diabetes Mellitus" Vol. 2, No. 8, pp. 870-879, November, 1955

SREEKAF

A palatable syrup of Bronchial
Antiseptics, Expectorants, Anti-
spasmodics and Sedatives

COMPOSITION:

Each fluid ounce of Sreekaf contains:

Potassium Sulpho Guaiacolate	.. 15 gr.
Ammonium Chloride	.. 3 gr.
Terpin Hydras	.. 1 gr.
Codein Phos.	.. 0.5 gr.
Ephedrine	.. 0.5 gr.
Antimony Tartarate	.. 0.06 gr.
Chloroform	.. 5 minims
Syrup Tolu B.P.	.. 1 Fl. dr.
Syrup Scilla B.P.	.. 1 Fl. dr.
Syrup Calcii Hypophosphite	.. 1 Fl. dr.
Syrup Vasaka (I.P.L.) to	.. 1 Fl. oz.

**PRESCRIBED BY THE MEDICAL
PROFESSION EVERYWHERE**

For further particulars please write to:

**SREEVATSA CHEMICALS
& DRUGS (PRIVATE) LTD.**

166/169, Nynlappa Nalek St.,
MADRAS-8

ALETROL

A UTERINE TONIC AND SEDATIVE

Each fluid ounce contains:—

Calcium Lactate	.. 15 Gr.
Potassium Bromide	.. 15 "
Ext. Aletis Liq.	.. 10 "
Ext. Ashoka Liq.	.. 15 "
Ext. Lodhra Liq.	.. 15 "
Ext. Ashwagandha Liq.	.. 10 "
Ext. Shatavari Liq.	.. 15 "
Ext. Plicid Liq.	.. 15 "
Ext. Hydrast Liq. B.P.C.	.. 5 "
Drakshaava	.. 2 Dr.
Syrup	.. Q. S.
Alcohol	5% V/V.

ALETROL is a combination of sedatives
uterine tonics, and nutrients useful in the
treatment of the common disorders of
female reproductive system especially of
uterus.

INDICATIONS: Irregular menstruation
and other menstrual disorders like menorrhagia,
dysmenorrhoea, inflammation of the
uterus, threatened abortion, premature
delivery, leucorrhoea, salpingitis and salpin-
goovariitis.

Dose: 1 to 2 teaspoonfuls three times a day.

PACKINGS: 4 oz. and 1 lb.

INDOCO REMEDIES LTD.,

457, Sardar Vallabhbhai Patel Road, BOMBAY 4.

AMEODINE

Indication

In all cases of acute and
chronic amoebiasis
mixed infection, mucus
colitis amoebio-hepatitis,
giardiasis.

Composition

Each Tab. Contains:—

Iodochlorohydroxyquinoline 25 gm.
Chloroquin Diphosphate 100 mgm.
Ext Belladonna Siccum 20 mgm. Vita-
min B₁ 3 mgm. Vitamin B₂ 1 mgm.
Vitamin C 25 mgm.



HINDUSTHAN DRUG HOUSE LTD.

120, DHARAMTALA ST., CALCUTTA-13

an orv's malt product

COMPOSITION:
Each Fluid Ounce
Contains:
Vitamin A Vitamin D
Vitamin B₁ Vitamin B₂

INDICATIONS:
(1) Normal
Growing
Child (2)
Under weight,
under
development
in children Mal
nutrition (3)
Pregnancy and
Lactation (4)
Convalescence
etc.

Orviferrol

THE ORIENTAL RESEARCH & CHEMICAL
LABORATORY LTD.
OUMARESH HOUSE SALKIA HOWRAH



BIRTH CONTROL

is considered today by the Government and the serious minded people as India's greatest need, to raise the living standard of every common man.

TIB-TABS

have a high degree of simplicity, dependability and acceptability.

An experimental survey with **TIB-TABS** have proved that this is the most modern contraceptive, spermicidal, Antiseptic, non-toxic, non irritant and deodorant. It is simplest and easiest in application and harmless to health.

TIB-TABS can also be used as Vaginal Antiseptic, non-specific infection and inflammation of Cervix as a deodorant and prophylactic.

Available with all the chemists throughout the country. For detailed literatures write to M/s. MOHAN BROTHERS, Manufacturing Chemists, Connaught Place, New Delhi. (Owner of the Trade Mark).

"EXCLUSIVE DISTRIBUTORS"

M/s. DEY'S MEDICAL STORES PRIVATE LTD.,

6/2B, Lindsay St., CALCUTTA-16,
Hornby Road, Fort, BOMBAY,
Bhagwati Bhawan, Chandni Chowk, DELHI-6,
290, Linghi Chetty St., MADRAS-1.

We have pleasure to offer the following

FRESH STOCKS:

COMBIOTIC $\frac{1}{2}$ Gr. Pfizer	...	1	2	6
" " " " " "	...	2	5	0
DIHYDROSTREPTOMYCIN 1 gr. Pfizer	...	1	2	6
PRONOPEN 4 lakhs Pfizer	...	0	12	0
" " " " " " Clinical Pack	...	0	11	6
PROCAINE PENICILLIN, FORTE 4 lakhs	...	0	7	3
Clinical 'Icar' & S.E.P.B.A.	...	0	7	3
PROCAINE PENICILLIN, 4 lakhs 'R.I.T.'	...	1	6	0
" " " " " " 20 lakhs 'R.I.T.'	...	1	6	0
" " " " " " in Oil 30 lakhs Clinical	...	1	6	0
" " " " " " 'Merck'	...	2	5	0
DIHYDROSTREPTOMYCIN 1 gr Clinical	...	0	12	0
'Continental Pharma'	...	0	12	0
STREPTOPENICILLIN $\frac{1}{2}$ gr. Clinical	...	0	12	6
'Imported'	...	0	12	6
PENICILLIN OINTMENT	...	0	9	6
PENICILLIN EYE OINTMENT	...	0	5	6
PENICILLIN TAB. 1 lakh x 12 (Strip	...	1	12	0
Packing) Imported	...	1	12	0
PENICILLIN TAB. 2 lakhs x 12 (Strip	...	2	4	0
Packing)	...	0	6	0
VITAMIN B COMPLEX 10 cc. 'Ankerman'	...	3	8	0
SULPHANILAMIDE 500's 7 $\frac{1}{2}$ gr 'Tedcoy'	...	0	10	0
SULPHATHIAZOLE 36's 7 $\frac{1}{2}$ gr 'Tedcoy'	...	7	8	0
do. 500's 'Tedcoy'	...	18	0	0
SULPHADIAZINE 500's 7 $\frac{1}{2}$ gr 'Tedcoy'	...	5	8	0
SULPHAGUNADINE 500's 7 $\frac{1}{2}$ gr 'Tedcoy'	...	13	6	0
SULPHADIMIDINE 500's 7 $\frac{1}{2}$ gr 'Tedcoy'	...	16	0	0
TRISULPH (Three Sulphas) 500's 7 $\frac{1}{2}$ gr	...	2	8	0
'Tedcoy'	...	31	8	0
ORACYN TABLETS 12's (Penicillin V	...	2	8	0
1 lac) 'Rhodia'	...	31	8	0
GRIPPE WATER Woodward Dozen	...	31	8	0

All Prices are ex-our godown, packing, forwarding extra, subject to stock being unsold, S.T. if applicable extra.

Kindly send 10% in advance along with order by Money Order or Demand Draft payable at Madras.

* Please note that we deal in our own imported and wholesale Drug lines only, hence we will not be able to supply other drugs.

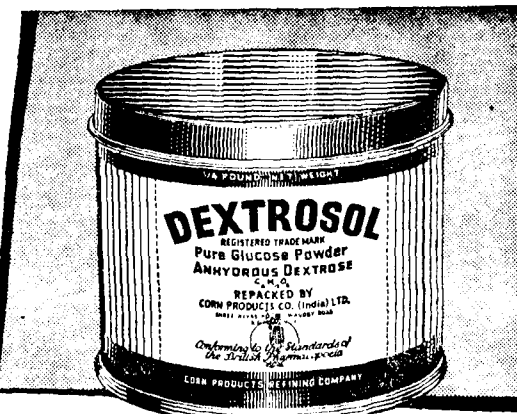
UNITED PHARMA (India) PRIVATE LTD.

Importers & Distributors

2/64, MINT STREET, MADRAS-3

Telegram: 'VITAMIN' MADRAS

Protect your patient
by prescribing
GLUCOSE POWDER
by name

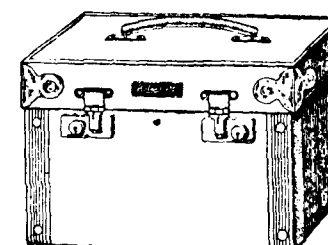
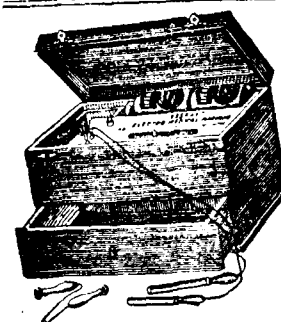


DEXTROSOL is pure Anhydrous Dextrose, conforming to the U.S.P. and B.P. standards, its chemical formula being $C_6H_{12}O_6$

GLUCOVITA EVERY 100 PARTS CONTAIN:
Dextrose Monohydrate 99.4
(Purified glucose)
Calcium Glycerophosphate 0.2
Calcium Phosphate 0.4
Each ounce of Glucovita is fortified with 250 I.U. of Vitamin-D (Calciferol)

CORN PRODUCTS CO. (INDIA) PRIVATE LTD.

Bombay-1 Calcutta-1



No.	1-a	4-a	3-a
1-a	Electro-Medical Machine (Automatic) for Gout, Rheumatism, Paralysis & Nervous diseases working with 2 Torch cells	13-a Midwifery Pouche Chrome Plated	42/-
2-a	do. working with 4 cells	14-a Eye Instrument Set C.P.	45/-
3-a	Emergency all Leather Bag with Zip 10" 8-12; 12" 10/8; 14" 12/4; 16" 14/-; 18" 16/-	15-a Cholera Apparatus	9/-
4-a	Stylish Bag 12" Empty 14/8 complete	16-a Tablet Making Machine	12/8
5-a	Eye Testing Case Eng. upto 8	17-a Organ Developer with instructions	9/-
6-a	do. without Rings	18-a Sphygmomanometer German	70/-
7-a	Cataract Spectacles	19-a Operation Table 130/- Stool	30/-
8-a	A.P. Apparatus Complete	20-a Syringe Sterilizer	7/8
9-a	Urine Test Box Comp.	21-a Syringe cases 2 cc 5 cc 2/12; 10 cc 4/; 20 cc 5/8	30cc 8/-
10-a	'ENT' Electric Wall Bracket	22-a Sterilizer 6" Electric	20/-
11-a	'ENT' Diagnostic Set	23-a Sterilizer 8" combined	28/-
12-a	Tooth Pouche with 11 Instruments	24-a " " Single	16/-
		25-a Centrifugal Machine	25/-
		26-a Pen Torch Complete	2/8
		27-a Pocket Dressing Case C.P.	9/-
		28-a 'Binaural' Stethoscopes B.D	6/12

Catalogue of Surgical Instruments, Sundries & Optical Goods on Request.

BABBLA BROTHERS (Private) LTD., 13-B, Pleasure Garden Market, DELHI-6.

RAMACILLIN COMPOSITUM

1,200,000 I.U.

Long Acting Penicillin

FORMULA:

Cryst. Penicillin G. Sod. 3 lakhs
Procaine Penicillin G. 3 lakhs
Benzathine Penicillin 6 lakhs

Price Rs. 1-8

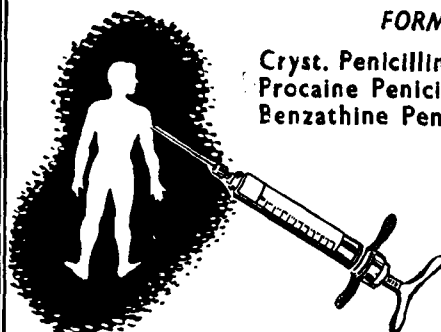
per vial Ex-Godown
(Special Rates
for Big Orders)

Manufactured by

Dr. B. S. LEVIN,
Pioneers of Antibiotics in Israel,
JERUSALEM, (Israel)

Sole Distributors in India:

AMARCHAND, SOBACHAND, 95, Nyniappa Naick St., MADRAS 3



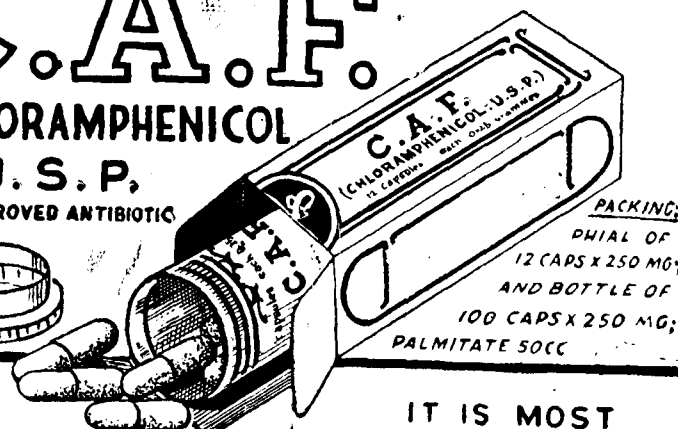
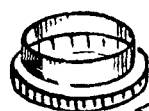
Prices have been Heavily Reduced

C.A.F.

CHLORAMPHENICOL

U.S.P.

AN APPROVED ANTIBIOTIC



IT IS MOST

RELIABLE and ECONOMICAL

IN THE TREATMENT OF VARIOUS BACTERIAL INFECTIONS.

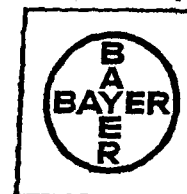
LITERATURE ON REQUISITION

SOLE IMPORTERS
FOR INDIA:

AMARCHAND SOBACHAND, POST BOX NO. 518, MADRAS-3.

Soleists: M/s. PREMIER MEDICAL SUPPLIES & STORES, 44/45 Ezra St., Calcutta-1 & Gauhati.
M/s. RATANLAL & CO., Chanderi Chowk, DELHI-6
M/s. NATH & CO., Princess Street, Bombay.

New! Neo-Bedermin



«Bayer»

LEVERKUSEN, GERMANY

For single dose treatment of
Ankylostomiasis, Ascariasis,
Oxyuriasis.

Reliable action. Excellent tolerance.

Tubes of 12 x 0.35 g. capsules.

Bottles of 100 & 500 x 0.35 g. Capsules.

Bottles of 30 cc. and 500 cc. (14% Solution).

PERISTON "N"

6% polyvinylpyrrolidone

(mean molecular weight 12600)

for

RAPID DETOXICATION OF BLOOD AND TISSUE

in

diphtheria, tetanus, dysenteries,
typhoid, botulism, drug-poisoning,
liver diseases, epidemic dropsy,
ascites, poliomyelitis, encephalitis,
burns, hyperemesis gravidarum, etc.
Also, as a diuretic in nephritis-
nephrosis, eclampsia, etc.

Infusion bottles of 100 cc.



«Bayer»

LEVERKUSEN, GERMANY

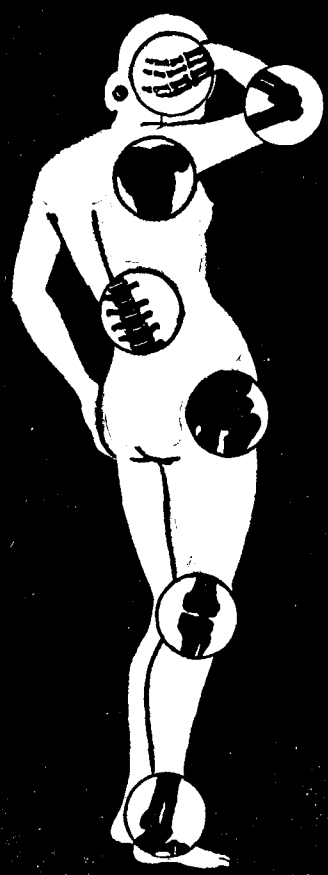
SOLE IMPORTERS IN INDIA

CHOWGULE & CO. (HIND) PRIVATE LTD.

P.O. BOX 1478, BOMBAY 1.

BRANCHES: P.O. BOX 8943, CALCUTTA 13. P.O. BOX 1743, MADRAS, 1.





BUTARIN

INJECTABLE & TABLETS

*A Most Efficacious
Antirheumatic
Preparation.*

Also

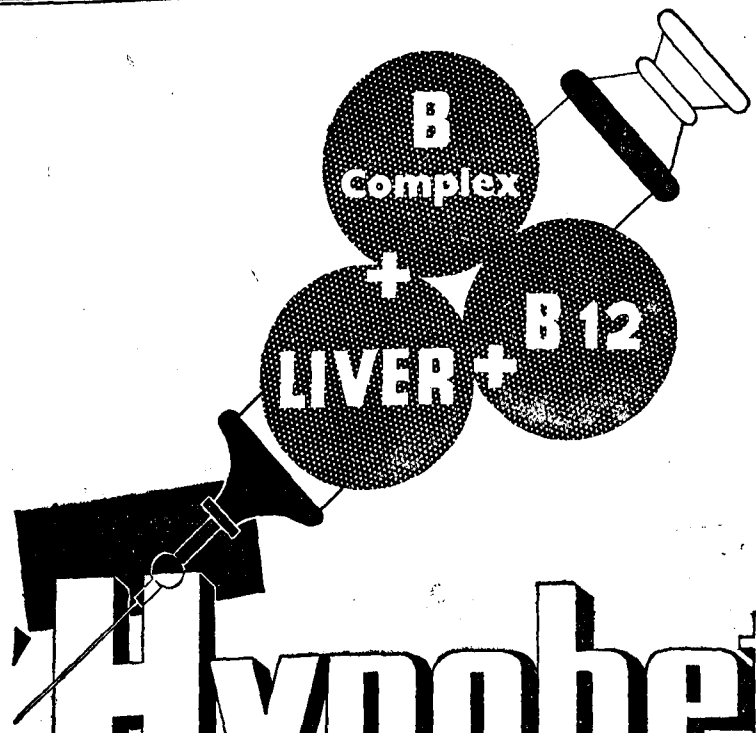
- ★ ANTIPYRETIC ★
- ★ ANALGESIC AND ★
- ★ ANTIPHLOGISTIC ★

EACH 5 C.C. CONTAINS:
Phenyl Butazone 750 mg.
Amidopyrine 750 mg.
Vitamin C 100 mg.

EACH TABLET CONTAINS:
Phenyl Butazone 125 mg.
Amidopyrine 125 mg.
Vitamin C 25 mg.

Detailed literatures
price list and clinical
samples from:

THERAPEUTIC PHARMACEUTICALS
CHOTANI ESTATE, PROCTOR ROAD, BOMBAY 7.



Hypobeta

WITH
VITAMIN B12

PARENTERAL B-COMPLEX THERAPY, FORTIFIED WITH
LIVER EXTRACT, AND WITH 5 MICROGRAMS OF VITA-
MIN B12 PER CC ADDED.



Each cc. of 'Hypobeta' contains:

Aneurine (thiamine) hydrochloride (Vitamin B ₁)	..	10 mg.
Riboflavin (vitamin B ₂)	..	2 mg.
Pyridoxine hydrochloride (vitamin B ₆)	..	1 mg.
Cyanocobalamin (vitamin B ₁₂)	5 micrograms	
Panthenol	..	4 mg.
Nicotinamide	..	100 mg.
Liver injection (20 mcg B ₁₂ per cc)	..	0.05 c.c.

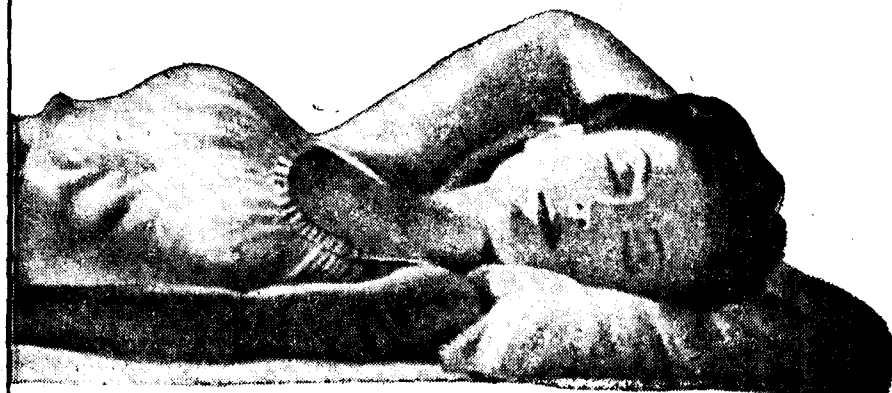
Merck-Sharp & Dohme International, Division of Merck & Co., Inc., U. S. A.
Sole Distributors:

VOLTAS LIMITED

BOMBAY • CALCUTTA • MADRAS • COCHIN • KANPUR • NEW DELHI
Scientific Literature from Bombay, P. O. Box 900

Sleep, rest of nature, O sleep, most gentle of the divinities, peace of the soul, thou at whose presence care disappears, who soothest hearts wearied with daily employments, and makest them strong again for labour!

OVID—METAMORPHOSES



'ETHOBRAL' contains quinalbarbitone, 50 mg. ($\frac{3}{4}$ gr.); butobarbitone, 30 mg. ($\frac{1}{2}$ gr.); and phenobarbitone, 50 mg. ($\frac{3}{4}$ gr.) With 'ETHOBRAL' there is rapid onset of hypnosis, extended duration of sound sleep and freedom from barbiturate hangover. The rapid onset of sleep is due to the incorporation of quinalbarbitone; depth of sleep to quinalbarbitone plus butobarbitone - both of which are detoxified by the liver; the extended duration to the phenobarbitone - excreted by the

kidneys. This selective excretion of the incorporated barbiturates, plus the fact that each is present in only a fraction of its usual therapeutic dose, makes 'ETHOBRAL' the barbiturate preparation least likely to produce toxicity or hangover.

In addition to insomnia, 'ETHOBRAL' is specifically indicated for day-time sedation or as a nocturnal hypnotic in the adjuvant treatment of Peptic Ulcer, Hypertension, Asthma, Premenstrual Tension, Menopausal stress and Anxiety state.

Hypnotic dose : 1 tablet before retiring.
Sedative dose : $\frac{1}{4}$ or $\frac{1}{2}$ tablet once or twice daily.
Tubes of 20 tablets.

*** ETHOBRAL**

for all patients who need sleep

Wyeth

JOHN WYETH & BROTHER LIMITED

(Incorporated with Limited Liability in England)
India Branch: Magnet House, Douglas Road, Bombay I.
Distributors: GEOFFREY MANNERS & CO. PRIVATE LTD.,
Bombay, Calcutta, Madras, New Delhi.

The Antiseptic

A Monthly Journal of Medicine and Surgery

Published on the 6th of every month

Founded by the late Dr. U. RAMA RAU in 1904.

Editor : U. KRISHNA RAU, M.B., B.S., M.L.A.

Associate Editor : U. VASUDEVA RAU, M.B., B.S.

Editorial & Publishing Office : 323-24, Thambu Chetty St., Madras-1.
Annual Subscription : Rs. 7-8-0. Foreign—Rs. 10 Post Paid.

AUTHOR and SUBJECT INDEX

Vol. 53

JANUARY TO DECEMBER, 1956

Nos. 1 to 12

AUTHOR INDEX

A	PAGE	C—(Contd.)	PAGE
Agarwal, Ramesh Chandra, M.B., B.S., D.O., New Delhi ...	261	Chatterjee, S., M.B., B.S., D.T.M. Major Ex. I.M.S. (See Gupta, C.M.) Meerut ...	921
Almast, S. C., M.S., Faridabad, C. Rly. ...	599	Chetty, V. V., M.B., B.S., Vishakapatnam ...	241
Amesur, C. A., M.S., D.L.O. (Eng.), Bombay ...	696	Chhaya, S. P., M.B., B.S., Rajkot ...	85
Anantaram, M., M.B., B.S., Madras (See Arogyadoss Miss S.) ...	691	Chowhan, Major J. S., M.B., B.S., A.I.R.O., I.M.S. (Rtd.), Calcutta ...	858
Anjaria, P. D., M.B., B.S., Bombay (See Mody, M. R., et al) ...	866	D	
Antia, F. P., M.D., M.R.C.P. (Lon.), M.S. (Ill.) (See Patel, B.R.) Bombay ...	503	Daruvala, R. B., B.Sc., L.C.P.S., Bombay ...	93
Arogyadoss, Miss S., Dr. M.D., (See Anantaram, M., M.B., B.S., Madras ...	691	Dastoor, H. D., F.C.P.S., D.O. (Oxon.), D.O.M.S., Bombay ...	936
B		David, John G., Mehmabad, Kaira Dt., Gujarat ...	351
Balagopal, P., M.B., B.S., (See Venkatesan, T. V.) Madurai ...	146	De, Haridas, Ballarpur (M.P.) ...	63
Bannerjee, N. R., M.B., B.S., D.T.M. (Cal.), Gorakhpur ...	535	De Rozario, J. L., M.D., Chicago, U.S.A. ...	271
Barua, S. D., M.B., B.S., (See Bhattacharyya, M. N.) Dibrugarh ...	821, 895	Deshmukh, P. L., M.D., D.T.M.H. (Lon.), F.C.P.S. (Bom.), F.A.C.C. (U.S.A.), Poona ...	497, 521
Bergschmidt, O., M.L. (Hamburg), Madras (See Thampian, R. K. K.) ...	577	Deshpande, P. J., A.M.S., etc., B.H.U. ...	929
Bhaskara Reddy, M.D., Visakhapatnam ...	489	Dhar, S. R., L.M.F., Assam ...	453
Bhattacharjee, B., Calcutta (See Sen Gupta, K. P., et al) ...	287	Dhir, B. K., M.S., D.O.M.S. (Lon.), Indore ...	901
Bhattacharyya, M. N., B.A., M.B., D.T.M., D.C.H., M.R.C.P., Dibrugarh ...	21, 561, 821, 895	Dinda, M., M.B., B.S. (Cal.), Calcutta ...	203
Bird, G. W. G., Poona ...	440, 863	Dotto, B. B., Calcutta ...	13, 27, 105, 587, 687
Bose, S. K., Cuttack, Orissa ...	753	G	
C		Ganguli, N. C. (See Sengupta, K. P. et al), Calcutta ...	287
Chakrabarty, S. C., L.M.F., Raxaul (Cham- paran) ...	113	Golwalla, A. F., M.D., F.C.P.S., Bombay (See Mody, M. R., et al) ...	866
Chakrabarty, H. K., M.B. (Cal.), W.B.M. & H.S., Asansol (See Sen Gupta, K. P.) ...	61, 299	Goswami, P., M.B., B.S., Assam ...	375, 765
Chakravarty, S. N., Lucknow ...	573, 939	Gour, K. N., M.D., M.R.C.P., F.R.F.P.S.G., D.C.H. (Eng.), D.P.H., Agra (See Lal, M. T.) ...	665, 741, 747, 749, 839, 845, 885
Chakravorty, B. C., L.M.F., Cooch Bihar ...	694	Govinda Menon, K., B.A., M.B., B.S., M.Sc., Madras ...	173
Chari, M. V., M.B., B.S. (Rangoon), M.R.C.P. (Lond.), D.T.M.H. (Eng.), Mangalore ...	479	Goyal, R. K., D.Sc. (Paris), Ph.D. (Edin.), Jaipur (See Sarin, J. G.) ...	179
Chatterjee, H. N., M.D., F.R.S.T.M. & H., (Calcutta) ...	161, 483	Grewal, K. S., (See M. P. Singh) Amritsar ...	279
		Gupta, C. M., M.B., B.S., Meerut (See Chatterjee, S.) ...	921

G—(Contd.)		P—(Contd.)	
	PAGE		PAGE
Gupta, K. P., Sen (See Ganguli, N. C. et al), Calcutta	287, 299	Prabhu, M. G., M.D., (See Kumaraswami, D. S.), Madras	864, 909
Gupta, P. N., B.Sc., F.R.S.T.M.H., M.R. San. I, Pathankot	507	Prakash, M., M.B., B.S., D.T.M., Meerut, U.P.	359
Gupta, S. L., L.M.P., Rajasthan	221	Prayag, V.S., M.D., F.C.P.S. (Bom.), Poona-4	62, 443
Gupte, V.V., M.B., B.S., D.O.M.S., Bombay	671		
H		R	
Haranath, P. S. R. K., M.D., Visakhapatnam	733	Raghavachari, T.N.S., Madras-14	884
J		Rai, B.B., M.B., B.S. (Pb.), O.B. (St. J.), Bareilly, U.P.	369
Jacob, K. C., B.A., M.D., Madras	85	Rajam, R.V., M.S., F.R.C.P., Madras (See Rangiah, et al)	9
John, A. T., B.Sc., M.D., D.C.H. (Lond.), Madras	499	Rajaram, S. R., M.B., B.S., Salem	215, 451
K		Rajoswari, M., B.Sc., L.M.P. (See Shamanna, D.), Chitaldurg	611
Kalyanasundaram, V., M.B., B.S., L.O., Madras	675, 781	Rajmwal, D. B., M.B., B.S., B.Sc., B.A. (Pol. Sc.), Raipur	195
Koenigsfeld, E. G. H., M.D. (Berlin), Kurduvadi	613	Rana, T.D., L.C.P.S., L.M. (Dub.), etc., Surat	97
Krishnamoorthy, N., M.B., B.S., D.V., Madras (See Rajam, R. V. et al)	9	Rangiah, P.N., M.D. (See Rajam, R.V.) et al	9
Krishnakutty, P.K., M.D., M.R.C.P. (Lond.), Madras	93, 169	S	
Kumaraswami, D. S., M.B., B.S., (See Prabhu, M. G.) Madras	909	Sachar, K. L., L.M.P., Hamarpur, Punjab	937
Kutumbiah, P., B.A., M.D., M.R.C.P. (Lond.), Vellore	643	Sahu, K.C., M.B., B.S., D.P.H. (Eng), D.C.H. etc., Cuttack	123
L		Sankararaman, S., M.B., B.S., Cuddalore O.T.	45, 863
Lakholia, Capt. A. N., M.B., B.S., Badaun U.P.	608	Sarin, J.G., M.B., B.S., D.T.M. (Cal.), Jaipur	179
Lal, M.T., Agra (See Gour, K. N.)	655, 741, 747, 749, 839, 845	Sarma, A.V.S., M.B., B.S., D.C.H. (Eng.), F.D.S. (Lond.), Madras-14	373
M		Sathe, H.S., M.D. (Bom.), Lucknow	199
Maneksha, R. J., F.R.C.S. (Eng.), Bombay	861	Sen, D.K., M.B., B.S., Calcutta	148, 529
Masilamani, J. A. S., M.D., Madras 7	319	Sen Gupta, K.P., M.B. (Cal.), W.B.M.S., Asansol	61, 220, 287, 229, 607
Mehra, D. S., B.Sc., M.B., B.S., Delhi 7	133	Sen, S.R., M.B., D.P.H., Bengal	191
Mehta, P.M., M.D., M.S., F.C.P.S., F.I.C.S., Jamnagar	725, 805	Shah, K.S., M.S., F.I.C.S., Jamnagar	345
Mehta, Vasant P., M.D., M.S., F.C.P.S., F.I.C.S., Bombay	175	Shamanna, D., B.A., M.B., B.S. (See Rajeswari, M.), Chitaldurg	611
Mehta, V. N., L.M. & S., Morvi	51	Shevade, C. V., M.B., B.S., D.T.M., Chhatarpur	915
Mishra, D., M.B., B.S., Bhawanipatna, Orissa	129	Singaravelu, K.N., L.M.P., Bangalore	119
Modi, M. T., Bombay	932	Sirsi, M., Bangalore	595
Mody M. R., M.B., B.S., Bombay	866	Sowmini, C.N., M.B., B.S. (See Rajam, R.V.), Madras	9
Mohan Rau, U., M.S., F.R.C.S., Madras-3	1	Srinivas Rao, B.N., B.Sc., L.M.P., Mysore	612
Mohindra Pal Singh (See Grewal, K. S.), Amritsar	279	T	
Mukerjee, S.K., M.B. (Cal.), Midnapore	602	Thampan, R.K.K., F.R.C.S. (E), F.R.C.O.G. (Lond.), (See Bergschmidt, O.)	577
N		V	
Narasimha Rao, P., M.S., F.I.C.S., Vishakhapatnam	257	Varadarajan, M.G., M.B., B.S., D.M.R., Tanjore	778
Natarajan, M., MCH. (Orth.), F.R.C.S. (Eng.), Madras 1	79, 399	Varghese, K.M., L.M.P., Munnar P.O.	293
P		Venkappa, D.V., L.M.P., Madras	627
Patel, B.R., M.B., B.S. (See Antia, F.P.), Bombay	503	Venkatesan, T.V., M.B., B.S., F.C.C.P. etc., Madurai (See Balagopal, P.)	146, 761, 853
		Verma, M. S., M.B., B.S., B.H.U. (See Deshpande, P. J.)	929
		Vijayakar, V.A., M.B., Ch. B. (Edin.), L. M. (Dub.), L.R.C.P.S., Dadar, Bombay	41

THE ANTISEPTIC 1956—SUBJECT INDEX

A	PAGE	A—(Contd.)	PAGE
Abortion (habitual)—Endocrine treatment	520	Arthritis—Control of pain in: by sodium cinnamate as an additive to salicylate	25, 868
Abortion—Management of missed	572	Arthritis: Rheumatoid—Gold hormonal therapy in	235
Abortion—Septic: Diagnosis and therapy	714	Arthritis—Therapy for early rheumatoid	388
Absence of posterior ramus in 1st cervical nerve	173	Asepsis and antiseptics	733
Achromycin brand of tetracyclin in typhoid fever etc	864	Aspirin and peptic ulcer	193
Achromycin in venereal diseases	9	Aspirin: Comparison of cortisone and: in juvenile rheumatoid arthritis	718
Acne vulgaris—Oral stilboestrol for	344	Aspirin—in heart stroke: Value of	914
ACTH and cortisone—Psychological responses	118	Aspirin—Recurrent urolithiasis with—Treatment of	904
ACTH-in hyperemesis gravidarum	498	Asthma—Bronchial	958
Acute infective hepatitis (Viral hepatitis)	865	Asthma in children	396
Acute mastitis	631	Asthma—Prolonged treatment with cortisone: of severe	142
Adenomatous goitres treated by radioactive iodine	844	Asthma—Sudden death from	174
Adenotonsillectomy bleeding prevented by vitamins K and C	717	Asthmatic patient: Care of seriously ill	636
Ætiology of ulcerative colitis	741	Atomic era	260
Alavandar murder case and the problem of identity	85	Aureomycin and terramycin in trachoma	230
Albuminuria is congestive heart failure	955	B	
Alcoholism—Its dynamics and treatment with antabuse	97	Back—Unflexed: a low incidence of spinal headache	593
Alimentary symptoms in cholera and some new lines of therapy	161	Bacteriological examination of 732 cases of suspected cholera	691
Allergy: Ocular and oral—Penicillin anaphylaxis	772	Bacteriological studies on vibriocidal indigenous drug	287
Ambulation. Early—Newer concept	710	Barium reduction of intussusception in infancy	470
Amoebiasis—Cardiac syndrome in	215	Bedsore	300
Amoebiasis—Diagnosis and management of	241	Benign tumours—Interesting and uncommon ones in Rajasthan	179
Amputation—Syme's	104	Biopsy—Is it safe?	710
Anemia and anxiety neuroses	939	Bitter gourd: in diabetes mellitus	608
Anemia—Cobalt therapy in	190	Bleeding ulcer—Emergency treatment for	674
Anemia—pernicious: Oral vitamin B ₁₂ in	717	Blood groups—The Lewis	440
Anesthesia and the general practitioner	390	Blood pressure—Height weight etc. (Insurance statistics)	587
Anesthesia: Elimination of nitrogen using semi-closed inhalers—Factors influencing	586	Blood—Toxic effects of citrated	156
Anesthesia: Shivering following	764	Body-weight and height—Influence on diseases, accidents mortality	27, 105
Analgesia in ocular surgery—sedation with	936	BOOKS Etc. REVIEWED:—77, 236, 315, 397, 476, 553, 639, 721, 880	
Ankylostomiasis—Piperazine adipate in treatment of	895	BOOKS RECEIVED:—77, 238, 397, 476, 555, 724, 803, 882, 959	
Ano-rectal lesions—Complications in surgery for benign	312	Bowel obstruction: Recurrent	799
Anorexia nervosa: C.N. system in	760	Boxing on vision—The impact of	202
Antenata exercises—Value of	794, 894	Breast cancer: Survival in cases of	158
Antibiotics—Combination of: in typhoid fever	909	Breast-cancer therapy	172
Antibiotic sensitivity tests in colitis (ulcerative)	839	Breast-carcinoma—Radical mastectomy	269
Antibiotics: Fifty years of chemotherapy	443	Breath deliveries in Chicago hospital	878
Antibiotics in surgery—Side-effects of	178	Bromidrosis: treatment of	877
Anticoagulants in obstetrics	631	Bronchogenic carcinoma: 5 year survey of	362
Anticonvulsant properties of reserpine	858	Buerger's disease—2 cases treated by lumbar sympathectomy	299
Antihelminthic drugs	853	Burn treatment—Exposure method with hydrocortisone	519
Antirabic vaccination—Neuroparalytic reaction in	21	Burns: Complications of treatment	954
Antrenyl—Its use in spasmodic conditions	93	C	
Anuria—Newer aspects in treatment of acute	270	Cæsarean operation—Abuse of the	214
Aorta—Aneurysms of the	528	Cæsarean section	466
Apoplexy: cerebellar—Venous angioma as cause	953		
Arsenic encephalopathy	921		
Arsphenamine reaction	113		
Arterial diseases of the leg: Occlusive	905		

C—(Contd.)	PAGE
Cæsarean section—Indications for	233
Calcium intake in last month of pregnancy	50
Cancer breast: Cortisone therapy in	791
Cancer—Breast: therapy	172
Cancer of cheek—Excision and skin grafting replacement	698
Cancer of the breast—prognosis in	157
Cancer of the breast—Survival in cases of	158
Carbon monoxide poisoning	721
Carcinoma—bronchial: and unspecific pneumonia: Diff. diag. between	72
Carcinoma—Metastatic mammary—Hormone therapy on the influence of	949
Carcinoma—5 year survey of bronchogenic	362
Carcinoma of cervix—Treatment of	467
Carcinoma of the lung	633
Cardiac massage	915
Cardiac syndrome in amoebiasis	215
Cardiomegalia	373
Carles of the spine	279
Cataract surgery—Complications of	230
Cataract surgery—Facts, fallacies etc. in	292
Cat-scratch fever—Diagnosis of	234
Cervical erosion—Therapy for	256
Cervical nerve—First: Absence of posterior Ramus in	173
Chemotherapy and antibiotics: Fifty years of	443
Chemotherapy in dysentery	499
Chest injuries—Management of acute	711
Children—asthma in	396
—bilateral herniotomy in	395
Children—Diarrhoeas in	761
Children—Regional ileitis in	548
Children—Salicylate poisoning in	456
Children—Vomiting of intussusception in	378
Children—Vomiting in	64
Chloromycetin for paratyphoid A	802
Chlorpromazine etc. in mental disorder	344
Chlorpromazine—in vomiting of pregnancy	793
Chlorpromazine—Reserpine combined in psychiatry	801
Cholecystectomy—Importance of technique in	312, 626
Cholecystitis—Subtotal cholecystectomy in acute	70
Cholecystography—Reliability of	432
Cholera, Alimentary symptoms in—and some new lines of therapy	161
Cholera at the Infectious Hospital, Madras: Bactl. examn. of cases of	691
Cholera: Haemorrhagic and severe haemorrhagic diarrhoea—Treatment of	433
Chondro-osteo-dystrophy—A case of	529
Chronic discharging ear	257
Chronic hoarseness in Eisenmenger's complex	696
Chronic hypervitaminosis A	852
Cirrhosis—hepatic. Prognosis of	71
Cirrhosis—Infantile biliary etc.	643
Citrated blood—Toxic effects of	156
Clinical meetings	199
Clostridial wound infections—Gas-gangrene in	271
Cobalt therapy in anaemia	190
Coffee—Influence of: on ocular tension	469
Colics—Acute abdominal—Oetinum in	535
Colitis (ulcerative): Aetiology of	741
Colitis (ulcerative) antibiotic sensitivity tests	839

C—(Contd.)	PAGE
Colitis—ulcerative (<i>Historical Review</i>)	665
Colitis (ulcerative): Liver in	749
Colitis (ulcerative): Management of	845
Colitis—ulcerative: Symptoms of	747
Colitis ulcerative: Treatment of	235
Colon—Complications from resection of the	233
Colon—Preoperative preparation of the	705
Complications in transverse presentation	191
Complications of hydramnios	233
Congenital heart disease in infants	128
Congestive failure—Oedema and: related to Rauwolfia serpentina administration...	148
Congestive heart failure—Albuminuria in	954
Consequence of pleural effusion	470
Conservative obstetrics in third stage of labour	158
Constipated infant—management of the	473
Constipation—Causes and treatment	51
Corns and callosities	879
Coronary occlusion—Treatment of	368
Coronary thrombosis and myocardial infarction—Treatment of	837
Coronary thrombosis—Recent trends in	573
CORRESPONDENCE	238, 316, 642, 883, 960
Cortisone and corticotropin in pemphigus	372
Cortisone and hydrocortisone in severe tetanus	182
Cortisone and tuberculosis of the lungs	791
Cortisone—Effect on growth	792
Cortisone in advanced breast cancer	791
Cortisone—Psychological responses to ACTH and	118
Cortisone therapy	488
Cortisone therapy—Prolonged for rheumatoid arthritis	286
Cortisone withdrawal syndrome	194
Cramps and their management	119
Curettage of plantar warts	112

D

Deafness, tinnitus etc.—Heparin in	716
Dermatological practice—Hormones in	123
Diabetes—Lente insulin in	720
Diabetes mellitus—Dietetic treatment of	41
Diabetes mellitus—Use of bitter gourd in	608
Diabetic coma and diabetes in pregnancy	951
Diabetic—Management of the pregnant	794
Diarrhoea in infancy—Non specific	395
Diarrhoeas in children	761
Diet for the older patient	959
Digitalis—Contraindications to	314
Digitalis—Toxic reactions to	472
Diphtheria: Complicating pregnancy	612
Discharge—Early hospital	624
Doctor-patient relationship	34
DURGS REVIEWED	77, 237, 560, 642, 882
Dysmenorrhoea—Vit. E in primary	601
Dysentery—Chemotherapy in	499
Dyspepsia in general practice—(Maharajah of Travancore Endowment Lecture)	319

E

Ear, the chronic discharging	257
Eclampsia and its prognosis	465
Ectopic gestation: A case of ruptured	220
Ectopic pregnancy—New concept	464
Eczema: Infantile—Psyche as agent in	949

E—(Contd.)	PAGE
EDITORIALS	
Jan. 1956	
Momentous fifty five (1955)	65
Medical education—Rural medical relief...	66
Cancer relief	69
Feb. 1956	
Developments in chemotherapy of malaria during the last 40 years	149
National plan for control of TB	153
March 1956	
Five-point health programme of the Union Govt.	223
Drugs control—Extension of Pharmacy Act	226
Madras Estimates Committee's first report on hospitals etc.	227
April 1956	
Pharmaceutical industry in India	301
Jaundice	305
Public Health in Madras State	306
May 1956	
Employees' State Insurance Scheme	379
Production of antibiotics in India	382
Control of leprosy in India—The Indian Red Cross Society—The A great and grievous loss (<i>Obituary</i>)	384, 385, 387
June 1956	
Welfare of children	457
Madras State Ophthalmological Conference—The	459
Drive against cancer	460
July 1956	
Expansion of medical aid	537
Home treatment of TB	539
New scheme for slum clearance and housing of the poor	541
August 1956	
Training of pharmacists in 2nd five-year plan	621
Medical relief in Madras City (Need for State help)	623
Unfair circular—An	625
Unjust ruling—An	626
Madras Med. Council and Regd. Med. Practitioners (<i>Contributed</i>)	647
September 1956	
Tobacco's effect on health	701
Polio-myelitis vaccine—what is its future?	706
The late Dr. P. Rama Rau (<i>Obituary</i>)	708
October 1956	
The Role of nurses in a Welfare State	785
The Manufacture of hormones in India	787
Leprosy control	788
Madras scheme in IIInd 5-Year Plan	788
November 1956	
XI Madras State Medical Conference in Tiruchirappalli	869
Medical care of children in India	871
Advanced studies in medicine	873
Insurance Corporation and medical examiners	875
December 1956	
Medical Research in India	941
Ophthalmologists in Conference at Coimbatore	943
Leprosy Control in India	944
Eisenmenger's complex—Chronic hoarseness in	696
Elbow—Treatment of supracondylar fractures of the	497
Empyema	502
Empyema—Staphylococcal	462
Endocarditis—Streptococcal: Penicillin and streptomycin in	71
Enlarged prostate—Diagnosis of	345
Enteric fever—Treatment of	937
Eosinophilia, Pulmonary (Tropical Eos.)	203
Epileptic—Treatment and employability of the	388
Epilepsy—Idiopathic: etc. (Probable origin)	675
Epilepsy—Idiopathic: new treatment for...	781
Epilepsy—Management and treatment	479
Erythrocyte sedimentation rate: Elevated	172
Essential endeavour	122
Eye diseases caused by virus infections and their treatment	602
Eyes of the newborn: Ag NO3 or erythromycin for prophylaxis?	798
Eye surgery—Use of air in	876
Eye symptoms in general diseases	35
F	
Facts, fallacies and failure in cataract surgery	292
Family-planning	363
Fatigue—Diagnosis and treatment of	635
Fifty years of progress in diagnosis, and treatment of TB	351
Foetal mortality with prolonged pregnancy	467
Fetus—The large: (547 cases studied)	606
Food-hygiene	560
Fractures by transfixing Treatment of	954
Fractures of the elbow—treatment of supracondylar	497
Fractures of the humerus	534
G	
Gas-gangrene in clostridial wound infections	271
Gas in symphysis pubis in pregnancy	310
Gastrectomy—Internal hernia after	232
Gastric juice: Analysis, in nutr. cedema	765
Gastro-duodenal hæmorrhage—Management of	953
General practice and public health in England	555
Germ-theory of disease—Musings on	595
Gitalin—Clinical trials with	169
Glaucomatous iridocyclitis	780
Goitres—Toxic adenomatous: treated with Iodine	844
Gold-hormonal therapy in Rh. arthritis	235
Gonorrhoea in the male: acute—erythromycin with sulphonamides in	900
Gout of the patella	772
Gout—Present day treatment of	358
Guided experience	461
H	
Hæmatoma, chronic subdural in the infant	792
Hæmophilia—Treatment of	20
Hæmorrhage: postpartum—Prophylaxis of	309
Headache—Ophthalmological aspects of	547
Health—rural: and sanitation	129
Heart-disease: congenital—in infants	128
Heart murmurs—Evaluation of innocent	73
Heel pain—Cause and therapy of	682

R—(Cont.)	PAGE
Rupture of the uterus—The problem of	698
Ruptured ectopic pregnancy—Atypical case of	220
Rural health and sanitation	129
Rural medical aid—A practical scheme	451
S	
Sedation—Analgesic postures in	740
Scorpion bite—Unusual case of	63
Scrub typhus in Rajasthan: Case of	221
Sea-water—Drinking water from:	159
Seventh venereal disease	367
Shock due to myocardial infarction	156
Shoulder—Stiff	79
Sigmoid colon—Strangulation in mesenteric hole	929
Sinusitis—Chronic frontal—Surgical treatment of	463
Skeletal T.B. with particular ref. to incidence in women and children	399
Sleep disturbances in children	793
Smallpox marks—Sand paper surgery for	861
Sodium cinnamate additive to Sod. Salicylate in arthritis and rheumatism	868
Spinal anaesthesia—Minor symptoms after	390
Spinal headache: Unflexed back—a low incidence of severe	593
Spine—Caries of the	279
Spleen—Surgery of the	543
Splenic enlargement—Case report	611
Staphylococcal empyema	462
Sterilizing sharp instruments	879
Stilboestrol—Oral: for acne vulgaris	344
Stomatitis—Diagnosis and therapy	471
Strabismus—Medical treatment: Advances in	158
Strabismus—Surgical treatment	798
Strangulation through the 'mesentery': case of volvulus with internal	61
Streptococcal endocarditis—Penicillin and streptomycin	71
Stress—Some reflections on: and how to fight it	437
Subarachnoid haemorrhage: Prognosis with	800
Supracondylar fractures of the elbow	497
Surgeon's life	386
Surgery of the rheumatic hand	450
Surgery—Side effects of antibiotics in	178
Syme's amputation	704
Sympathectomy in persistent hemiplegia	462
Syndromes—Cortisone withdrawal	194
Syndromes—Uncommon ophthalmic	261
Syphilis—Early: Treatment with penicillin G, procaine and 2% Al. stearate	546
Syphilis—Relapse in early	195
" Decreased incidence	947
T	
Target cell syndromes in India	863
T.B., Association of India—Report Review	722
TB in Tea Estates—Prevention of	458
Testicular hormone in muscular wasting	62
Tetanus convulsions—Control of	686
Tetanus—Severe: Cortisone and hydrocortisone in	132
Thorax: Injuries to the	145
Thymectomy in treating myasthenia gravis	350
Thyrototoxicosis: treatment with radioiodine	156
Tongue—Significance of furring of the	598

T—(Cont.)	PAGE
Tonsillectomy—Respiratory diseases after	612
Toxaemia of pregnancy—Hypotensive agents in pre-eclamptic	194
Toxaemia of typhoid fever—I.V. hydrocortisone in	866
Toxic effects of citrated blood	156
Toxic urethritis	920
Trachoma: aureomycin and terramycin in	230
Transverse presentation and management of its complications	191
Treatment of cancer—place of surgery in the	83
Trichomonal urethritis in males	634
Tricuspid regurgitation—pulsation of orbital contents in	550
Tropical eosinophilia—Observations on	203
Tuberculosis and the G.P.	133
Tuberculous lung cavities—treated by continuous drip	928
Tuberculosis of the lungs: Cortisone and	791
Tuberculosis—pulmonary pathology of	489
Tuberculosis-skeletal with particular ref. to its incidence in women and children	399
Tuberculous meningitis—A case of	146
Tumours—Bone	610
Tumours—Interesting uncommon benign	179
Tumours—Surgical management of parotid	74
Tympanic membrane perforations—Repair	280
Typhoid fever—Achromycin of Tetracycline in	864
Typhoid fever—Intravenous hydrocortisone in toxæmia of	866
Typhus: A case of scrub—in Rajasthan	221
U	
Ulcerative colitis (series of articles)	665, 741, 747, 749, 839, 845
Ulcerative colitis—Treatment of	235
Urethritis in males: Trichomonal	634
Urethritis—Non-specific	919
Uterine inversion and a new method of treatment	19
Uveitis in contralateral eye—after cataract extraction	469
V	
Vaginal smear at end of pregnancy in diagnosis of date of delivery	392
Varices—Oesophageal	281
Varicose veins of lower limbs—Treatment	599
Vasopressor drugs in toxæmia of pregnancy	91
Vasotomy—Bilateral	879
Venereal diseases—Achromycin in	9
Venous obstruction of limbs	783
Venous angioma—Cause of cerebellar atrophy	954
Vertigo	45
Virus infection—Eye diseases caused by	602
Vision: Impact of boxing on	202
Vitamin E therapy in menopause	536
" " primary dysmenorrhœa	601
Vitiligo (Leucoderma): surgical treatment	175
Volvulus with strangulation etc.	61
Vomiting in children	64
W	
Wilms tumour—Case of bilateral	375
Wounds—Lacerated: treatment of	752
Y	
Yaws: Study of cases of in Cooch Bihar	694

FOR ANGINA PECTORIS • CARDIAC NEUROSES • HYPERTENSION

TABLET
Aminophen
CARDIO-RESPIRATORY STIMULANT AND SPASMOLYTIC

Each tablet contains:
Aminophylline gr. 1½ and Sod. Phenobarbitone gr. ¼

Indicated in hypertensive states and in conditions of coronary insufficiency associated with spasm; also useful for relieving spasm of bronchial tubes.

FOR BRONCHIAL ASTHMA • PAROXYSMAL DYSPNOEA

Supplies: Original packing of 100 tablets

BENGAL CHEMICAL
CALCUTTA, BOMBAY, KANPUR.

If your patient is in need of
Vitamin B-Complex in a practical form

PRESCRIBE

VIBITON POTENT AND PALATABLE

VITAMIN B-COMPLEX

useful in Vitamin deficiency resulting in symptoms of fatigue, anorexia and loss of weight, etc.

Vibiton contains per fluid ounce:

Vitamin B1 (Thiamine Hydrochloride)	18.0mg.	Methionine	250.0 mg.
Vitamin B2 (Riboflavin)	4.0 mg.	Nicotinamide	50.0 mg.
Vitamin B6 (Pyridoxine)	3.0 mg.	Sodi. Glycerophos.	400.0 mg.
Vitamin B12	10.0 mcg.	Liver Extract	(in terms of fresh liver) 80.0 gm.
Cal. Pantothenate	12.0 mg.	Malt Extract	q.s.
Choline Chloride	60.0 mg.	Absolute Alcohol	15% v/v.

25 per cent extra quantities of Vitamin B1, B2, B6 and Nicotinamide are added to compensate loss due to storage.

Available in 4 oz. phial and 1 lb. bottle

BENGAL CHEMICAL PRODUCT

Distributors for Madras State: M/s. R. L. Gowder & Co., 59, Bunder Street, Madras.
Distributors for Andhra State: M/s. Satyanarayana Pharmacy, Kummari Street, Vijayawada-1 & Vijayanagar.

In Ocular Infections...



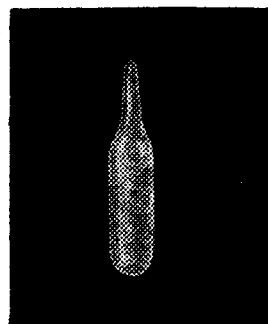
Highly Effective

Sealed and Protected in Disposable Applicator

Sufficient Medication for Application in Both Eyes

Minimizes Cross-Contamination and Re-Infection

Easily Administered



Chloromycetin

'APLICAPS'

SPECIAL-SHAPED PLIABLE GELATIN
CAPSULES WITH ELONGATED TIP

*Chloromycetin Applicaps are supplied in bottles of 12's and
50's, each Applicap providing 2.5 mg. of Chloromycetin in
250 mg. of a specially formulated petrolatum ointment base.*



PARKE, DAVIS & COMPANY LIMITED
(Inc. U.S.A. Limited Liability)
BOMBAY 1