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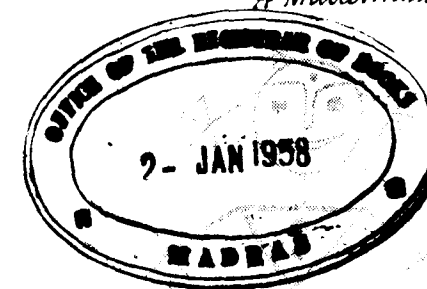
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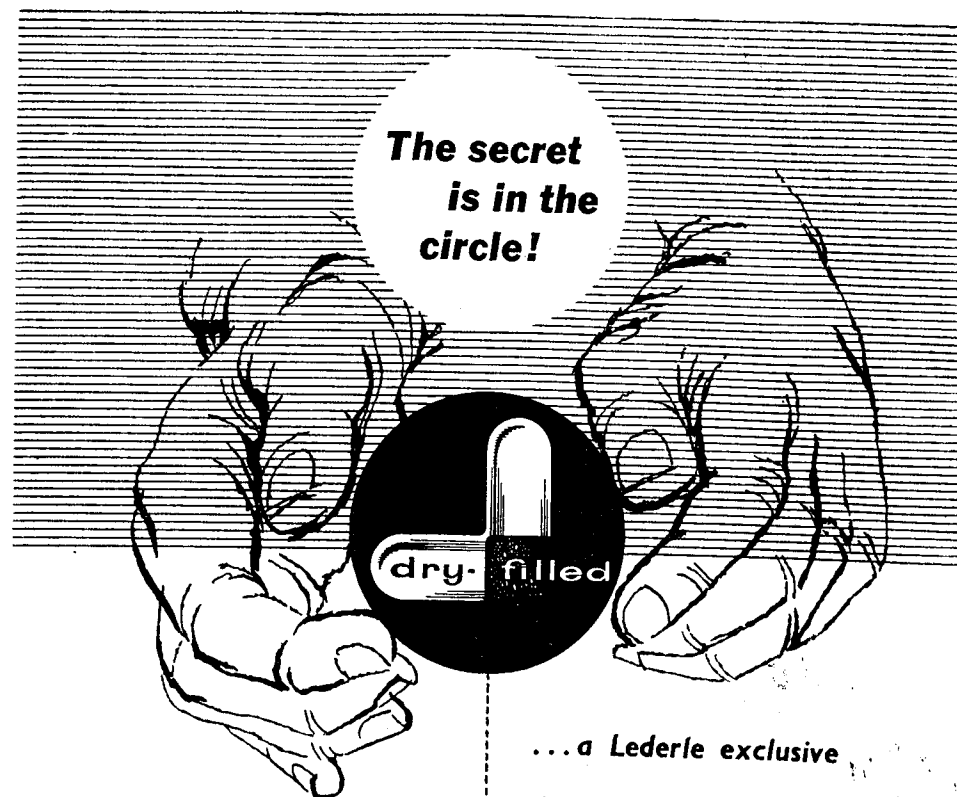
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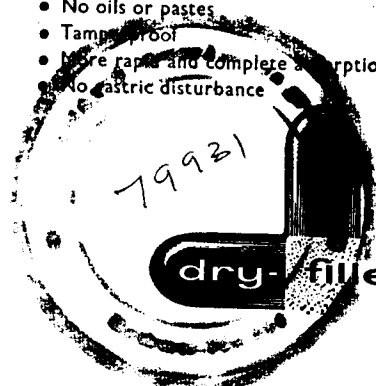
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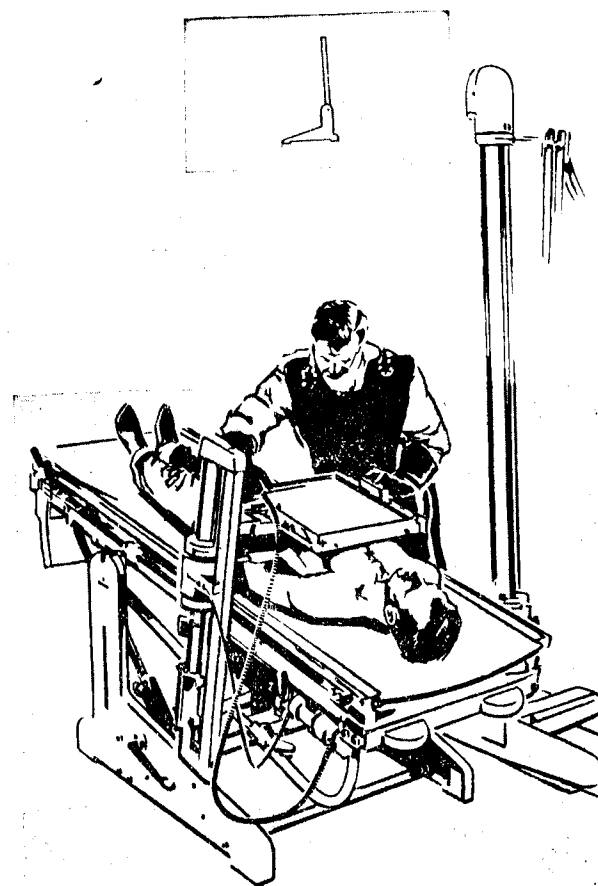
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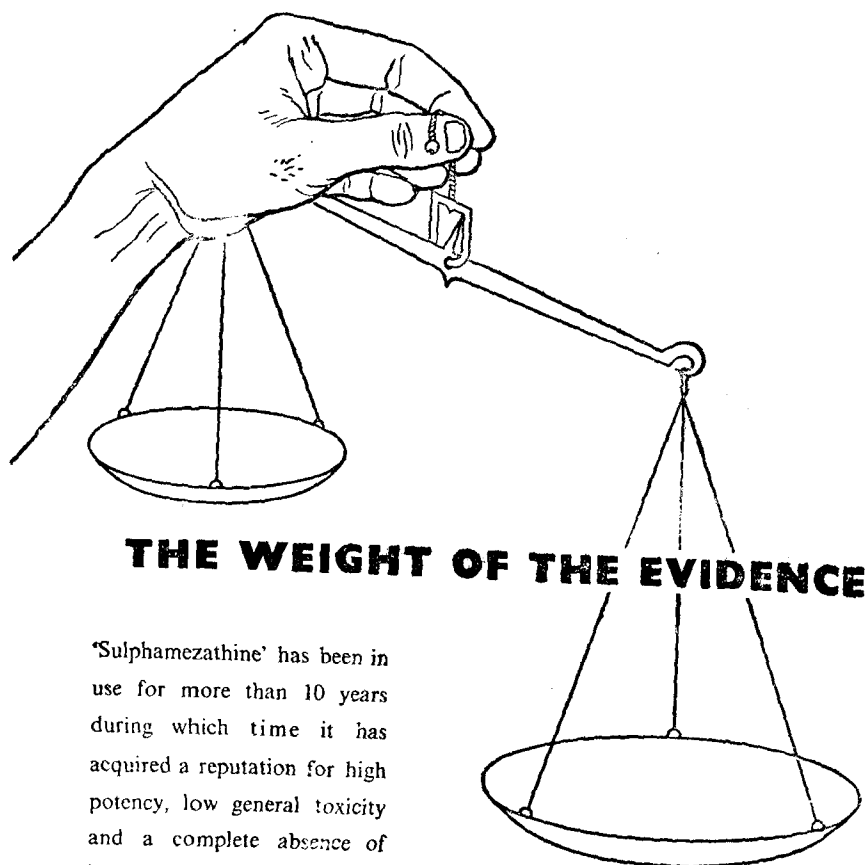
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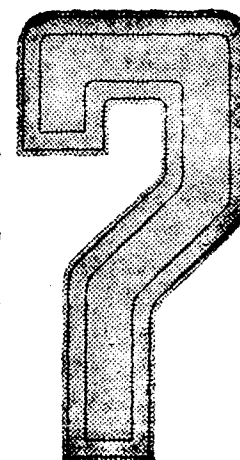
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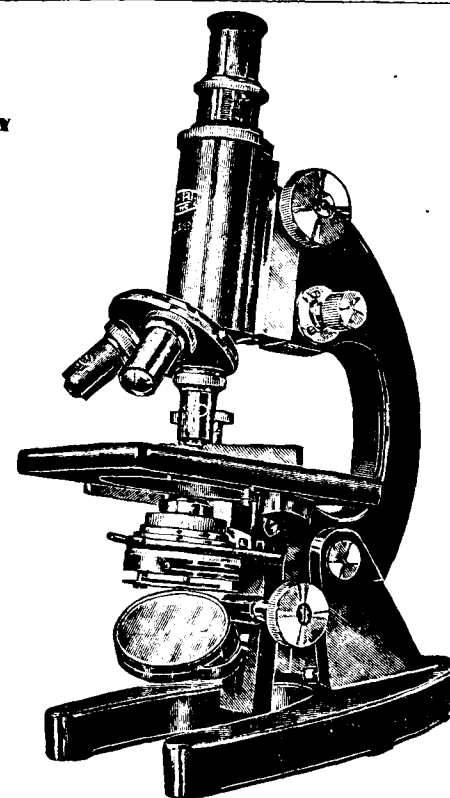
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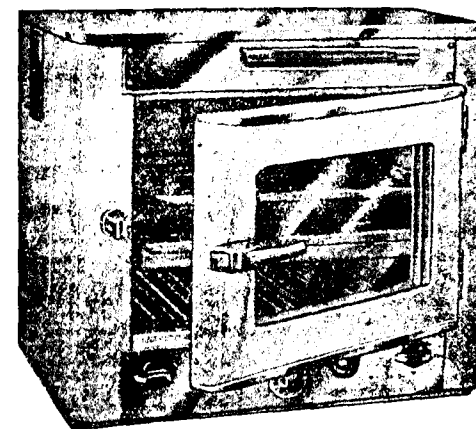
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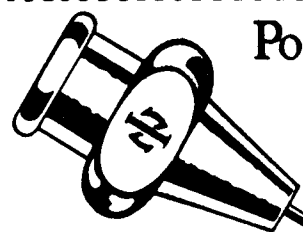
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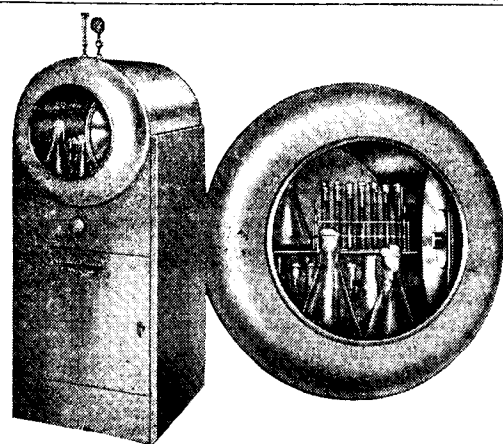
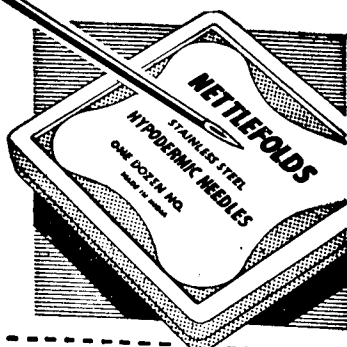
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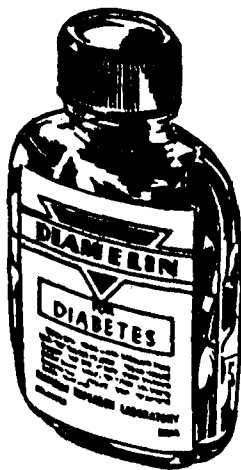
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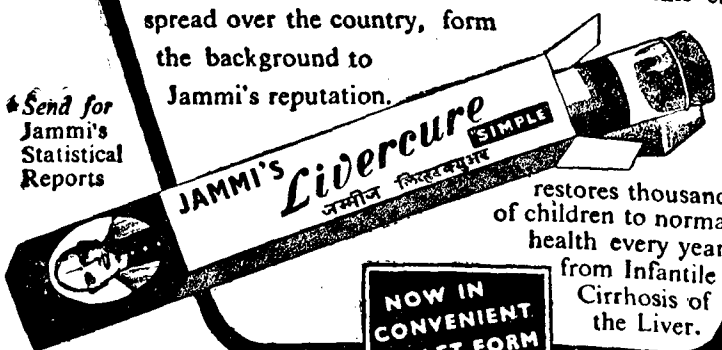
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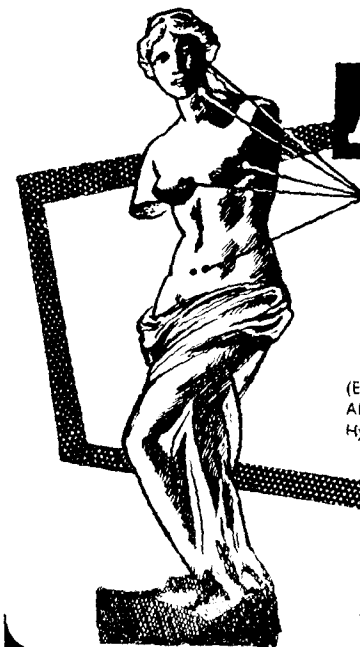
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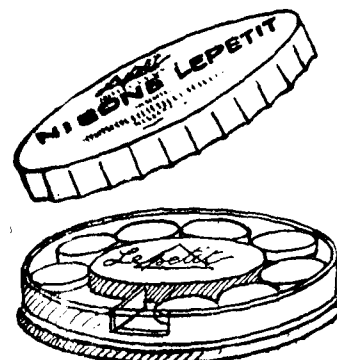
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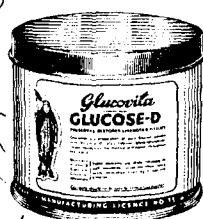
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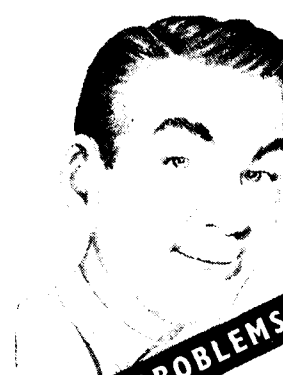
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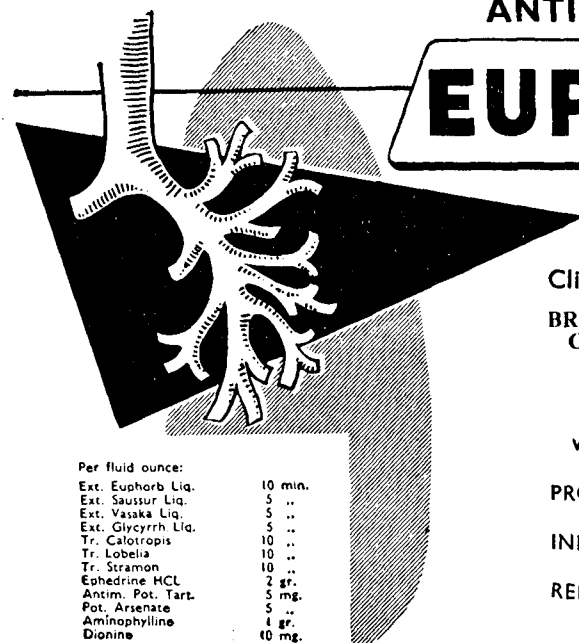


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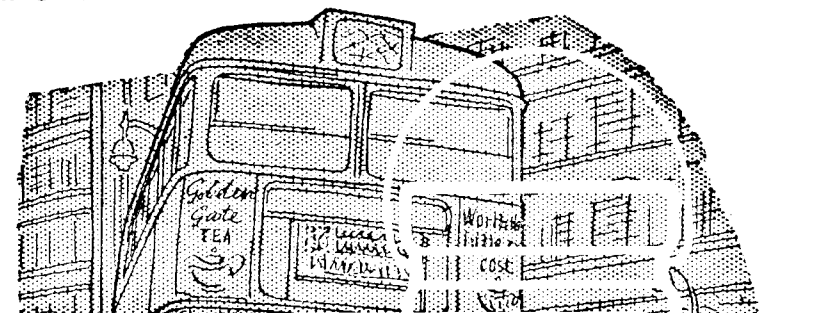
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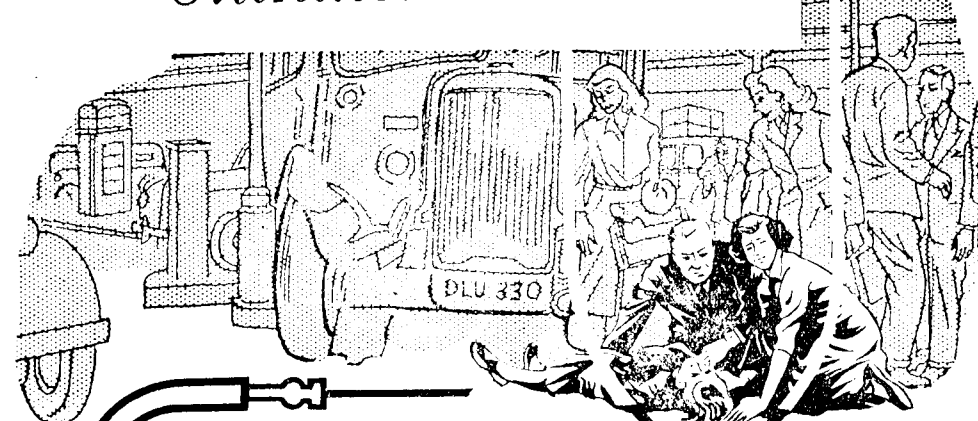
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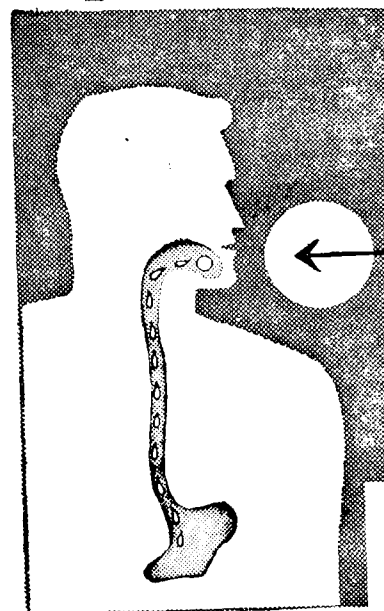
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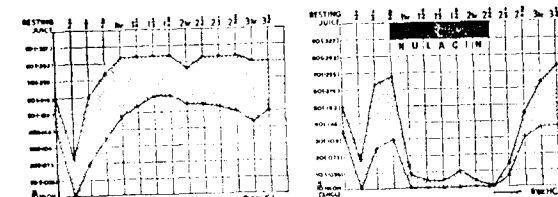
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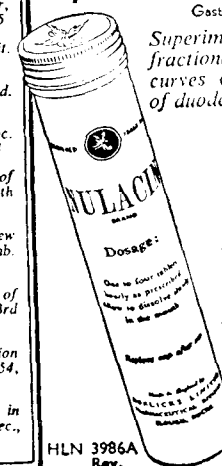
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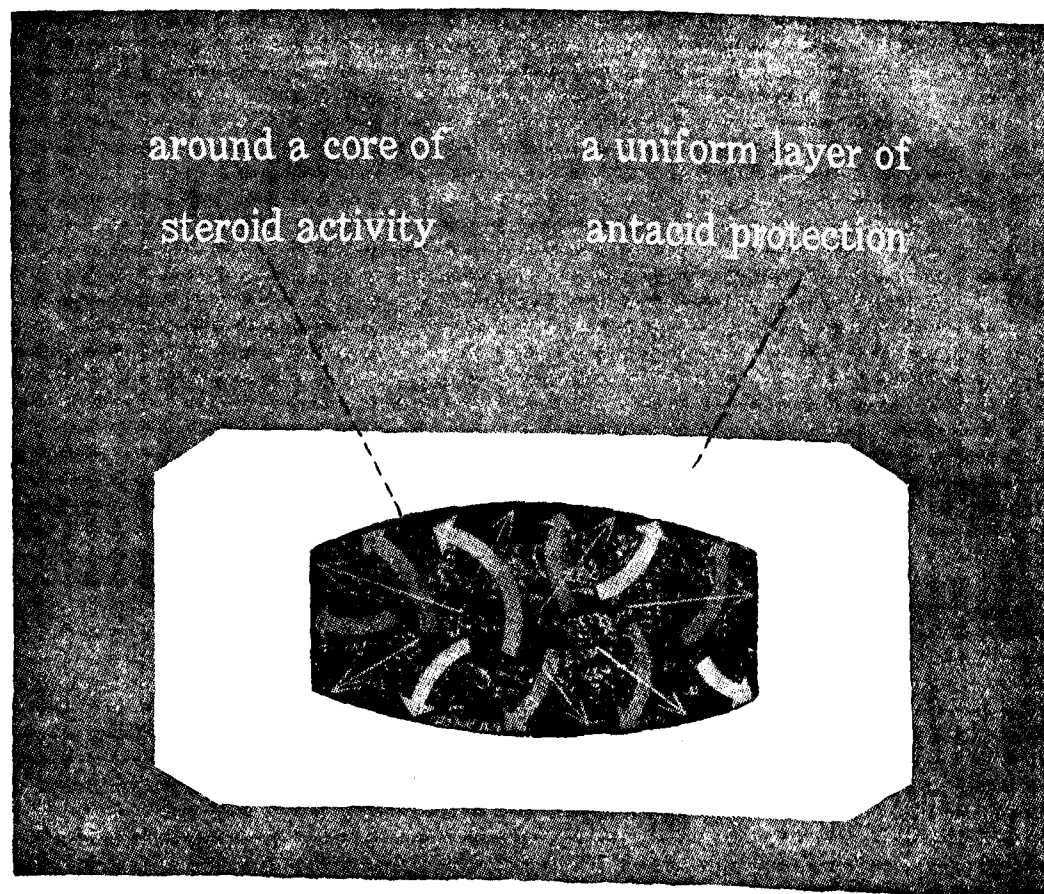
- ### REFERENCES
- Medical Treatment of Peptic Ulcer, Med. Press, 27th Feb., 1952, 227: 195
 - The Control of Gastric Acidity, Brit. Med. J., 26th July, 1952, 2: 180
 - Notes on Remedial Agents, Med. Review, Sept., 1952, 46: 162
 - Discussion on Peptic Ulceration, Proc. Roy. Soc. Med., May, 1953, 46: 354
 - The Effect on Gastric Acidity of "Nulacin" Tabs., Med. J. Aust., 28th Nov., 1953, 2: 823
 - Control of Gastric Acidity by a new way of Antacid Administration, J. Lab. Clin. Med., Dec., 1953, 42: 955
 - Further Studies on the Reduction of Gastric Acidity, Brit. Med. J., 23rd Jan., 1954, 1: 183
 - Clinical Investigation into the Action of Antacids, Practitioner, July, 1954, 173: 46
 - Management of Peptic Ulceration in General Practice, Med. World, Dec., 1954, 2: 591

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MULTIPLE COMPRESSED TABLETS

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CO-DELTRA/CO-HYDELTRA
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DIVISION OF MERCK & CO., INC., 161 Avenue of the Americas, New York 13, N.Y., U.S.A.

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Distributors for **MERCK-SHARP & DOHME INTERNATIONAL**
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Offices in CALCUTTA, BOMBAY, MADRAS, DELHI, RANGOON.

ENTEROMYCETIN

CHLORAMPHENICOL U.S.P.

INTRAMUSCULAR

Intramuscular therapy is indicated when oral or rectal administration is not possible in Comatose or Semi-Comatose patients. It produces immediate as well as prolonged therapeutic concentration in the blood.

Packing: Enteromycetin Intramuscular Ampoules of 250 mg. (2 cc) and 125 mg. (1 cc) in boxes of 3.

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G. ZAMBON & CO. S.p.A.
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DEY'S MEDICAL STORES PRIVATE LIMITED
CALCUTTA · BOMBAY · DELHI · MADRAS



Dalda—its role in nutrition

MCCARRISON in one of his addresses remarked: "The general dietetic error lies not in quantity, but in quality." Faulty nutrition is no doubt common in this country, but it is not so much lack of food as lack of the right kind of food, particularly vitamins and fats.

In a statistical survey of Vitamin A deficiency—judging by poor dark adaptation—more than half the children from working class homes in England were found to be deficient by Harris and Abbasy in 1939. Both in Africa and India, skin changes due to lack of Vitamin A were present in 80% of some groups of children (Nicholls, L-Indian Medical Gazette: 1933). This is also emphasised in Health Bulletin No. 23 (1956), issued by the Nutrition Research Laboratories, Coonoor. Vitamin A deficiency is the single factor responsible for a large number of nutritional deficiency diseases. The daily allowances for an adult are in the neighbourhood of 3,000 to 4,000 International Units of Vitamin A.

Vitamin A is found in only a very few foods, of which the most common are eggs, milk and butter, and for that reason it is important to realise that their Vitamin A content is not constant, but depends on the diet of the hens and cows. Besides, these animal foods are expensive and beyond the reach of many. Therefore, Fitzgerald Moore, in a practical discussion of the whole problem, concludes that the only hope of a solution is to reinforce local vegetable oils and fats with Vitamin A concentrates. As is well known, the Food Fortification Sub-

Committee of the Indian Council of Medical Research thought on the same lines, and recommended that 700 International Units of Vitamin A should be added to every ounce of Vanaspati. This recommendation was accepted by the Government and to Dalda we add 700 International Units of Vitamin A in addition to 56 International Units of Vitamin D.

Fat must be included in ordinary diets—because of its high calorific value and its protein-sparing action. But we have no exact knowledge of the quantity required. It is probably advisable that not less than 45-60 grams (1½-2 oz.) should be consumed daily. Most diets in India are very low in fat.

Dalda is a cooking fat made from pure vegetable oils according to strict Government specifications. It is manufactured from ordinary edible oils of everyday use by refining and hydrogenating them. Seven hundred International Units of Vitamin A and 56 International Units of Vitamin D are then added to every ounce—which is as much as good quality ghee contains. Dalda is easily digested and utilised by the body on account of its low melting point. The standards of quality are so high that Dalda compares favourably with its other counterparts such as "shortening" and "margarine" used extensively in the United States, England and other European countries. Each ounce of Dalda yields 250 calories, as much as 1 ounce of any good quality ghee and over twice as much as an ounce of wheat or rice. Dalda is, therefore, a very valuable addition to the average Indian diet.



HVM. 311-23



Use Loma, and regain your natural loveliness.

LOMA, the Universally acclaimed natural hair darkener is now available in specially designed bottle with pilferproof cap.



Sole Agents: M. M. Khambhatwala, Ahmedabad - 1.
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The first and original combination of Isoniazid, Pas, Vitamin C, Di-Calcium Phosphate & Vitamin D- Most economical and dependable for the successful treatment of tuberculosis in all forms.

TABLETS & GRANULES

ISOPASCAL-CD

INJECTABLE & TABLETS

BUTARIN

Phenyl Butazone, Amidopyrine plus Vitamin C Antirheumatic, analgesic Antipyretic & Antiphlogistic of choice - Antirheumatic action almost equivalent to cortisone - more safe & more economical.

The very latest, safest and surest tranquilizer for the management of Anxiety, Tension and Muscular Spasm. Non-toxic and economical.

COMPOSITION

2-Methyl-2-n-Propyl-1, 3-Propanediol Dicarbamate 0.4 gms. per Tablet.

Detailed literatures and price list from:

PANEDIOL

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**SAFETY
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NUMBERS**

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'SULPHATRIAD'

trade mark brand

COMPOUND SULPHONAMIDES

There are many infections in which sulphonamide therapy is clearly indicated. The difficulty is that high dosages of a sulphonamide may produce sensitization reactions, crystalluria and other undesirable side-effects.

This is why 'Sulphatriad' is so valuable. Its effective action is the sum of the virtues of its three powerful constituents, and combines rapid absorption with a good tissue distribution. But

as the risk of crystalluria is relative to the concentration in the urine of a single sulphonamide, 'Sulphatriad' means reduced concentrations of the individual components and reduced risk. Detailed information is available on request.

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*Most effective
Calcium Therapy...*

Colloidal Calcima D, B₁₂

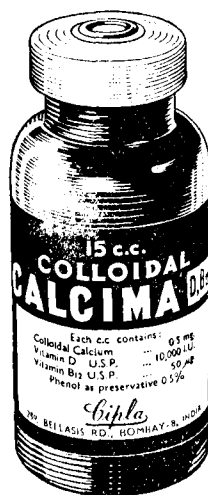
Containing

In each c.c.:

Colloidal Calcium 0.5 mg.

Vitamin D 10,000 I.U.

Vitamin B₁₂ 50 mcg.



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

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Each 30 ml. represents:—

Vitamin A (from 2.4 ml. of Shark Liver Oil approx.)	25,000 I.U.
Vitamin D	5,000 I.U.
Saccharated Oxide of Iron	3.55 G. (55 gr.*)
Hypophosphites of Lime.	
Sodium & Potassium B.P.C.	0.8 G. (12½ gr.)
Vitamin B ₁ B.P.	3 mg.
Vitamin B ₂ (Riboflavin B.P.)	2 mg.
Niacinamide B.P.	40 mg.
Copper & Manganese	Traces.
Palatable base enriched with flavoured Malt Extract	q.s.

* Approximate apothecary equivalent

Bottles of 454 Gms. (1 lb. approx.)

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CO. LTD., BARODA-3.**

You can put
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WHAT IS IT?

the phosphate complex of
tetracycline for initial
antibiotic blood levels.... faster
and higher than ever before

+

antifungal activity of Mycostatin
for added protection against
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the logical combination for antibacterial therapy and antifungal prophylaxis

MYSTECLIN

Squibb Tetracycline Phosphate Complex + Nystatin (Mycostatin)

Each capsule contains tetracycline
phosphate complex equivalent
to 250 mg. tetracycline hydro-
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Minimum adult dosage: 1 capsule
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WHY SHOULD YOU PRESCRIBE IT?

Because it provides highly
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antibiotic therapy for many
common infections and at the
same time protects your
patients against the monilial
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the usual broad spectrum
antibiotics

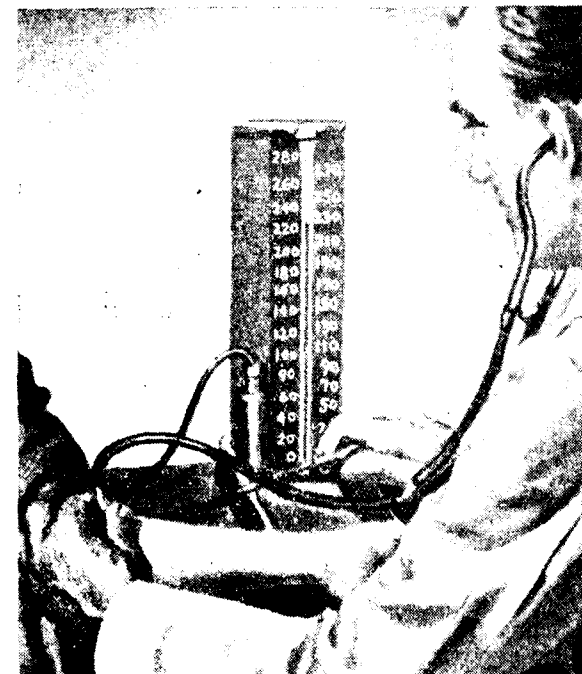
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Dequadin Lozenges containing a new bactericidal and fungicidal substance are rapidly effective against all the common oral pathogens including those resistant to penicillin. They do not contain any antibiotic or anaesthetic substance.

Dequadin Lozenges are indicated in the treatment of Vincent's angina, tonsillitis, sore throat, stomatitis, pyorrhœa, pharyngitis, aphthous ulcers, thrush and glossitis.

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By suppressing monilial growths, Dequadin Lozenges prevent the appearance of black tongue and oral thrush. They are also rapidly effective in the treatment of oral thrush including that due to prolonged antibiotic therapy.

DEQUADIN LOZENGES

In tubes of 20 lozenges each containing
0.25 mg. decamethylene-bis (4-aminoquinaldinium chloride).

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(INCORPORATED IN ENGLAND: THE LIABILITY OF THE MEMBERS OF THE COMPANY IS LIMITED)
CALCUTTA BOMBAY

CB6/400/X

*Sleep, rest of nature, O sleep, most gentle of
the divinities, peace of the soul, thou at whose
presence care disappears, who sootheest hearts
wearied with daily employments, and makest
them strong again for labour!*

QVID—METAMORPHOSES



'ETHOBRAL' contains quinalbarbitone, 50 mg. ($\frac{3}{4}$ gr.); butobarbitone, 50 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



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because anemia complicates
so many clinical conditions . . .



Lilly

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'Reticulex'

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serves a vital function in your total therapy

Potent 'Reticulex' offers your patient complete and convenient oral anemia therapy; provides therapeutic quantities of all known hematinic factors. Just 3 Pulvules 'Reticulex' daily produce a standard response in the average uncomplicated case

of pernicious anemia (and related megaloblastic anemias) and provide at least an average dose for hypochromic anemias (including nutritional deficiency types).

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To the sufferer it is not so much the common cold but its aftermath that causes discomfort. Secondary bacterial invaders are responsible for the sequelae of a cold; they also provide a focus of chronic infection and increase susceptibility to respiratory diseases.

A course of Cold (Anti-Catarrhal) Dissolved Vaccine 'Glaxo' improves the antibody defence against organisms commonly responsible for respiratory infection and protects against prolonged attacks and complications of cold.

COLD (Anti-Catarrhal) DISSOLVED VACCINE

In vials of 5 cc.

'Glaxo'



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NAUNEHAL BABY TONIC

*Useful in the following
diseases of Children*

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

FORMULA

*Each dose of 4.5 c.c. (approx.
one teaspoonful) contains :*

Vitamin A	... 2000 I.U.
Vitamin B ₁	... 0.4 mg.
Vitamin B ₂	... 0.6 mg.
Niacinamide	... 5 mg.
Vitamin C	... 20 mg.
Vitamin D ₂	... 500 I.U.
Calcium Glycero- phosphate	... 0.5 gr.
Sodium Glycero- phosphate	... 0.25 gr.
Sucrose	q.s.

NAUNEHAL

THE RICHEST TONIC FOR BABIES

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DAWAKHANA (TRUST) DELHI

HERE
IS
HEALTH
FOR
YOUR
BABIES!



NAUNEHAL GRIPE SYRUP

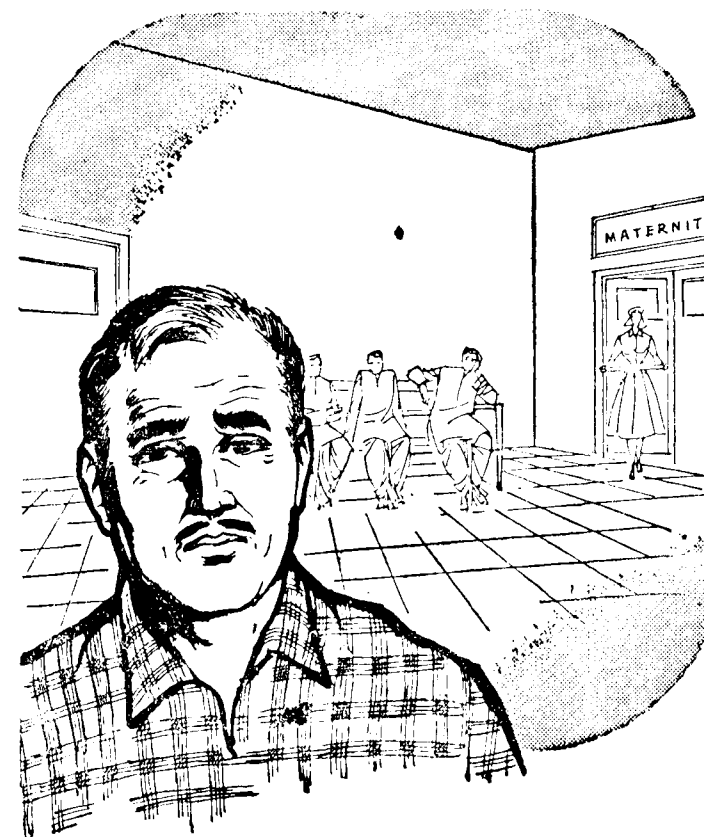
*Useful in the following
diseases of Children*

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

FORMULA

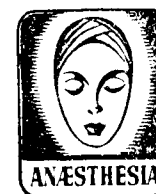
*Each dose of 4.5 c.c. (approx.
one teaspoonful) contains :—*

Aqua Pudina Destil- lata	— 3 min.
Aqua Zira Destillata	3 min.
Conc. Anisi Water	— 1 min.
Aqua Anethi Cono.	— 1 min.
Aqua Menth. Pip	— 1 min.
Soda Bicarb	... 2 grs.
Sodii Bromidum	... 1 gr.
Spt. Ammonia Aromat	1 min.
Spt. Chloroforml	... 1 min.
Sucrose	q.s.



*Will it be a
boy or a girl?*

Soon the anxious waiting will be over,
and everyone will know. Today and
every day people put their trust in
medicine. Doctors and nurses in
hospitals all over the country put
their trust in Indian Oxygen
equipment and gases—a
trust that is well founded.



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FLIT with Lindane

keeps homes healthier!

NOW everyone can guard against disease-carrying insects! FLIT contains Lindane as well as DDT to give it faster action, longer-lasting effect!

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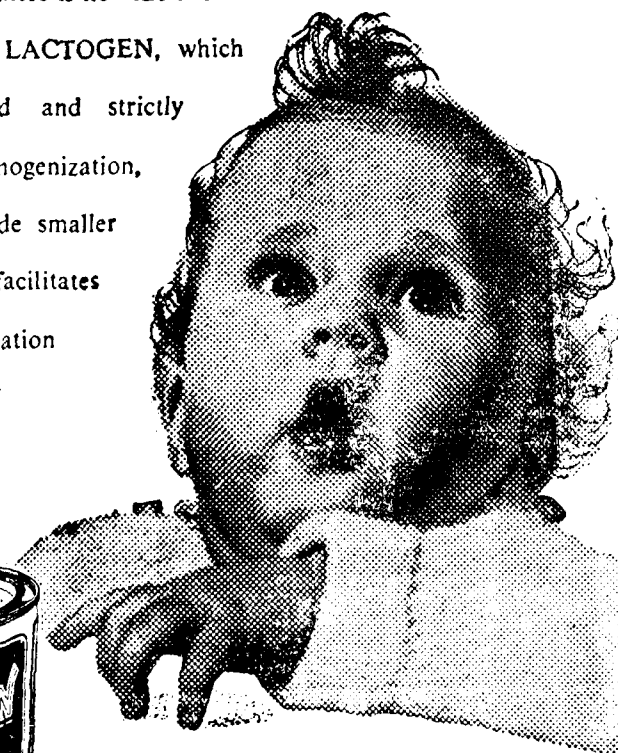


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V. 5352 (a)

“Every doctor knows ...”

Every doctor knows that there is no finer substitute for mother's milk than LACTOGEN, which offers a well balanced and strictly uniform diet. By homogenization, the fat globules are made smaller than human milk and so facilitates digestion, while pasteurization ensures the removal of pathogenic organisms.



The advantages of LACTOGEN :-

- Humanized composition
- Extreme purity
- Lasting freshness
- Easy digestibility
- Standard formula
- Simple preparation

Natural vitamins A & D and mineral contents supplemented by the addition of vitamins A & D concentrate and iron salts.

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HYDROPROTEIN

[PROTEIN HYDROLYSATE]

rich in
essential
amino acids

Serves as an invaluable aid in protein starvation and in maintaining nitrogen balance under different pathological conditions associated with impaired absorption of protein foods as in chronic diseases, inadequate synthesis of plasma protein as in liver diseases, increased protein catabolism as in febrile states, surgical operations and excessive loss of protein during pregnancy, lactation haemorrhage and also as an antacid modifies the gastric juice.

Packings: Injection Boxes of 6, 12 & 50 amps of 25 c.c. each. Bottle of 200 c.c.

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HYDROPROTEIN (Inj.) contains 5% protein in the form of amino acids and peptides in normal saline. HYDROPROTEIN (Oral) contains about 20% amino acids and lower peptides each fl. oz. representing 6 gms. of protein. Has been suitably supplemented with carbohydrate and essential aromatics to make it a palatable elixir.



Bengal Immunity Co., Ltd.
CALCUTTA - 13



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Brand

DIGOXIN

formerly known as Digoxin 'B. W. & Co.'

The new name has been adopted
to make easier for everyone
the distinction between
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Now simply write:

'Lanoxin' Tablets 0.25 mg.
'Lanoxin' Elixir Paediatric, or
'Lanoxin' Injection

to provide the unchanging safety and predictability afforded by the uniform potency, uniform absorption, brief latent period and optimum rate of elimination of this crystalline glycoside.

Packings

Tablets (0.25 mg.): containers of 25, 100 and 500.
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*it's good
-very good*

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ONE WEEK'S THERAPY for the peptic ULCER patient

	BREAKFAST followed in $\frac{1}{2}$ hr. to 1 hr. by	'ALUDROX' 2 teaspoonfuls
	----- MID-MORNING -----	'SEBELLA' 2 tablets
	LUNCH followed in 1 hour by	'ALUDROX' 2 teaspoonfuls
	----- MID-AFTERNOON -----	'SEBELLA' 2 tablets
	SUPPER followed in 1 hour by	'SEBELLA' 2 tablets
	----- BEDTIME -----	'ALUDROX' 4 teaspoonfuls

This dosage may be increased wherever necessary. After one week's combined 'Aludrox'/'Sebella' therapy, 1 'Sebella' Tablet t. i. d. will usually suffice.

'ALUDROX'* 'SEBELLA'*

AMPHOTERIC GEL
Available in bottles of 12 fl. oz.
'Aludrox' Tablets in bottles of 60.



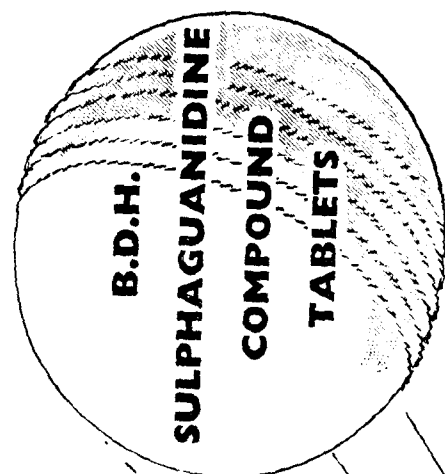
TABLETS
Available in bottles
of 60 tablets

* TRADE MARK

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CLEAN BOW(EL)LED



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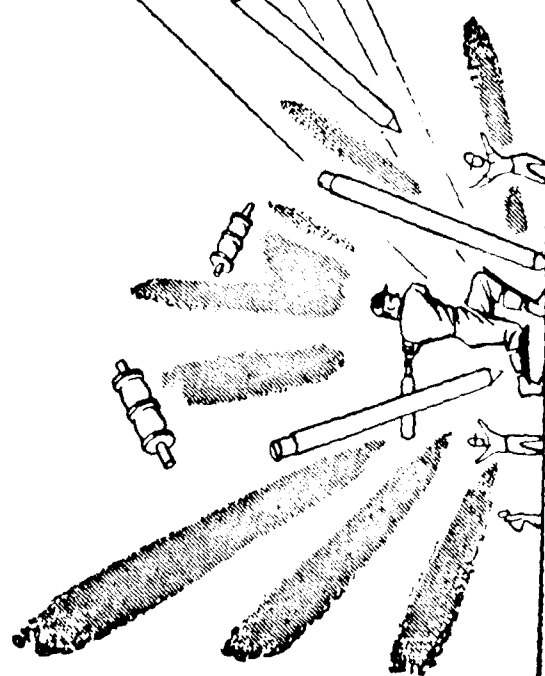
for treatment of bacterial infections of
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Bacillary dysentery. • Non-specific gastroenteritis
Summer diarrhoea. • Food poisoning

Tubes of 20 tablets. Tins of 500 tablets

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dreams a mother to-be.....

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A vitamin enzyme preparation with Bioflavonoids,
Lecithin, Methionine, Betaine Hcl, Folic acid, Vitamin
B₁₂ and intestinal antiseptic.



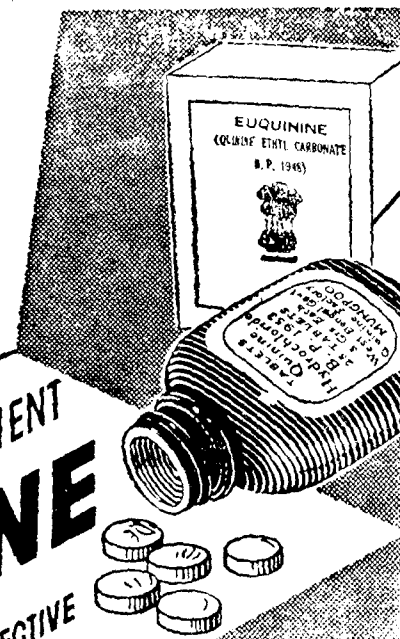
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Long Acting Penicillin

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Cryst. Penicillin G. Sed. 3 lakhs
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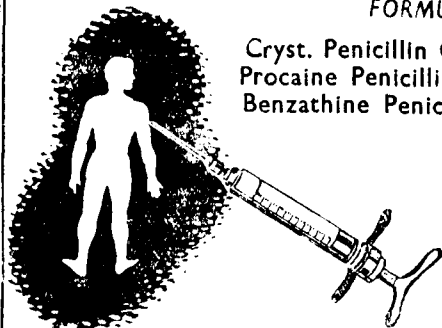
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TIC SINCE 1950

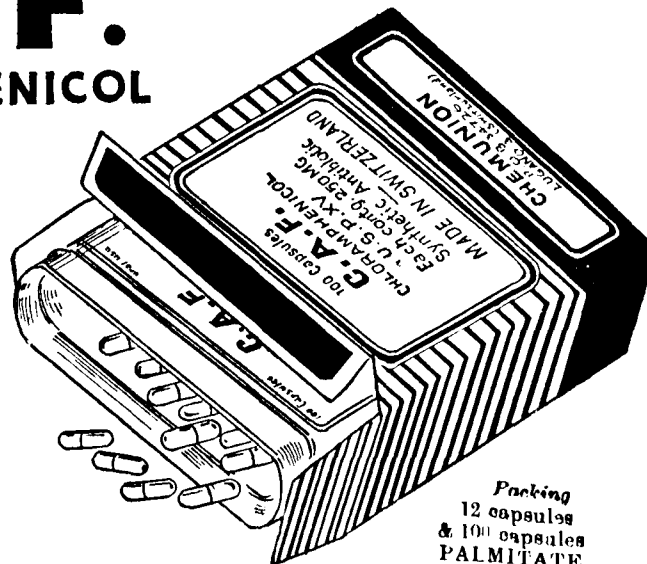
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RIAL INFECTIONS.

Manufactured by :
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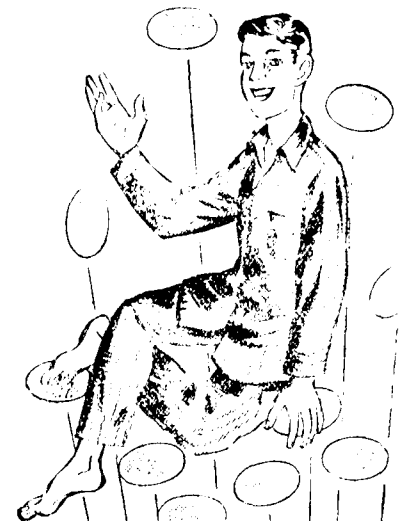
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Packing
12 capsules
& 10 capsules
PALMITATE
50 c.c. container



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.

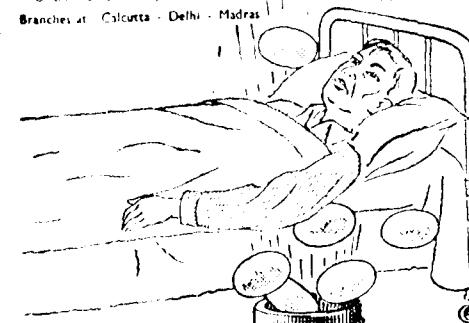
MULTIVITE FORTE

In Chocolate-Coated Tablets

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Branches at : Calcutta - Delhi - Madras



VITAMIN A, B₁, C, D

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CALCIUM



HEWLETT'S MIXTURE

IN 4 OZS. &
10 OZS. BOTTLES

WITH OR
WITHOUT
OPIUM

Popular
for over
80 Years

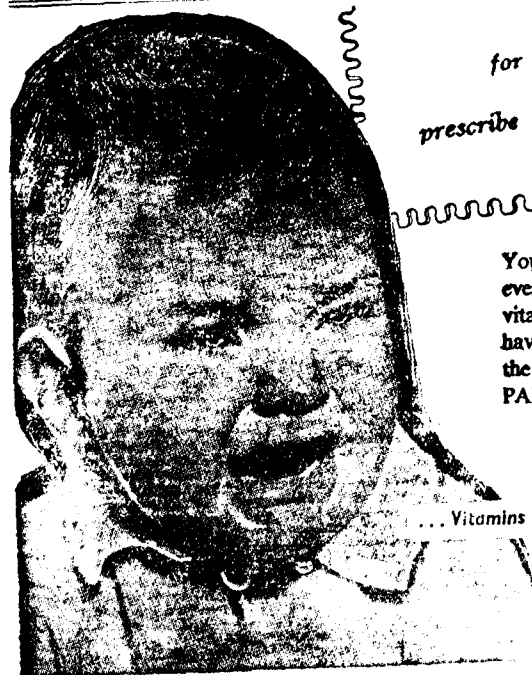


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Original Articles

DIAGNOSIS AND MANAGEMENT OF CORONARY THROMBOSIS*

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THERE has been an increase in the incidence of coronary thrombosis all over the world which is evident even in India.

TABLE I

Showing the admissions in the Govt. General Hospital, Madras

Year	Total No. of Cases	Year	Total No. of Cases
1946	... 28	1951	... 46
1947	... 30	1952	... 48
1948	... 26	1953	... 57
1949	... 23	1954	... 59
1950	... 20	1956	... 76

Coronary thrombosis is an outstanding cardiac emergency and there is a history of chest pain in the large majority of cases. As a rule the pain is very severe and incapacitating. The pain is so excruciating that the patient is restless and goes into a state of shock; it may be anywhere in the precordium or entirely in the right side of the chest with radiation to the right or to the left shoulder or it may be felt along the sides of the neck, on the under-surface of the jaw to the left heart or left side of the back or the epigastrium or hypochondrium. On rare occasions the pain may even be referred to the thighs. Wherever the pain may occur, there is always a dull sub-sternal pain in cases of coronary thrombosis. This wide variation with regard

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to the site of pain accounts for the common mistake that is made in the diagnosis of coronary thrombosis. For instance, with a right-side chest pain one is likely to think in terms of pleurisy or biliary colic and if the pain is referred to the abdomen one is inclined to think more of acute abdomen. In coronary thrombosis there is a peculiar ashy appearance of the face which is well-marked in a fair-skinned person, though it can be made out even in dark coloured persons. About a day or later, low fever sets in, when a few rales are heard over the base of the lungs particularly over the left base. In cases of anterior myocardial infarction a pericardial rub may be heard over the precordium but the pericardial rub is not a constant feature. It may be heard only for a short-while though occasionally it may be heard for some hours or even for a day or two.

The present tendency is to divide cases of coronary thrombosis into "severe" and "less severe" attacks based on clinical judgement. Severe ones are associated with large infarcts and the less severe ones with the small infarcts of the myocardium. The infarct can take place either abruptly resulting in a sudden and acute onset of symptoms or slowly when the symptoms will be spread over some days or even weeks. The infarct may also occur by an extra load occurring in a vessel which is already sclerosed. Sometimes a drop in the blood-pressure may precipitate thrombosis if the artery is narrowed or if the thrombosis is already in the process of forming.

In one of my cases the patient presented himself with a history which was very highly suggestive of coronary insufficiency. He took a saline purgative which precipitated an acute attack of coronary thrombosis, from which he did not recover. Sometimes a drop in blood-pressure may occur due to the administration of anti-hypertensive drugs. For thrombosis to occur there must be damage to the intima. Periarteritis and traumatic arteritis may also give rise to thrombosis. It is believed that either a proliferation of the intima occurs which partially occludes the lumen of the vessel aiding thrombus formation or that a rupture of a small intimal vessel in an atheromatous patch gives rise to thrombosis which eventually occludes the vessel or that a sub-intimal hæmorrhage from vaso-vasorum may rise the intima and due to the rough surface it may favour thrombus formation. So long as the lumen is patent there may not be any symptoms or there may be symptoms suggestive of angina pectoris and when final occlusion occurs collateral circulation takes place. A severe or less severe coronary thrombosis is evident. Clinically the condition is recognized when sizable arteries right or left circumflex and the anterior descending branch is affected. Sometimes minor branches may also be affected. The size of the infarct naturally

depends upon the size of the artery, as also on the degree of collateral circulation. If the collateral circulation is good in spite of occlusion, the myocardium will be free from infarction. Sometimes coronary thrombosis varies widely from 'no symptoms,' to 'severe attacks' with prolonged pain, shock and pulmonary œdema. Cases which have had no symptoms can be recognized by the fact that they come for symptoms of cardiac failure without any valvular damage. The pressure is invariably low. It is the systolic which is low as compared with the diastolic, particularly blood-pressure readings like 130-140 or 110 which suggest the possibility of coronary thrombosis. More so when one sees in an X-ray picture or on screening a large-sized heart in a robust well-built individual. In these cases an electrocardiogram confirms the suspicion. Clinically thrombosis is not evident, in these cases; the occlusion would have taken place sometime previously without producing any pain.

Sometimes the pain is replaced by one of its equivalents *i.e.*, the patient may go into a severe state of shock, in which he does not experience the pain, or is not in a position to appreciate the pain nor the clinical manifestations like pulmonary œdema. Sometimes the attack may be characterized by giddiness, dyspnoea, or a state of pallor or by belching or vomiting. These are called substitution symptoms and sometimes they may be the only symptoms. The fall in B-P. that occurs, again varies widely. In severe degrees of shock there may be a progressive and continued fall in the pressure and the patient may not recover at all. The severity of the myocardial damage is reflected by the degree of fall in the B-P., by the duration of shock and by the extent of pulmonary œdema. If peripheral venous engorgement occurs in a case of coronary thrombosis, it indicates that there is right heart-failure as well and it also indicates a bad prognosis. In the average or in the mild case the blood-pressure may not fall for the first 24 hours. Generally a low-grade fever occurs; the temperature as a rule does not exceed 101°F. The fever is due to the absorption of the thrombus and the duration of fever also gives an idea of the severity of the thrombus-formation. With the onset of fever, a leucocytosis occurs; the E.S.R. is raised, and characteristic E.C.G. changes may be expected to occur by this time.

Other complications are:—(1) *Pericarditis* occurring generally at the end of the first day, though it may be delayed by 48 or 72 hours. Exceptionally, it may occur even at the beginning of the second week. This is however, rather unusual. This is not an important complication but to the attending physician a fresh onset of pain naturally raises the question whether it is an extension of the previous thrombosis or it is a fresh thrombus. Usually with the onset of pericarditis in addition to pain

there is a mild elevation of the blood-pressure. An intelligent patient is generally able to distinguish this pain from the pain caused by the infarction some days previously. Apart from that, in some cases at any rate a pericardial rub may be heard. Unfortunately the pericardial friction-rub in the case of coronary thrombosis is extremely evanescent in character, the place to look for pericardial rub is over the precordium and along the edges of the heart. The pain does not radiate. There are characteristic E.C.G. changes in pericarditis. Sometimes in the E.C.G., the picture may be masked by the previous coronary thrombosis.

The troublesome complications that may occur during the earlier phase of coronary infarction are:—cardiac arrhythmias, which may be numerous, ventricular extra-systoles or paroxysmal tachycardia or auricular fibrillation. It is with a view to checking this irregular heart action, that people of one school of thought administer quinidine as a routine, in every case of coronary thrombosis. There is no justification for this procedure as, when such a complication actually occurs, one can always start the patient on quinidine. Less commonly, embolic manifestations may occur, at any time after the 4th or 5th day after the infarction. This is due to thrombosis from the endocardial surface getting dislodged and being carried by the systemic circulation. In cases of complete immobilization, peripheral venous thrombosis might occur which, getting dislodged is likely to be lodged in the pulmonary circulation resulting in pulmonary arterial embolism. This pulmonary arterial embolism is a rather late manifestation, likely to be seen in severe cases. In these cases the fever is likely to last much longer than in cases of coronary thrombosis. In a few of my cases, the temperature was not high. Sudden deaths that occur in the course of coronary thrombosis are due to ventricular fibrillation or to a rupture of the myocardium. These complications may occur at any time but usually they do during the first few days.

TREATMENT:—Almost the first thing to do is to relieve the pain so that the patient will have adequate rest. To this end, as soon as the condition is recognized as due to coronary thrombosis, a quarter grain of morphia is given intravenously in severe cases and at the same time one of the cardiac analeptics is given intramuscularly. In the less severe and in moderate cases morphine is given intramuscularly combined with cardiac analeptics or atropine. The complete immobilization of the patient has been a matter of controversy. It may be all right in western countries where patients sensibly conform to the regimen of the hospital. Being afraid of cardiac necrosis that is likely to develop they do not submit these patients to complete immobilization. Here in India, the economic condition

of our people is so bad that patients are not likely to observe complete immobilization even when insisted upon and so there is little chance of cardiac necrosis developing. The average Indian patient can ill-afford to remain in bed under the present economic conditions and living standards of our people. For the first 24 to 48 hours, there need be no hesitation in repeating morphine, if necessary every two hours, so that the pain is completely controlled. The time-interval at which morphine is needed to relieve pain gives a prognostic clue. Cases in which two hourly injections of morphine are needed do not generally do well. Cases in which recovery occurs do not usually need on an average more than 4 or 5 times in the course of the first 24 hours, and no more than three injections on the following day.

The great objection to morphine is the depressing effect on the cardiac and respiratory centres and the vomiting that may accompany it; it is also likely to cause constipation. To overcome this difficulty pethidine has been advocated. Though many patients are not so sensitive to pethidine, as to morphine, one cannot be absolutely certain that pethidine will not cause vomiting. I have had quite a few patients who had severe vomiting even with pethidine.

In all severe cases, it is worth while putting the patient on anticoagulants. Either depot-heparin or ordinary heparin may be used. Depot-heparin is slow-acting, the heparin being released from the depot only slowly; but for quick action ordinary heparin should be used; 50 to 60 mg. every 4 hours. Depot-heparin may be given every 12 hours. In many cases the clotting-time should be determined before the next injection and the clotting-time should not be longer than 20 minutes and if, by chance the clotting time is beyond 20 minutes, heparin administration should be delayed till the clotting time returns approximately to 20 minutes. It is assumed that the normal clotting-time is 6 to 8 minutes. As heparin is being administered, the patient is started on one of the coumarol derivatives. We have been using for the last few years either Tromexan or Marcoumar. Tromexan promotes an easier breakdown of the content and encourages very rapid absorption in the intestinal tract. Generally the action is obtained in anything from 18 to 30 hours and in another 18 hours, after cessation of the administration of the drug, the prothrombin-time returns to the normal level. At the end of 18 hours, the prothrombin time is about 20 seconds and at the end of 30 hours, it reaches the peak value of 30 seconds following a single dose of 1500 mg., whereas the peak level is reached between 48 and 72 hours; with Dicoumarol it takes two or three days for this effect to be over. Tromexan has about a fifth of the strength of dicoumarol and so the dosage is about

5 times that of dicoumarol. Marcoumar is roughly about 16 times as strong as dicoumarol and so 3 mg. tablets can be used in place of 50 mg. of dicoumarol or 500 mg. of Tromexan. While administering anticoagulants it is necessary to maintain therapeutic levels with prothrombin-time of 25 to 35 or 40 seconds and if one wishes to maintain the optimal therapeutic results. Thrombo-embolic complications occur only in cases where the drug is used in inadequate therapeutic doses. Coumarol derivatives are contraindicated in liver diseases. Deficiencies of Vitamin K may be brought about by the administration of the broad-spectrum antibiotics. Salicylates may also be given; given in large doses, salicylates may accentuate the activation of the anticoagulants. Similarly acute alcoholism may also accentuate the effect of the anticoagulant. Protein-deficiency in the diet, is another important factor, as also starvation. Malignancy is a notorious cause for increasing response to anticoagulants particularly malignant diseases of the pancreas and of the liver. Whether anticoagulant therapy can be given as a routine or only in selected cases is a clinical problem. Those who are for anticoagulants as a routine are sure about the uncertainty of thrombosis *i.e.* in cases which appeared to be mild but may take a serious turn and die. The safe procedure will be to provide laboratory facilities before starting anticoagulant therapy.

At present most of the teaching institutions are having good laboratory control and anticoagulants can be safely started in these centres. Where laboratory control is not possible, depot-heparin may be tried as it will then be easier to control the clotting time. Once anticoagulant therapy is started, it should be kept up for the next six weeks and in cases where there is evidence of multiple thrombosis—coronary or cerebral thrombosis—it may even be necessary to continue it for some months. Anticoagulants are particularly indicated when there is high fever or where there is evidence of cardiac failure, and irregularity of rhythm and when the pain is severe. In spite of the availability of all facilities and laboratory controls, hæmorrhage and bleeding may occur. So once the patient is started on anticoagulant therapy it is wise to have Vitamin K₁ handy. It is marketed by Roche under the trade-name of Konakion. It is not yet available in this country; but its average dose is 250 mg. Fresh-blood should also be kept ready, in case bleeding starts. If there is diabetic complication it is wise to give insulin during the acute phase of myocardial infarction if there is acidosis as well, when a small dose of insulin is administered. The crystalline variety of insulin is to be preferred. Alcohol may be used as a vaso-dilator and as a soothing agent during the course of acute myocardial infarct. It may be administered as whiskey and soda. Papaverine is a very useful drug to control peripheral vascular spasm,

in a dose of 0.1 g. intramuscularly; Aminophyllin also has got a dilating effect on the collateral anastomotic branches and may help to bring more blood into the area of infarction. A dose of 0.25 g. should be given slowly into the veins over a period of 10 minutes; if given too fast it might produce ventricular fibrillation.

Digitalis is indicated only when there is a congestive failure and not otherwise. A very useful preparation is Lanatocide or Cedilanid for acute failure. Similarly it can be used for paroxysmal supra-ventricular tachycardia; but in the nodal and ventricular tachycardia Pronestil intravenously or quinidine orally or intramuscularly or intravenously are the drugs of choice. Convalescence should be slow particularly in severe cases. Every week the patient may be allowed one pillow, and when at about six weeks he may be brought to sitting posture and at the end of six weeks he may become ambulant within the room and after another six weeks (*i.e.*, 12 weeks later) he may be asked to move about on level ground. If there is respiratory distress, the patient should be given oxygen for inhalation.

DIET:—Diet in the form of glucose and fruit juice should be given in small quantities during the first 24 to 48 hours, and at the end of 48 hours he may be given citrated milk or skimmed milk, defatted butter-milk and *conjee*. Four or five days later when the symptoms have all subsided he may be allowed solid food, avoiding all articles of diet likely to cause flatulence *e.g.*, leafy vegetables like cabbage, cauliflower etc. Once solid food is permitted, digestive enzymes may be administered to prevent flatulence. It is wise to start the patients from the beginning on liquid paraffin or an emulsion of it at bed-time, in order to keep the bowels open, but without causing diarrhoea. If at the end of 72 hours, there is no motion in spite of laxatives, a low glycerine enema may be given. This may be repeated once in 48 hours if spontaneous evacuation does not occur. Once the pain has been controlled, phenobarbitone or similar drugs may be administered to ensure adequate sleep. The key note to success in treatment is the "Go-slow policy."

Summary.—(1) Coronary thrombosis is now increasing in its incidence as shown by statistics; (2) the main diagnostic features are mentioned, as also (3) the important complications that may be met with (4) a brief outline of the treatment is given stressing the need for rest, relief of pain by drugs like morphine, the role of anti-coagulants, the complications and their management.

Acknowledgement.—I wish to thank the Dean of the Government General Hospital, Madras and the Director of Medical Services for permitting me to publish this paper.

REFERENCE:

1. Practitioners' Conferences, Vol. I.

RETINAL DETACHMENT

A joint Conference of the National Society for the Prevention of Blindness and the Pan-American Association of Ophthalmology was held in New York City in April 1957. More than 1,000 eye specialists, nurses and social workers attended.

Dr. K. Pischel of San Francisco reported that the basic knowledge of the pathology and physiology of the causes and development of retinal detachment is now fairly complete. When vitreoretinal adhesions are numerous or very marked, some form of scleral resection is needed. Dr. Pischel stated that the original penetrating scleral technique has been practically replaced by the lamellar scleral resection, a simpler and safer operation. In his opinion it is the operation of choice among the various types of surgery advocated today. As an adjunct to this operation or as a separate one the intra-vitreous injection of preserved human vitreous as recommended by Dr. Donald M. Shafer is a valuable procedure.

Dr. Guillermo Pico of Puerto Rico stated that successes in surgical operations were due to pre-operational ophthalmoscopic localization of the tears. According to Dr. Pico, good results are still being obtained with the classical diathermy operation on 75 per cent or more of retinal detachments. Where this is not likely to be successful a number of techniques, all based on the principle of shortening the sclera, are now available, the most popular being the lamellar scleral resection. Dr. Pico said that although some ophthalmologic surgeons, for apparently good reasons, are shortening the period of bed rest after surgery for retinal detachment, conservatism still seems wise in view of the 14-day period necessary to achieve wound-healing, regardless of the technique employed.

Treatment of trauma:—Increasing incidence of success in keratoplasty was reported by Dr. R. Townley Paton of New York at the P. A. Conference of Ophthalmologists in New York in April 1957. This is due to three factors: experience in the selection of cases; improved surgical technique; and successful treatment of postoperative complications. It is generally agreed that small central corneal scars with an absence of vascularization, and in an otherwise normal eye, give the highest incidence of success. Conical cornea, before hydrops or perforation occurs, gives the next highest incidence of success. Formerly, the criterion was whether the patient had 20/200 or less sight with a contact glass. Now most surgeons prefer to operate when ordinary glasses fail to give adequate correction, and the condition is known to be progressive. Excellent results are now obtained in the familial dystrophies. Interstitial keratitis gives a good prognosis in the inactive stages, and when there is a minimum of superficial vascularization. Dr. Paton said that nearly all lime burns and other chemical damage give a bad prognosis.

A paper on the management of traumatic lesions and foreign bodies of the anterior chamber angle was presented by Dr. Harvey E. Thorpe of Pittsburgh. He outlined the diagnosis and treatment of blunt and perforating injuries and foreign bodies, emphasizing that the most careful planning and sound judgement are important aids. Contusion or concussion of the eyeball, may induce an attack of primary or secondary glaucoma. The former usually occurs in patients with narrow anterior angle. The latter may occur in patients with narrow or wide angles. When a contusion causes rupture of the globe, careful attention to prolapsed tissues (judicious replacement or excision) and direct suturing of the scleral margins are important.—(*The Sight-Saving Review*, Summer 1957).

HYPERTENSION IN GENERAL PRACTICE*

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WITH the increasing tempo in the speed of our daily lives, hypertension is becoming more and more common. Accordingly its treatment is also becoming more expensive, rigorous and dynamic. In practice, the disease is found in various grades of severity. The patient may often be totally unaware of its existence till it is accidentally revealed in a medical check-up. Sometimes it may present itself in a florid form with cardiac asthma, anginal pain, dyspnoea on exertion, and retinitis. There is a gross disparity in the clinical manifestations of the same entity and so the approach must be suitable to the variations noted.

The greatest difficulty in regard to hypertension lies in a definition of the limits of normality, because there are multiple physiological factors that raise the blood-pressure for short or long periods. So the elevation of blood-pressure is not necessarily the greatly feared 'hypertension' or 'hypertensive disease.' For the elevated blood-pressure to be styled 'hypertension,' it is necessary that the blood-pressure must show a persistent rise, when the patient is completely relaxed, both mentally and physically. The ideal time to test the blood-pressure of a person is during sleep or soon after he wakes up. This will be the basal blood-pressure. The patient should be rested on a couch in the consulting room for over 15 minutes before blood-pressure readings are taken. Even in the process of taking them the blood-pressure may show a rise. So it is generally the custom in my clinic that an assistant fixes the blood-pressure cuff on the arm of the patient while he is resting on the examination-couch and long before the blood-pressure reading is actually taken by me after interrogation and other physical examinations. An isolated reading of an elevated blood-pressure does not constitute 'Hypertension.'

There is little uniformity in regard to the limits of normal blood-pressure. Both the systolic and diastolic pressures smoothly increase gradually from birth to the age of 50 in health, when they are generally accepted as normal at 145 mm. Hg. systolic and 95 mm. Hg. diastolic. After the age of 50, the increase in systolic pressure is accelerated, perhaps as a result of sclerotic changes in the blood vessels. The increase in diastolic pressure after 50 years is comparatively very small. The lower limits of hypertension as given by Master *et al.*¹ for the age-group 60 to 64 years in both males and females are 190 mm. Hg. for systolic, and

* Specially contributed to the ANTISEPTIC.

110 mm. Hg. for diastolic. The intermediate zone between the definitely normal range and the lower limit of hypertension as mentioned above, deserves a thorough study before the persons in the range are declared to be hypertensive. Personal equations in the registration of blood-pressure readings should also be taken into consideration.

The blood-pressure readings may be placed in three zones *viz.*:—(1) Those in the definitely normal zone, *i.e.* up to 145 mm. Hg. systolic and 95 mm. Hg. diastolic with due reference to age and weight. (2) Those in the intermediate zone, where the readings are higher than normal but lower than the lower hypertensive limit with the same considerations as above. Ten per cent above the upper normal limit for the age and weight may roughly be taken as the lower hypertensive limit. (3) Those that are definitely in the hypertensive range. The sphygmomanometer is useful in showing the elevated blood-pressure but not hypertension. The label of hypertension can truly be applied only if the blood-pressure readings are in the third or hypertensive zone, or when the systemic effects of an abnormally high blood-pressure are observable. These effects consist of:—(a) an enlargement of the left ventricle. (Familial cardiomegaly excluded); (b) sclerotic changes, or in the early stages spasm of the retinal arteries, or other fundal abnormalities; (c) left axis deviation or signs of left ventricular hypertrophy in the electrocardiogram; and (d) albuminuria or renal dysfunction.

Spasm of the retinal vessels may be seen in high strung individuals. Temporary high blood-pressure readings may be obtained in emotional and sensitive persons. Frequent rises of blood-pressure may, in the long run, lead to established hypertension.

Before the systemic responses make their appearance certain symptoms may point to the early hypertensive state. It is important to look for the symptoms in order to forestall the diagnosis of hypertension. At this stage a little precaution by way of rest, the use of tranquilizers and sedation may suffice to control the progress of the disease. The symptoms which may be associated with hypertension are:—headache, giddiness, a feeling of tiredness, breathlessness even on mild exertion, indigestion, lack of concentration, disorders of sleep, anginal pain or spasm of cerebral or other vessels.

Readings of elevated blood-pressure should always be viewed seriously by the doctor, who should however, always take care to ensure that his patient does not notice the doctor's concern about it. The figures should never be communicated to the patient. He must be told that the readings do not matter at all, so long as he has no complaints. If the patient inadvertently

gets to know that he has a high blood-pressure, that knowledge alone will do him greater harm than the raised blood-pressure itself.

If the elevated blood-pressure is higher than normal but lower than the lower hypertensive limit, *i.e.* in the second zone and not associated with any symptoms or signs of the systemic reaction mentioned above, there is no need for any treatment. No attempt should be made to bring down this asymptomatic raised blood-pressure as the rise may possibly be due to certain internal delicate adjustments which do not cause stress to any vital organ. Vascular tension may sometimes cause premature sclerosis. But that will be the minimum penalty for saving the damage to the vital organs. If any attempt is made to lower the blood-pressure with a view to avoiding vascular sclerosis, the delicate balance achieved by the body to maintain adequate blood flow to the important organs may be interfered with, and disastrous results may perhaps ensue. Our clinical experience supports such a view because patients come up with various complaints when an attempt is made to lower the blood-pressure. It has been found difficult to lower such blood-pressure persistently for long, because it is perhaps a purely physiological reflex adjustment.

If the readings in the intermediate zone are associated with symptoms which can definitely be ascribed to the rise in blood-pressure or preferably, if they are associated with any definite signs of the systemic reaction mentioned above, rest, relaxation, tranquilizers, and mild sedatives are usually enough to relieve the symptoms, and even the raised blood-pressure. Drastic methods to reduce the blood-pressure are not necessary and should not be adopted, lest they do more harm. The symptoms in such cases are very often due to the patient's awareness of the abnormal blood-pressure and to suggestion.

The third zone or the hypertensive group may be divided into two classes. Benign or static and malignant or progressive. They are not two entities but different phases of the same condition. They may assume, one or the other phase at any time during the progress of the condition. The progressive form may be distinguished by a rise in the blood-pressure readings (raised diastolic blood-pressure generally above 120 mm. Hg.) fundal changes with retinal hæmorrhages and exudates, progressive renal failure, encephalopathy, marked left ventricular hypertrophy, electrocardiographic evidence of left ventricular strain, gallop rhythm and other signs and symptoms of left ventricular failure. Occasionally cases from the intermediary group may pass into the hypertensive group and hence a close observation is necessary in such cases. The static type may assume the characters of the malignant or progressive type. Conversely, the

malignant type may occasionally stop its progressive course and take on the static character. Thus there will be remissions and intermissions in the course of the hypertensive group. Clinical experience shows that once the malignant type is assumed the end comes generally within 3 to 5 years.

TREATMENT:—For purposes of treatment it is necessary to classify hypertensive conditions into two groups *viz*:—(1) conditions with a known cause and (2) conditions where the cause is not known.

In the first group, ætiological treatment is indicated.

I. Aetiological treatment.—This will apply only to the few conditions where the cause of the hypertension is definitely established. Unilateral damage to a kidney as by pyelonephritis may justify nephrectomy. The affected part may be excised in coarctation of the aorta. Total or subtotal adrenalectomy may be done in Cushing's syndrome. A pheochromocytoma may be removed.

II. In hypertension where the cause is not known the treatment falls into the two main groups:—(A) The indirect and (B) the direct.

A. In the *indirect treatment*, attempt is made to lower the blood-pressure by indirect means, which include (i) rest; (ii) reassurance and suggestion; (iii) modulating the way of life; (iv) the use of sedatives and tranquilizers; and (v) diet.

B. *Direct treatment*:—In the direct method, attempt is made to lower the blood-pressure by producing a dilatation of peripheral vessels, which may be achieved by the following means:—(i) by the use of peripheral dilators which diminish the spasm of the peripheral vessels by acting on the terminal nerve endings. Prisol, nitrites, hydergine belong to this group; (ii) by drugs acting on the autonomic ganglia. These ganglion-blocking drugs consist mainly of the halogen compounds of hexa- and pentamethonium. Ansolysen is the drug of choice at present. It has a much stronger and prolonged action and its oral administration will help to maintain hypotension. Two drawbacks which must be specially mentioned are that (a) tolerance to the drug is rapidly developed; (b) side-effects due to the blocking of the parasympathetic ganglia with the sympathetic ones, appear *viz.*, pupillary paralysis, gastric hyposecretion and constipation. Rauwolfia derivatives have proved effective in counteracting the side-effects and also in enhancing the hypotensive effect of the methonium compounds.

Methonium compounds should *not* however, be used:—(i) when there is evidence of nitrogen retention. The condition is aggravated by a fall in blood-pressure and uræmia may be precipitated.

(ii) when there is advanced cerebral or coronary arteriosclerosis. Fall in blood-pressure may precipitate thrombosis;

(iii) and when there are prostatic symptoms. They may become aggravated.

III. By drugs acting centrally such as Veratrum viride and hydralazine which are the important members of this group.

Veratrum is given in the form of Veriloid, Pertenal, Veratrone and may be given parenterally in an emergency. The disadvantage is that the margin of safety between the optimum therapeutic dose and the toxic dose is very narrow. Nausea, vomiting, salivation, heartburn are the earliest symptoms of toxicity. Individual tolerance varies widely.

Hydralazine or Apresoline is the drug of choice in early impairment of the renal function, because though it lowers the diastolic pressure, the renal blood flow is maintained or even increased, thereby improving the renal function. Once uræmia develops and progresses, no drugs will avail.

Several toxic reactions due to Hydralazine have been reported recently:—headaches, nausea, palpitation are common. Anæmia, disseminated lupus, arthritic conditions, œdema of the skin, enlargement of the liver and spleen have also been observed. The side-effects limit the use of the drug and so it is not advisable to use it for prolonged periods.

IV. By surgical procedures.—Two operations have been utilized to relieve hypertension:—(A) lumbo-dorsal sympathectomy; and (B) bilateral adrenalectomy.

A. *Lumbo-dorsal sympathectomy*:—Bilateral paravertebral excision of the sympathetic ganglia from the level of the 9th thoracic to the 1st or 3rd lumbar root has been done in cases where overactivity of the sympathetic system producing widespread vaso-constriction has been presumed to be the cause of hypertension. The operation has been useful in young patients with very severe grades of hypertension which do not respond to medical treatment. But the hypertension tends to recur in some cases after three or more years after the operation. The operation is not indicated in the presence of renal and left ventricular insufficiency. Being a serious operation with prolonged convalescence and unpleasant side-effects, it has a limited scope and value.

B. *Bilateral adrenalectomy*:—Bilateral adrenalectomy is a major operation attended with grave risks. The results being uncertain, the operation has fallen into disfavour.

The indirect treatment has wider application and is greatly useful in mild, non-progressive cases. It is possible to control most cases of hypertension by a judicious combination of hypotensive drugs with the indirect treatment.

REST:—Rest in hypertension does not usually mean 'coronary' rest, in bed. A restful life is what is indicated. There should be long hours of sleep at night, a few hours of rest in the afternoon, short walks in the morning and evening on level ground. Personal habits and ways of life may require suitable modifications. It is advisable to encourage the patient to adapt his life to his average blood-pressure, rather than reduce the blood-pressure to suit his life, unless the blood-pressure is dangerously high so as to produce degenerative changes in the cardiovascular system. The cultivation of a placid and philosophical temperament helps greatly to counteract nervous tension and mental irritability. A string of beads for regular *Japa* (i.e., again) has brought surprising relief to a number of my patients. It is definitely more difficult to reduce blood-pressure and maintain it at a low level, rather than adapt a way of life to suit the modified blood-pressure. Care should be taken not to interest the patient in his blood-pressure readings. It must be impressed on the patient that 'blood-pressure' is essential for the adequate circulation of blood to 'higher levels.'

DIET:—The main object in prescribing diet, is to maintain the patient's weight at the lower normal level, and in high grades of blood-pressure, to imbibe less of sodium. Attempt should be made to bring down abnormal weight by a strict dietetic regime. During diuretic treatment in particular, salt restriction should be carried out with great care for fear of developing a low-salt syndrome. Tolerance to salt restriction varies with each patient; hence it should not be pushed to a dangerous limit. Generally, for the sake of safety it is wise not to continue a strict salt-free regime for more than two weeks and a low-salt regime for more than four weeks at a time. It has been observed that a low-salt diet appears to potentiate the treatment with ganglion blocking drugs.

Psychotherapy.—The value of assurance and suggestion and the creation of an optimistic atmosphere are very important in the treatment. A sympathetic doctor will achieve more by his manner, attitude, personality and encouragement than by any other means.

Sedatives and tranquilizers.—Sedatives have always played an important role in the treatment of blood-pressure by soothing the irritable mind. Tranquilizers by their central action produce a feeling of tranquility without somnolence. Bromides, Chloral, Gardenal, Amytal, Phenobarbitone, Paraldehyde and other similar drugs fall in the group of sedatives. The products of *Rauwolfia serpentina* like Serpasil, Reserpin, Rauwiloid, Serpina etc., head the list of the tranquilizer-group. Equalin, Miltown, Anxine and other similar drugs also sometimes help.

Some of them help to reduce the blood pressure by direct action as well. A combination of the direct hypotensive drugs with those from this group has proved to be of greater value in controlling hypertension than the use of the drugs individually used. In this way, the dose of the hypotensive drug required in smaller with a consequent decrease in the side-effects due to parasympathetic stimulation.

The real objectives in treatment.—Throughout the course of treatment for hypertension, the real objective which is the well-being of the patient should not be lost sight of. The reduction of blood-pressure is but means to an end, and not an end in itself. The well-being of the patient is seldom correctly denoted by the mercury column of the sphygmomanometer; hence the accent should be on the patient's well-being rather than on the rigorous execution of the various details of the treatment. In established hypertension, the treatment is life-long process, and life is bound to be miserable and become unbearable to the patient if too much emphasis is laid on the strictness of the *regime*.

A rise in blood-pressure is sometimes a reflex circulation adjustment. So the lowering of blood-pressure beyond a particular 'well-being' limit is not desirable. The patients do not necessarily feel normal with a normal blood pressure. In some patients *e.g.*, those with advanced arteriosclerosis it may be positively harmful to lower the blood pressure. In such cases, the blood-flow is diminished with a high vascular resistance. A reduction in blood-pressure may further lower the blood-flow and precipitate a catastrophe. Such an episode may prove disastrous to the brain and heart. The use of vascular dilators in lowering the blood pressure in advanced arteriosclerosis is contra-indicated for the same reason. The blood pressure may get lowered thereby but the blood-flow is not increased; oedema and thrombosis are likely to develop in the organ. It should therefore, be always remembered that we are treating the patient with hypertension and not the hypertension itself. Relief to the patient is the objective, which may be achieved with or without a reduction of the hypertension, as may be deemed expedient.

Conclusion.—Great caution should be exercised in diagnosing hypertension. Uncomplicated raised blood pressure *per se*, usually does not give rise to any symptoms. The symptoms are often due to an anxiety-state consequent on a knowledge of the height of blood pressure. In hypertension with signs and symptoms, a judicious combination of direct and indirect treatments is indicated. At no time during the treatment, should the subjective well-being of the patient be ignored in order to effect a reduction in the blood pressure readings. Constant anxiety on the part of the physician to keep the blood pressure down tends

to keep the patient high-strung all the while. The more frequent the blood pressure readings are taken the greater the tension in the patient. At times, a reduction in blood pressure may prove to be an undesirable, and officious interference, to the detriment of the patient and to the reputation of the science of medicine. The discovery of a reliable, potent and a long-acting hypotensive drug will prove more of a curse than a boon to humanity, because of the great likelihood of its being misused.

Causes of episodic aggravations during the course of hypertension are not known. Vigilant observation and prompt adequate treatment are the only valuable measures at hand to guard against the on-coming disaster.

Summary.—Blood-pressure can be conveniently divided into three zones viz., (i) Normal and sub-normal; (ii) inter-mediary and (iii) hypertensive. If the readings are in zones (ii) and (iii) it should be ascertained whether they are associated with any known signs and symptoms of hypertension. Attempts should be made to find the cause of the hypertension where possible. If a definite cause could be ascertained, treatment should be directed to remove it. If none is found, the treatment should be divided into (a) direct and (b) indirect methods. In the direct method, an attempt is made to lower the blood pressure by producing a dilatation of the peripheral vessels, which is achieved in two ways, viz., by the use of drugs acting on the peripheral vessels, the autonomic ganglia and on the mid-brain centres, and by surgery. The indirect method consists in ensuring rest, diet and psychotherapy in giving sedatives, and tranquilizers. Reduction of raised blood pressure is not always desirable. In the treatment of hypertension, the objective should be to afford relief to the patient, which is achieved with or without a permanent reduction of blood pressure as may be found expedient.

REFERENCE:

1. Journal of Amer. Med. Association, 1950, 143, p. 1464.

Jayashree,
Deshmukhwadi,
Poona-2.

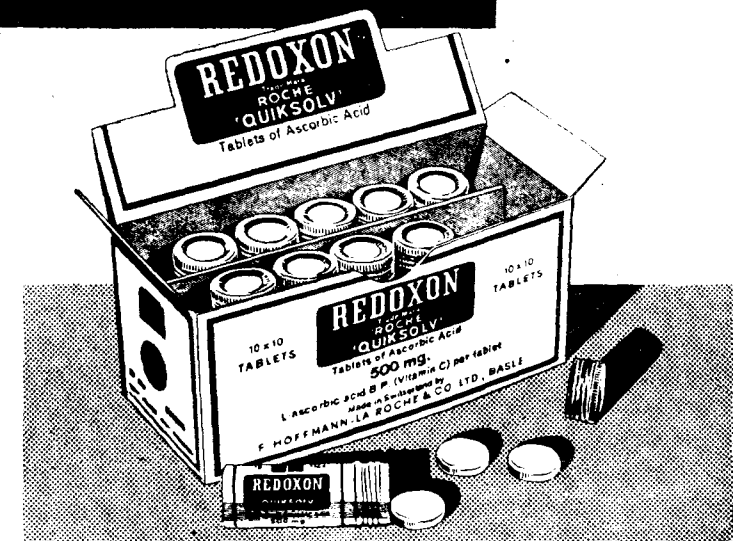
PURULENT NEONATAL MENINGITIS

Watson found that coliform organisms caused 33 of the 45 cases of purulent meningitis studied in the first month of life. Fourteen were due to *E. coli*, ten to paracolon, three to *B. proteus*, two each to *Pseudomonas pyocyaneus* and *B. anitratum*, and one each to *A. aerogenes* and *salmonella*. Of the remainder, six were caused by streptococci, and one each by staphylococci, pneumococci, *H. influenzae*, meningococci, gonococci and *Listeria monocytogenes*. Twenty-two additional cases were associated with meningococci. Similar bacterial aetiologies were noted, but with a tendency to mixed infections.

Obstetric difficulties, prematurity and foci of infection in the infant (commonly umbilical) were frequently associated. The onset was insidious and the clinical picture nonspecific.

Twenty-nine of the 45 infants died. (These cases all occurred between 1949 and 1955). Three of the 16 survivors are hydrocephalic. One has other evidence of cerebral damage, and one is deaf. The salvage was 24 per cent over-all, but only 15 per cent in the coliform group. Treatment consisted of varied combinations of antibiotics. The authors emphasize the urgency for lumbar puncture, bacteriologic and sensitivity identification, and early vigorous therapy.—(*Jour. Paediat.*, 50: 352, 1957 via *Gen. Pract.*).

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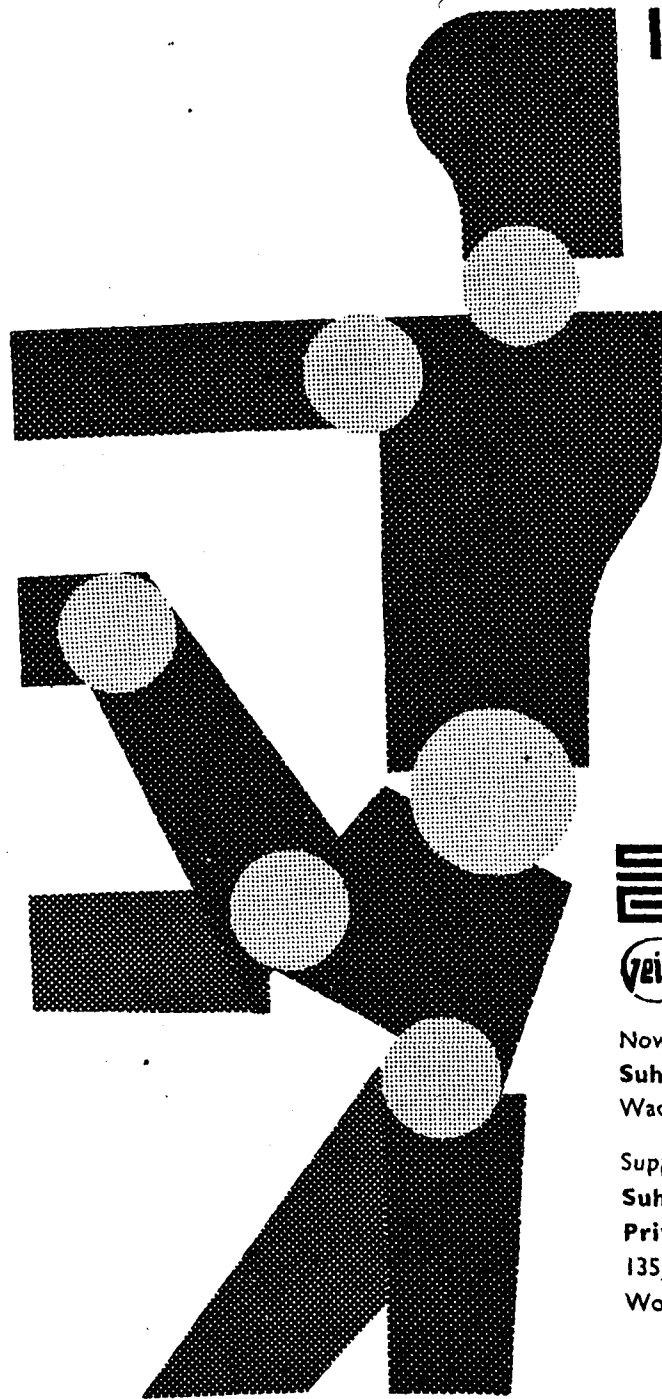
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EVOLUTION OF THE SCIENCE OF PHARMACY IN AYURVEDA

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(Continued from page 821 of the Nov. '57 issue of the ANTISEPTIC)

PART II

AMONG the four requisites for curing disease, drugs occupy an important place, second only to the physician.

भिषग्द्रव्याण्युपस्थाता रोगी पादचतुष्टयम् ।

गुणवत् कारणं ज्ञेयं विकारव्युपशान्तये च. सू. ७. ३.

"The physician, the drugs, the attendant and the patient constitute the four basic factors in treatment." (*Charaka Sutra, IV : 3*).

Charaka enumerates the essential qualities of a good drug as under:—

बहुता तत्रयोग्यत्वमनेकविधकरुणा ।

संपन्नति चतुष्कोष्ट्यं द्रव्याणां गुण उच्यते ॥

"Abundance, applicability, usability in multifarious modes and richness of quality; these four are said to be the tetrad of desiderata in drugs." (*Charaka Sutra, IV : 7*).

Drug action is fully described by Charaka. For instance in *Charaka Samhita, Vimana-sthana*, chapter I: 16, we find a concise but full description of long pepper (पिप्पली).

पिप्पल्यो हि कटुकाः सत्यो मधुरविपाका गुर्व्यो नात्यर्थं स्निग्धोष्णाः प्रक्लेदिन्यो मेघजा-
भिमतश्च ताः सद्यः शुभाशुभकारिण्यो भवन्ति; आपातभद्राः, प्रयोगसमसादगुण्यातः दोषसञ्चयानु-
बन्धाः सततमुपयुज्यमाना हि गुरुप्रक्लेदिन्याश्छलेष्माणमुत्क्लेशयन्ति, औष्ण्यात् पित्तं, न च वात
प्रशमनायोपकल्पन्तेऽल्पस्नेहोष्णभावात्; योगवाहिन्यस्तु खलु भवन्ति; तस्मात् पिप्पलीर्नात्युप-
युज्जीत ।
च. वि. १-१६.

"Long pepper, pungent though in taste, is sweet in post-digestion, heavy, neither overmuch unctuous nor overmuch hot, is deliquescent and esteemed as medicine. It is at once productive of beneficial and baneful effects. If administered in the proper time and measure, its action is at once beneficial. But if continued over a long period, it results in morbid cumulative effect, as due to its heavy deliquescent qualities it gives rise to *Kapha*. It aggravates *Pitha* on account of the meagreness of its unctuous and hot qualities. Nevertheless it makes a good vehicle. In view of these considerations long pepper should not be used in excess." (*Vimana, I : 16*).

Similar descriptions of salts and alkalis are given. We find detailed accounts of the actions and properties of various kinds of milk in *Charaka Sutra-sthana*, chapter I: 105-113. A lengthy but apt description of the actions of wines (मद्य) is given in *Charaka Chikitsasthana : XXIV : 29-73*.

Speaking about preparations, their properties and actions, Charaka says :—

अल्पमात्रं महावेगं बहुदोषहरं सुखम् ।

लघुपाकं सुखास्वादं प्रीणनं व्याधिनाशनम् ॥

अविकारि च व्यापत्तौ वातिग्लानिकरं च यत् ।

गन्धवर्णरसोपेतं विद्यान्मात्रावदौषधम् ॥ च. सि. ६-१५-१६.

“That should be known as the proper medication which requires to be taken in small doses, which is quick in action and is curative of even an excessive degree of morbidity, which is light in digestion, palatable, pleasing, curative of the particular disease, not harmful even if complications arise, not very depressant and is possessed of the most agreeable smell, colour and taste.” (*Charaka Siddhi-sthana VI: 15-16*).

The prescriptions of drugs were arranged in such a way as to embody all the above qualities. The processes for these preparations were explained and rules also were framed for nomenclature of these preparations in order to bring about uniformity. Rules were also laid down regarding the use of drugs containing just the opposite properties to these preparations, if it was found necessary to add such drugs for the sake of taste, appearance or smell.

यद्वि येन प्रधानेन द्रव्यं समुपयुज्यते ।

तत्संज्ञकः स योगो वै भवतीति विनिश्चयः । च. क. १२-६.

“It has been laid down that a compound preparation is named after the basic drug which forms its active principal ingredient.”

In the prescription of a compound where the emetic nut etc., forms the basic or principal drug, wines etc., occupy a secondary role as constituents, vehicles or excipients. These latter followed the main drug in the prescriptions even as the attendants follow their king.

Even the antagonism of this potency does not vitally impair the main effects of the principal drugs, while an admixture of drugs of similar potency intensifies its action.

विरुद्धवीर्यमप्येषां प्रधानानामबाधकम् ।

अधिकं तुल्यवीर्यं हि क्रियामामर्थ्यमिष्यते ॥

इष्टवर्णरसस्पर्शगन्धार्थं प्रति चामयम् ।

अतो विरुद्धवीर्याणां प्रयोग इति निश्चितम् ॥ च. क. १२-४५-४६.

“It is laid down, the use of articles that are of antagonistic potency to the disease is allowed for the purpose of imparting to the medication pleasant colour, taste, touch and odour suitable to the conditions of the disease.” (*Charaka Kalpa XII: 45-46*).

In the modern method of writing prescriptions, the letter ‘R’, a symbol for ‘Recipe,’ is always found at the beginning. This sign or symbol is called superscription. As a matter of fact the symbol ‘R’ is the symbol for the patient to chant some sacred hymn while taking the medicine. The sacred hymn as given in *Charaka Kalpasthana I: 14*, is as under :

ॐ ब्रह्मदक्षाक्षिरुद्रन्द्रभूचन्द्रार्कानिलानलः ।

ऋषयः सौषधिग्रामा भूतसङ्घाश्च पान्ति ते ॥

रसायनमिवर्षाणां देवानाममृतं यथा ।

सुधीवोत्तमनागानां भैषज्यमितमस्तु ते ॥ च. क. १-१४

“Om! may Brahma, Daksha, Aswins, Rudhra, Indra, the earth, the moon, the sun, the gods of the wind, the fire, the sages, the host of drugs and all living creatures protect thee! Even as the vitalizers are to the sages, and ambrosia to the gods, as nectar is to the best of the Nagas so may this medicine be unto thee!

It is better to use symbols rationally than blindly. The chanting of a hymn would seem ridiculous to us of this modern age, but we must probe behind the apparently absurd practice and try to find out the concept on which such a chant is based. This can be understood only if we study and examine the other ideologies of that period.

Minuteness and singleness of purpose are two qualities of the mind. Mind cannot work at two places at a time. So one must concentrate on the work on hand, otherwise the work cannot be a success. On this reasoning the chanting of a hymn becomes helpful in transferring the attention of the mind busy in other affairs to concentrate on the medicinal dose. Therefore Atreya says :—

विधूय मानसान् दोषान् कामादीनशुभोदयान् ।

एकाग्रमनसा पीलं सम्यग्योगाय कल्पते ॥

“If a person after cleansing his mind of its impurities like passion and other inauspicious sentiments and concentrating his mind on the treatment, takes this dose, it brings about the most desirable results.”

The second step in a prescription is the writing of it; it consists of the basis or the chief ingredient, the adjuvant and the corrective. The nomenclature of the prescriptions is based on the names of the chief ingredient followed by the word (आदि) or “and others” to suggest the compounding of other ingredients, e.g., नागरादिचूर्ण. In English ‘Co’ the shortened form of ‘compound’, is used for this purpose, e.g., ‘Pulvis glycerrhiza co’. This similarity in the nomenclature of prescriptions in the East and in the West shows that Science is one but ignorance may lead to manifold differences.

In therapeutics, the mere knowledge of the properties and action of the drugs in the prescription is not the end in itself. Therapeutics is an art or more properly it is an artistic science. Charaka says :

मात्राकालश्रया युक्तिः सिद्धिर्युक्तौ प्रतिष्ठिता ।

तिष्ठत्युपरि युक्तिज्ञो द्रव्यज्ञानवतां सदा ॥ च. सू. २-१६

“The art of prescription depends upon the knowledge of dosage and time, and on this art, in turn, depends success; hence the skilful physician stands ever superior to those possessing merely a theoretical knowledge of drugs.” *Charaka Sutra II : 16*.

He further adds :

योगैरेव सिक्तिसन् हि देशघ्नोऽपराध्यति ।

वयोबलशरीरादिभेदा हि बहवो मताः ॥ च. चि. ३०-३२०

“Though he may be treating with the right prescriptions, if the physician is ignorant of the knowledge of the place etc., he cannot achieve success in treatment. Many differences exist in the nature of men as regards age, vitality, constitution etc.” *Charaka Chikitsa XXX : 320*.

The preparations should be made in accordance with the doses. We generally believe that standardization is the last word in modern medical science, but we must not forget that accuracy in measurement is the first step in scientific progress. “Logical reasoning and accuracy in everything” was the motto of the scientific age in India which began about 600 B.C., and it is for this very love of accuracy that the science of logic (न्याय) and Sankhya (सांख्य) came to be written. In an age when even the sequence of words in a sentence was strictly regulated and words should not be used without a definite purpose, the laxity in accuracy of measurement is unthinkable. Let alone accuracy and the exact measurement of medicinal doses, even food was to be taken in measured quantities. While narrating the principles of hygiene, the first chapter on the subject begins with (मात्रादीत्यात्) i.e., “you shall eat food in measured quantities.” The word (मात्रा) is derived from (मीयते अनेन) i.e., “by which it is measured” while the English word ‘dose’ is derived from (दा) to give. The English word simply “gives” while the Sanskrit word “measures.” This shows that accuracy in measuring received greater emphasis in the Ayurvedic code.

A few quotations relating to this ‘accuracy of measurement’ from various Ayurvedic treatises will not be out of place here.

मात्राशी स्यात् । (च. सू. ५, ३)

“You shall eat food in measured quantities.”

मात्रामूलं चिकित्सितम् । (का. खि. ३, १-१)

“All treatment depends on dosage.”

न मानेन विना युक्तिर्द्रवाणां ज्ञायते क्वचित् । शा. म १-१४

“There can be no compounding of drugs without taking into account their measures of dosage.”

मात्राप्रमाणं प्रतिपुरुषमवेक्षितव्यं भवति । च. सू. १५, १०

“The dosage of medicine is dependent upon the individual patient.”

नाल्पं हन्त्यौषधं व्याधिं यथाऽऽपोऽल्पा महानल्म् ।

दोषवच्छाप्तिमात्रं स्यात्सस्यस्यात्युदकं यथा ॥

संप्रधार्य बलं तस्मादामयस्यौषधस्य च ।

नैवातिबहु नात्यल्पं भैषज्यमवचारयेत् ॥ च. चि. ३०, ३१३-१४

“An under-dose of medication cannot cure the disease just as a small quantity of water cannot quench a great fire; and medicine given in an over-dose will prove harmful just as excessive watering harms the crops. So, after carefully considering the severity of the disease and the strength of the medication, the physician should administer it, neither in too large nor in too small a dose.”

द्रव्यप्रमाणं तु यदुक्तमस्मिन्मध्येषु तत् कोष्ठवयोबलेषु ।

तन्मूलमालम्ब्य भवेद्विकल्प्यं तेषां विकल्पोऽभ्यधिकोऽनभावः ॥ च. क. १२, ८६

“The dosage of drugs given in this section is with reference to persons with normal bowels of average age strength. This should be regarded as the standard for pharmaceutical purposes and larger or smaller doses should be prepared, with the above standard in view.”

समीक्ष्य दोषौषधदेशकालसात्म्याभिसत्त्वादिवयोबलानि ।

“(.....should be administered) after a full investigation of the morbid humours, the medications, climate and seasons, homologation (*sic*) of the patient, his digestive power, psychic condition, age and vitality.”

The (अनुपान) or after-potion concept of Ayurveda is in accord with the theory of humours. The dose of medicine was to be followed by some after-potion prescribed as a corrective to the medication in accordance with the constitutional tendency of the patient or the humoral imbalance of the disease-condition :

अनुपानं तर्पयति, प्रीणयति, ऊर्जयति, बृहयति, पर्याप्तिमभिनिर्वर्तयति, भुक्तमवसादयति, अन्नसंघातं भिनत्ति, मार्दवमापादयति, क्लेदयति, जरयति, सुखपरिणामितामाशुन्यवायितां चाहारस्योपजनयति इति ।

अनुपानं हितं युक्तं तर्पयत्याशु मानवम् ।

सुखं पचति चाहारमायुषे च बलाय च ॥ च. सू. २९, ३२५-३२६.

Post-prandial drink gives nourishment pleasure, energy, tone, a sense of satisfaction and settles down the food eaten, breaks up the mass of food, imparts softness, liquefies, digests and brings about quick assimilation and diffusion in the body. Post-prandial drink that is rightly administered satisfies

the man immediately and digests the food nicely and imparts life and strength.

Toxicology is one of the chief branches of Ayurveda. We need not reiterate that the knowledge of toxicology in India was far superior to that of other countries in the world. When Alexander the Great, invaded India (323 B.C.), he gave orders to his staff that whenever any treatment for poisoning was necessary, only an Indian physician should be called in. This is but one proof of the superiority of toxicology then in vogue in India. Poison girls (विषकन्या) are not fabulous. They were reared to be used against enemies. It was the practical application of the theory of immunization as the country abounded in poisonous animals and vegetation. Kings were under constant vigilance against poisoning, and so a physician was always in attendance to protect the king against food-poisoning etc. During wars, poisoning was resorted to, for killing individuals as well as for mass murders. The knowledge of snake-poison was also profound. Snakes were, and still are, plentiful in India and hence a knowledge of snakes and toxicology came to be special branches of study. The recognition, description and classification, etc., of serpents is astonishing. Snake poison was used also in medicine. Atreya prescribed it for the incurable condition of *Tridosha Udara*, mostly a malignant growth.

The science of toxicology was the result of varied experiments. The poisonous drug or poisoned food was tasted by the senses, by fire, by mixing them with water and other substances, and also by administering it to beasts and birds. We find that about 25 beasts and birds were made use of in such animal experiments.

The list of terms, then in use, to describe the action of drugs surprises us even today. We find more than 500 terms used in this connection.

Atreya, while fully recognizing the physical, pharmaceutical and physiological incompatibilities, goes further and describes eighteen points which should be considered in deciding the compatibility or otherwise of any drug.

यच्चापि देशकालमिमांसासात्म्यानिलादिभिः ।

संस्कारतो वीर्यतश्च कोष्ठावस्थाक्रमैरपि ॥

परिहारोपचाराभ्यां पाकात् संयोगतोऽपि च ।

विरुद्धं तच्च न हितं हृत्संपद्विधिभिश्च यत् ॥ च. सू. २६, ७६-७९.

"That substance is unwholesome which is incompatible from the point of view of country, season, gastric fire, measure, homologations (*sic*) *Vata* and other body humours, preparation, potency, bowel-tendency, state of the patient, things to be avoided or observed, cookery-combinations, palatability, richness of quality and rules of eating." Food as well as medicine should not be incompatible with the above points.

Channels of administration.—The general principle laid down is that medicine should be administered by the channels through which it can reach the seat of disease quickest. In the world of to-day the routes of administering a drug have increased, but all of them fall within the above comprehensive precept.

आस्यादामारीयस्थान् हि रोगान् नस्तः शिरोगतान् ।

गुदात् पक्वाशयस्थांश्च हन्त्याशु दत्तमौषधम् ॥

शरीरावयवोत्थेषु विसर्पपिडकादिषु ।

यथादेशं प्रदेहादि शमनं स्याद्विशेषतः ॥ च. चि. ३०

"In diseases of the stomach, the medicine administered by the mouth; in diseases of the head, nasal medications; and in diseases affecting the colon the medications given by the rectum act most promptly. In local diseases arising in the various regions of the body and in acute spreading affections, pimples and similar lesions, local applications suitable to the part afflicted, will prove specially efficacious" (*Charaka Chikitsa*, XXX : 294-295).

Time for administering drugs.—The time for the administration of drugs should be fixed according to morbidity, constitution and age or season, Ayurveda gives the following times, ten in number, for administering medicine :—

"(अभक्त) On empty stomach; (प्रभक्त) pre-prandial; (अयोभक्त) post-prandial; (अन्तराभक्त) in between meals; (मध्येभक्त) in the middle of a meal; (सभक्त) mixed with the meal; (समुद्र) given at the beginning and at the end of the meal; (मुहुर्मुहुः) repeatedly; (ग्रस) with each morsal of food and (ग्रसान्तर) in between morsels."

This is followed by a detailed exposition as to why the medicines should be taken at particular periods.

This brief survey of 'Pharmacy' as it existed in theory and as it was practised in ancient India would suffice to give an idea of the development of the science in its manifold aspects, some of which have not been excelled by modern science. The rich heritage left to us needs but proper research so that we can proudly present it before the scientific world and declare it as one of our richest contributions to science.

We shall next briefly review the evolution and progress of mercurial and mineral preparations in ancient medicine.

THE RASAYUGA (8th to 16th Century A.D.)

This was the contemporary period of iatrochemical period in the west, but in India this period commenced very early, and its beginnings can be traced to the Ayurvedic age.

The seeds of this Rasatantra (रसतन्त्र) took root in the two great ambitions of man, *viz.*, the acquisition of wealth and the desire for longevity. These two ambitions are common to both the hemispheres, because the pandits of both the East and the

West have laboured hard to obtain the elixir of life or *Amrita* and (परसमणि) the philosopher's stone. The success or failure of their efforts is a matter of dispute, but it may safely be stated that their efforts resulted in the birth of the science of chemistry and brought about a revolution in the science of pharmacy. Paracelsus stated that alchemy must produce new medical products and not gold.

Both the ambitions are common to the average man, but the sages reared on the milk of Aryan culture, and the avowed celibates who obtained knowledge after practising austere penance, would never have yielded to temptations. The spirit of the other-world-mindedness was the prevalent note in India. This resulted in the creation of the *Yoga Sastra*. It was hardly intelligible to the average man. Also the penance and the discipline enjoined therein were hard and rigid. The knowledge was imparted only to a few selected worthy pupils. All these factors contributed to the creation of a shroud of mystery, secrecy and incomprehensibility round the science and progress was halted. As a result, the science deteriorated and gradually turned into the *tantric* state.

The science when mastered, endowed the person with eight kinds of supernatural power.

आवेशश्चेतसस्ते ज्ञानमर्थानां छन्दः क्रिया ।

दृष्टिः श्रोतं स्मृतिः कान्तिरिष्टतश्चप्यदर्शनम् ॥

इत्यष्टविधमास्त्यातं योगीनां बलमीश्वरम् ।

शुद्धसत्त्वसमाधानात् तत्सर्वमुपजायते । च. शा. १. १४०, १४१

"The entering into other bodies, telepathy, the doing of things according to one's own will, clairvoyance, clair-audience, omniscience, effulgence, vanishing from sight at will—these eight are said to be the sovereign powers of the *yogis*. All these accrue from concentration of the pure mind."

The ultimate aim and purpose for which this *Yoghasakthi* was meant was absolution.

योगोमोक्ष प्रवर्तकः ॥ च. शा. १३१

"The human should become one with the super-human soul by the practice of *Yoga*."

But it was very difficult to attain this power and so attempts were made to find out some simpler way. Meanwhile it became known that mercury possessed the power of transforming other metals into a new substance. This led to parallel thought; if mercury can transform a base metal (iron) into a noble metal (gold), can it change man into god? *Yogis* started experimenting on mercury and thus a whole philosophy on mercury became current in India.

Madhava describes 16 Darshanas of which (रसैश्वरदर्शन) is one.

न च रसशास्त्रं धातुवादार्थमेव इति मन्तव्यम् ।

देहवेधद्वारामुक्तेरेव परम प्रयोजनत्वात् ॥ सर्वदर्शन संग्रह

"The Science of Mercury should not be understood merely in the sense of a science of metals. For its supreme purpose is the attainment of spiritual release by a transfiguration of the body" (*Sarvadharsana Sangraha*).

They also found out that the human body requires some potent drug from time to time. If this is not given, the bodily elements do not function properly and cannot defend themselves against the inroads of disease and the body gets old and decays early. Just as we have the current beliefs about Vitamins today, so also in those days they had metals and metallic preparations for escaping ageing and diseases and for preserving positive health. This science was treated as a separate branch of *Yoga* by *Yogis* who could not attain perfection in *Yoga*. Their methods were usually different from the scientific Ayurvedic methods. They had their peculiar dietetics, rituals, hymns, secrecy and apparatuses.

रसविद्या दृढगोप्या मातुगुत्यमिवरध्रुवम् ।

भवेदवीर्यवतीगुप्ता त्विर्वीर्या च प्रकाशनात् ॥ ६३ ॥

नरोजीविदितं कार्यम् वटमिर्विदितं तथा ।

रोगिनां बहुभिज्ञातं भवेन्नवीर्यमौषधम् ॥ ६४ ॥

"The Science of Mercury must be kept secret like the secrets of a mother. It becomes efficacious when thus preserved but it becomes powerless when broadcast. It must not be prepared within the ken of the patient's knowledge nor of many onlookers; when it is thus made familiar to the patient and to many others, that recipe will become powerless to act." (*R.R.S. 6* :).

Their master-preceptors also were different. We find parallels to this also in the West.

Rasatantra was greatly developed by the followers of *Saivism* and *Buddhism*. NAGARJUNA was considered the grand old man of *Rasatantra*. The patron deities are *Uma-Maheswar*. The phallus is the symbol. The attendants of *Siva* and *Bhairava* are also worshipped. A part of the offerings is reserved for *DHANVANTRI* and *RUDRA* and as many as 27 great preceptors are mentioned. Although the desire for wealth and longevity predominated in *Rasatantra*, the spirit of other-world-mindedness was not allowed to disappear by the Brahmins and the Buddhas.

रसशास्त्रं प्रदातव्यं विप्राणां धर्महेतवे ।

राज्ञे वैश्याय वृद्धयर्थं दास्यार्थमितरस्य च ॥ २. स. स. १, १५७

"The Science of Mercury should be taught to the Brahmins with a view to inculcating virtue, to the Kshatriya and Vaisya with a view to helping them to a living, and to others, that they may learn to be of service."

There are verses giving instructions as to who should prepare the *Rasashala* and how.

सम्यक्साधनसोध्यमा गुरुयुता राजज्ञयालंकृता ।

नानाकर्मपराङ्मुखा रसपरा आस्याजनैश्चार्थिताः ॥

मातायन्त्रसुपाककर्मकुशलाः सर्वौषधेकोविदाः ।

तेषां सिध्यति नान्यथा विधिवलाच्छीपारदः पारदः ॥

"They are those who are endowed with adequate means and enterprise, who have been trained under a preceptor, and have received the sanction of the State, who are free from distractions of any kind and are devoted solely to the Science of Mercury, who are themselves rich and whose help is sought by the people, who are experts in the handling of measuring instruments and in the art of pharmaceutical preparations, and who are expert in the knowledge of all kinds of drugs. It is for such that Mercury, the Saviour of Mankind, will yield a rich fulfilment aided by the force of destiny and not to others."

The following qualifications were deemed necessary for a *Rasa Vaidya*.

रससंवित्तरा वैद्य निष्पदुज्ञाश्चवार्तिकाः ।

सर्वदेशजभाषाज्ञाः संग्रह्यास्तेऽपि साधकैः ॥ र. स. १-१४

"The organizers of a Mercurial Pharmacy must select and gather *Vaidyas* who are well-versed in the science of Mercury in *Materia medica*, lexicology and in all regional languages."

Even the person who brings the herbs should possess certain qualifications, which are given below:

तत्तदौषधनामज्ञाः शुचयो च नो ज्ञिताः ।

नानाविषयभाषाज्ञाः तेमता भेषजात्त्वतौ ॥ र. स. २-३४

"They are regarded worthy of culling the drugs who are versed in the names of all drugs, who are clean, who are free from deceit, and who are acquainted with languages of the various provinces."

The expert in *Rasashastra* is praised thus:—

रससिद्धो भवेन्मर्त्यो दाता भोक्ता न माचकः ।

जरायुक्तो जगत्पूज्यो दिव्यकांतिः सदासुखी ॥ र. स. २, ३९

"The man who has mastered the Science of Mercury becomes a bestower of wealth, enjoyer of happiness, but never a seeker of larges. He will be free from ageing, adored by the world, endowed with lustre and will be ever happy."

This is the conception of the power of *Rasa* in Ayurveda.

The experimental lessons were given in the presence of the preceptors. The modern methods of scientific experiments were not known and so the empirical methods of clinical observation and experience, were utilized. It was what we call the empirical stage, and so it was necessary to obtain full training in observation and practical experience. On going through the

literature of the times, one thing clearly stands out viz., that practical knowledge was greatly valued. YASHODHAR the author of *Rasaprakash Sudhakara* (रसप्रकाशमुद्राकर) says:

धातु बाधस्तृतीयोऽसौ स्वहस्ते न कृतो मया ।

धृष्टप्रत्याययोगोयं कथितो नातसंशयः ॥

"This is the third experimental work, I have done with my own hand on the science of minerals; this is the result of direct experimental observation and is beyond all doubt."

प्रत्यक्षेन प्रमाणेन योनजानाति सूतकम् ।

अदृष्टविग्रहं देवं कथं ज्ञास्यति चिन्मयम् ॥ र. स. १, ५४

"How can one who has not ascertained the virtues of Mercury by means of direct observation, know the invisible form of the Supreme Being who is the essence of all knowledge?"

This knowledge was a specialized subject. Practical knowledge was absolutely necessary. It had great advantages, and so secrecy continued to be observed and traces of this secrecy are to be seen even today. Paracelsus says that although the philosopher's stone and the elixir of life evaded their searches, the science of medicine was greatly benefited by the mad pursuit and it now occupies the honoured position, of an important section in Medical Sciences. This science devised many recipes, consisting of metals, mercury, gems etc., which were useful to men in health and disease. This system proved greatly beneficial. It was very difficult to preserve herbal preparations for a long time. The dosage of herbal preparations was also large, while the dosage of metallic preparations was comparatively small and their action was immediate.

अल्पमात्रोपयोगिवात् अरुचेरप्रसंगतः ।

क्षिप्रमारोग्यदायित्वा दौषदेभ्यादेधिकोरसः ॥

रसवैद्यः स्मृतो वैद्यो मामुषोमूलकादिभिः ।

अधमः रासादाहाभ्यां सिद्धवैद्यस्तु मान्त्रिकः ॥

"Mercurial preparations are superior to other drugs, as they are administered in infinitesimal doses, as there is no question of their unpalatability, and as they quickly restore the patient to health. The real physician is the mercurial physician; one versed in the Mercurial Science. He who uses roots and other herbals is the ordinary physician and the lowest in the order is he who resorts to surgical instruments and cauterization procedures, while the *Siddha* physician or supernatural healer is he who treats chanting sacred hymns etc."

Thus the *Rasavaidya* declared his superiority by enumerating the advantages of metallic preparations over herbal ones.

These *Rasavaidyas* possessed the knowledge of herbs also and just as the herbal physician gave along with the chief medicine some other herbs as (अनुपान) the after-potion, similarly the

Rasavaidya also used different herbs in the metallic preparations. The same metal when treated with different herbs, acted on different diseases. This resembles the modern method of compounding a certain preparation with other drugs, the latter being varied to suit the disease. The only difference is that in those days, the manufacturer prepared these different preparations, while in the modern age a compounder mixes ingredients. In this way the *Rasavaidya* started to treat all diseases by mercurial preparations.

The whole subject is a special feature of Ayurveda. Much of it lies in secrecy and there is great scope for research in this field. The world would be better off for such researches. The *Rasa* preparations will be a welcome addition to our knowledge and many specific remedies may be evolved. It is hoped that something more than what modern chemistry can give us will be unearthed as a result of these researches.

The names of more than 5000 preparations of mercury and metals are known. Even now *Rasasastra* is a living science in India. The older physicians know a good deal about the science and some are specialists in the line. No doubt, superstitions and traditional beliefs have been woven round the real science; but the seeker after truth will find great and valuable truths in it, but he must be a real seeker after truth and should keep an open well-balanced mind.

INDICATIONS FOR SURGERY IN REGIONAL ILEITIS

Crohn has outlined what he believes to be the indications for surgical intervention in regional ileitis, and has made recommendations of optimum methods of treatment. He stated that he knew of no satisfactory conservative regimen, although, in a series of 700 cases, he found approximately ten cases in which a spontaneous recovery occurred. Most of these were cases of acute regional enteritis.

The author listed several contraindications to surgery. These included extensive ileojejunitis with diffuse involvement of the whole or a large part of the small intestine; acute ileitis; mucosal enteritis in which the disease extends rapidly to involve the entire small bowel; and combined ileocolitis in which both ileum and colon are affected.

Positive indications for surgery were stated to be: (1) localized regional or terminal ileitis; (2) perirectal fistulas; (3) fistulas to the abdominal wall; (4) hæmorrhage; (5) intestinal obstruction; (6) recurrent ileitis, if diarrhoea is excessive; (7) persistent activity in the primary lesion after short-circuiting and (8) perforation.

Crohn stated that the preferred method of surgical therapy was a short-circuiting operation with transection of the ileum 10 to 18 inches above the uppermost point of discernible involvement of the bowel. He quoted a series of cases from the Mayo Clinic in which the recurrence rate after this procedure was 54.5 per cent, compared with 66 per cent of a large group of cases treated by primary resection. Although the cause of this disease remains unknown, it was found that areas of diseased bowel often contained Brunner-like glands similar to those commonly seen in the duodenum. In patients whose ileum did not contain these glands, ileitis did not recur after resection.-(*Arch. Surg.*, 74 : 305, '57 via *General Practitioner*).



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POST-GRADUATE MEDICAL EDUCATION*

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Necessity for post-graduate medical education.—The first question that arises in one's mind when considering the above subject is—what is the necessity for post-graduate medical education? Under-graduate education alone would not satisfy the need for the supply of an adequate number of qualified doctors to serve the people of India. The forty-six existing medical colleges in India are thoroughly inadequate to supply the country's needs in the matter of medical relief.

Post-graduate education has however, an equally important role to play in medical studies. It is on the post-graduates and medical research workers that advances and progress in medicine depend. Every country has its own peculiar diseases and its own problems, which must be investigated on the spot; and no one is better qualified for this task than the post-graduate student or the research scholar. Advances in post-graduate medicine mean advances in all directions and in all branches of medicine. It would also mean freedom from dependence on other countries for the investigation of our medical problems; this has not been the case till now.

Post-graduate medicine would meet one other very great need in this country. Although new Medical colleges are fast springing up the requisite staff with post-graduate qualifications to teach in these colleges is not available and this is a universal cry heard all over the country. Old and retired officers are often re-employed for imparting under-graduate medical education. There is no, "Second line of defence," if anything untoward should befall these retired re-employed professors. It is necessary, therefore, to start post-graduate education *pari passu* with under-graduate medical education.

Let us take the Karnataka State for example. We have at present three medical colleges in the state with the possibility of a fourth being opened in the near future. While under-graduate education has thus increased, it is really surprising that not even one of these colleges has been equipped to give training to enable students to obtain post-graduate and research qualifications. This has necessitated the re-employment of retired people in some of these colleges and, it has not been possible to get any staff at all for a few non-clinical subjects.

Apart from the necessity for starting post-graduate teaching for (a) medical research and advancement and (b) training

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candidates to fill the posts vacated by the senior members who must retire, two other aspects are of importance. Human nature, especially the student mind, is always ambitious. A brilliant student would like to proceed further with his studies and attain still more brilliant distinctions. Post-graduate medical education is an incentive to students to study and reach greater heights in the profession. I may cite my own University as an example of what a lack of facilities for post-graduate medical education can do. In the University of Rangoon there are no facilities even to-day to obtain an M.D., or M.S., degree or for taking even a diploma examination. A similar state of affairs existed also in the Universities of Hongkong, Singapore and Colombo. As a result a number of students have to go abroad from Rangoon to the U.K. for obtaining their membership or/and fellowship. It cannot be denied that foreign travel widens one's outlook and broad-bases his education. But at the same time it is expensive. Many students are unable to go abroad because of inadequacy of funds. Students, brilliant in many respects, with a thirst for knowledge and hankering after research work, have to abandon all such ideas and take to government service or private practice, for lack of the requisite finance.

If post-graduate education is started in this country, there will be a considerable saving of money. Students who have now to go abroad—in some cases for several years—can now qualify for a post-graduate degree in their own land, and may later be deputed to go abroad when and if necessary. This will mean that only the right type of doctor, suitably qualified in his speciality, will go abroad. The present tendency is for every student with a little money to go to England and some of them, as reports show, do not get adequately trained. A few return back unsuccessful after many attempts, bringing a bad name to the standard of medical education in India. Post-graduate education in our own country will obviate this predicament.

Staff.—For imparting efficient and successful post-graduate education, the staff must be well-trained, experienced and qualified. We find the following in a recent article in the Education Number of the *British Medical Journal*: "I have often wondered why a school teacher has to be trained in the art of teaching, but a University teacher is supposed to be divinely endowed." How true! For education in a Secondary or High School, a teacher has to qualify for his B.T., while for appointment as a professor or a reader in a college no one cares to find out if the professor or reader *can teach*. As has been well said "no lecturer is to be appointed unless he has proved himself lecturer." The same thing should apply, so far as research experience is concerned. A post-graduate teacher should be a good lecturer and an experienced research-worker, without which he should not be

considered for appointment. This rule may, however, have to be relaxed to some extent in the early stages in order to get sufficient staff for post-graduate education. It has been observed that allowing a post-graduate teacher (this applies to the undergraduate teacher as well) to practise medicine, interferes with his professional work in the college or department. It must be emphasized that no senior teacher in a college should be allowed private practice. It may be argued that under such conditions, experienced and senior members may not be attracted to teaching work. This is not so, in other lands. In Japan for instance, very experienced members draw only Rs. 500/- a month. Yet many doctors aspire for this position—a position of dignity and honour. In India, if a post-graduate is given sufficient emoluments to compensate initially for the loss of practice, suitably qualified persons, will be attracted and the standard of post-graduate education will necessarily rise.

Students for post-graduate education.—Side by side with the proper selection of post-graduate teachers, a proper selection of post-graduate students should also be enforced. A student who passes out with his M.B., B.S. degree will be "a reasonably good all-round person who knows how and where to get further information and help if required." It has been stated, "The main objective in medical education is to produce potential, good and wise doctors in a rather amorphous state; but ready and capable of developing into a general practitioner, a good specialist, teacher, research worker or administrator." It is from this lot that a student should by proper screening be selected for post-graduate training. The professor under whom the student is to work should be satisfied and should have the knowledge that he himself was responsible for selecting the students working under him. The post-graduates should have a special liking for the specialities they choose. Post-graduates during their period of training often find it difficult to maintain themselves and their family. In India (and I found this in Japan too) most of the post-graduates are married men. This may be due to the insistence of parents or to other causes. Many post-graduates feel that they should cease to be a burden on their parents after their undergraduate training. To be able to turn out good solid work, a post-graduate should be free from all domestic worries and from pecuniary want. Private practice will certainly interfere with his research work. Moreover, it is sad, but nevertheless true, that in some places there is a tendency for post-graduates to "feed" his senior and would-be examiners with cases in order that they may have an easy walk-through. Debarring post-graduate students, staff and examiners from private practice will alone create a healthy atmosphere in every respect. To help the post-graduate during his studies, a subsistence allowance should be given by

the Government, the University or the College to which he is attached.

Types of post-graduate education.—Two types of post-graduate education may be envisaged. For purposes of getting students trained in the minor specialities like Pædiatrics, Tuberculosis, Venereal diseases etc., short post-graduate courses and training may be given for from six months to one year. Such post-graduate courses will help to produce specialists who can be attached to the smaller hospitals or the larger hospitals in the districts. Of course since such specialists possessing only diplomas are not qualified, according to the Indian Medical Council regulations, to teach in Medical Colleges their services cannot be utilized for teaching purposes. For purposes of under-graduate and post-graduate teaching in Colleges and to satisfy the Indian Medical Council regulations, M.D., M.S., Ph.D. and D.Sc. degrees may be awarded to the postgraduate after a period of intensive study and research in his speciality. Such candidates will be expected to submit a written thesis in certain institutions.

Post-graduate examinations.—Although the above arrangements *viz.*, a proper selection of post-graduate staff and students will help in creating a good and all-round healthy spirit and making them concentrate on their research and teaching, another problem is often found to arise in this country *viz.*, "*Influence.*" I have noticed a senior member of the staff from another college, visits my college just to tell my professor, who was an examiner for the M.D. examination, to "look after his candidate." Needless to say that the candidate passed, which he may have done even otherwise. In order to put a stop to these "unhealthy" practices, a stricter supervision and a more rigid system of selection of examiners are required. The final assessment of the results should not vest in the hands of the examiners.

Apart from University post-graduate examinations where students compete only with other students from their own University, a system such as that which obtains in the Royal Colleges in Great Britain will be very useful. Such Colleges bring students from all the Universities together and promote a healthy rivalry and competition. This will be a good method of judging and selecting the best student in the country. Following the practice of the Royal College of Physicians of London, it must be made compulsory that students from one University should not appear at the examination if it is conducted in the centre where he had studied. Thus the examinations may be held four times a year as in England, but unlike in England they may be held at different centres each time.

Post-graduates and degrees.—A remark I had often heard in England is that Indian Students attach more importance to

examinations and degrees than for real study. Very true! Nearly all Indian students who go abroad do so with the sole idea of getting as many degrees as possible. Some of them appear for such diverse diplomas like D.P.H., D.P.M., D.C.H., and D.C.P. all at the same time! These candidates obviously do not know which speciality they should choose—and they are post-graduates! They would have spent their time more usefully if they had concentrated on only one subject. Recently I met in Japan a senior member of the staff from the Kyoto University. He was still an Asst. Professor and had had three years' training in Oxford and a further course of training in the United States. I asked him if he was a D. Phil. from Oxford. I was very much surprised when he said that he was not. No Indian student would have worked for three years in England without trying to get a Ph.D. This Japanese doctor told me that he already had a doctorate from his own University in Japan and so did not care for one from England. I do wish that Indian students follow his example. I remember an Indian student obtained his Ph.D. from Edinburgh and then approached a senior professor in London University stating that he wished to obtain a London Ph.D. as well. The London professor told him that he would only be casting a reflection on his previous University and it would only imply that his previous University was not good enough. I know of a doctor who after obtaining his M.B., B.S. degree here proceeded to England and studied there for the M.B., B.S. in order that he may qualify for the M.D. examination! Such examples, are, alas! all too frequent! What a waste of time, money and energy! Post-graduate medical education which concentrates only on degrees is, therefore, of no value. It should, on the other hand help in the advancement and the progress of the science of medicine, by discovering new drugs, exploring fresh possibilities, opening up new avenues for research and thus contributing to the nation's progress.

TREATMENT OF RHEUMATIC FEVER

The treatment of active rheumatic fever has changed little over the course of years; bed-rest is believed to be necessary for the lessening of residua although there is only slight evidence for this belief. The virtues of salicylates in high and low dosage and of similar compounds, of corticotropin, cortisone and its analogues continue to be discussed but chiefly now in the light of those studies that are well designed and include adequate control observations. There is still some hope that a drug in the steroid or salicylate class might be found that would make suppression worth while. What is really wanted is something that will inhibit the consequences of streptococcal infection at the stage of rheumatic fever in a more basic way. Achieving this goal depends upon knowing more about the ætiologic mechanisms involved.—(*Circulation*, December 1956 via *Current Medical Digest*, March 1957).

LATENT HÆMOLYSIS IN RHEUMATOID ARTHRITIS

The rate of red blood-cell destruction is increased in many diseases in which a hæmolytic process is not the predominant factor—e.g., cirrhosis of the liver and uræmia. Mollison and Patterson (1949) transfused sensitized red cells to 2 patients with rheumatoid arthritis and found that in both cases the transfused cells were eliminated at an increased rate. The life-span of normal red cells in the circulation of 15 patients with anæmia and rheumatoid arthritis was measured. The effect of intravenous iron therapy on the anæmia was studied in 7 of the 15 cases. Marrow-iron examination, which is a means of distinguishing the iron-deficient from the non-iron-deficient patient (Hutchinson 1953), was carried out in each of the 7 cases before blood-transfusion or the administration of iron. The effect of intravenous iron therapy was studied over a test period of about a month, either before the start of or after the conclusion of the transfusion experiment in each case. The 15 patients examined were inpatients at the Royal Bath and White Hart Hospitals, Harrogate. 13 were classified as having "very" active disease; the remaining 2 had "moderately" active disease. In classification the following factors were considered: the degree of joint pain and tenderness, the presence of general constitutional symptoms, and the erythrocyte sedimentation rate (E.S.R.).

Latent hæmolysis, demonstrated by abnormally short survival-time of normal red cells, is a factor in the production of anæmia in certain cases of active arthritis. The results of the present study agree with those reported by Mollison and Patterson (1949), Freireich *et al* (1954), and Alexander *et al* (1956). Evidence that there is an intrinsic red-cell defect in rheumatoid patients is described by Bunim (1954), who found in a single case that red cells from a rheumatoid patient had an abnormally short life-span in the circulation of a normal individual. Freireich *et al* (1954), however, reported that red cells from rheumatoid donors survived normally in normal subjects in the few cases which they studied. Alexander *et al* (1956) state that red cells from rheumatoid donors survive longer in rheumatoid recipients than do cells from healthy donors. They suggest that this may be due to some special characteristic of the red cells from rheumatoid donors. Mollison (1956), however, points out that this longer survival-time of rheumatoid cells is not surprising as red cells taken from any patient with a hæmolytic process are a selected population compared with red cells from a normal donor, and their survival is expected to be better. Alexander *et al* further observed that the administration of corticotrophin in doses sufficient to control the clinical signs of the disease did not prolong the survival-time of normal red cells in rheumatoid patients. In the present study reduced little, if at all, in patients in whom sustained clinical improvement took place after transfusion.—(*The Lancet*, February 23, 1957).

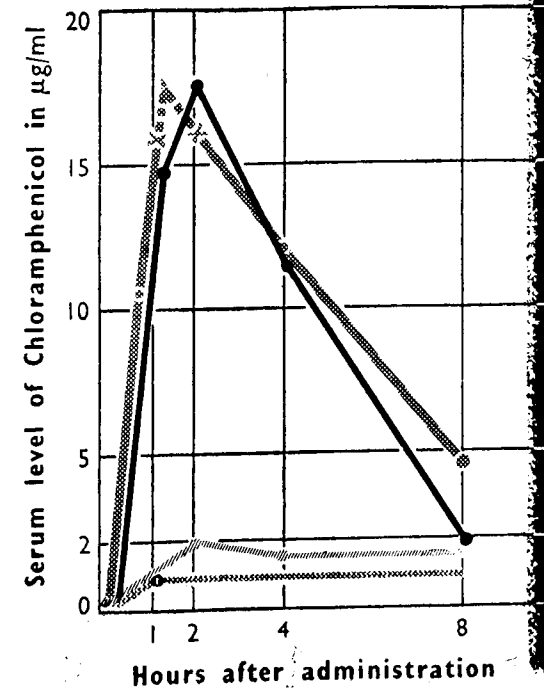
THE TESTIMONY OF MEDICAL EXPERTS

The medical expert should keep in mind that his part in a criminal or civil trial is to aid in the administration of justice. His opinion is sought and admitted as evidence because it is founded on the principle that there are many facts and deductions inferable from facts which are beyond the knowledge of men generally. The opinions of physicians are deductions which are proved in study and experience to reasonably flow from the facts considered. The medical expert need not accept employment as a witness except upon terms agreeable to him. He need not engage to stultify himself or to prostitute his profession. He should not engage as an advocate, because no matter how honest the physician, the moment he takes a partisan position, his mode of thinking precludes the presentation of an unbiased opinion.—(*Current Medical Digest*, May 1957).

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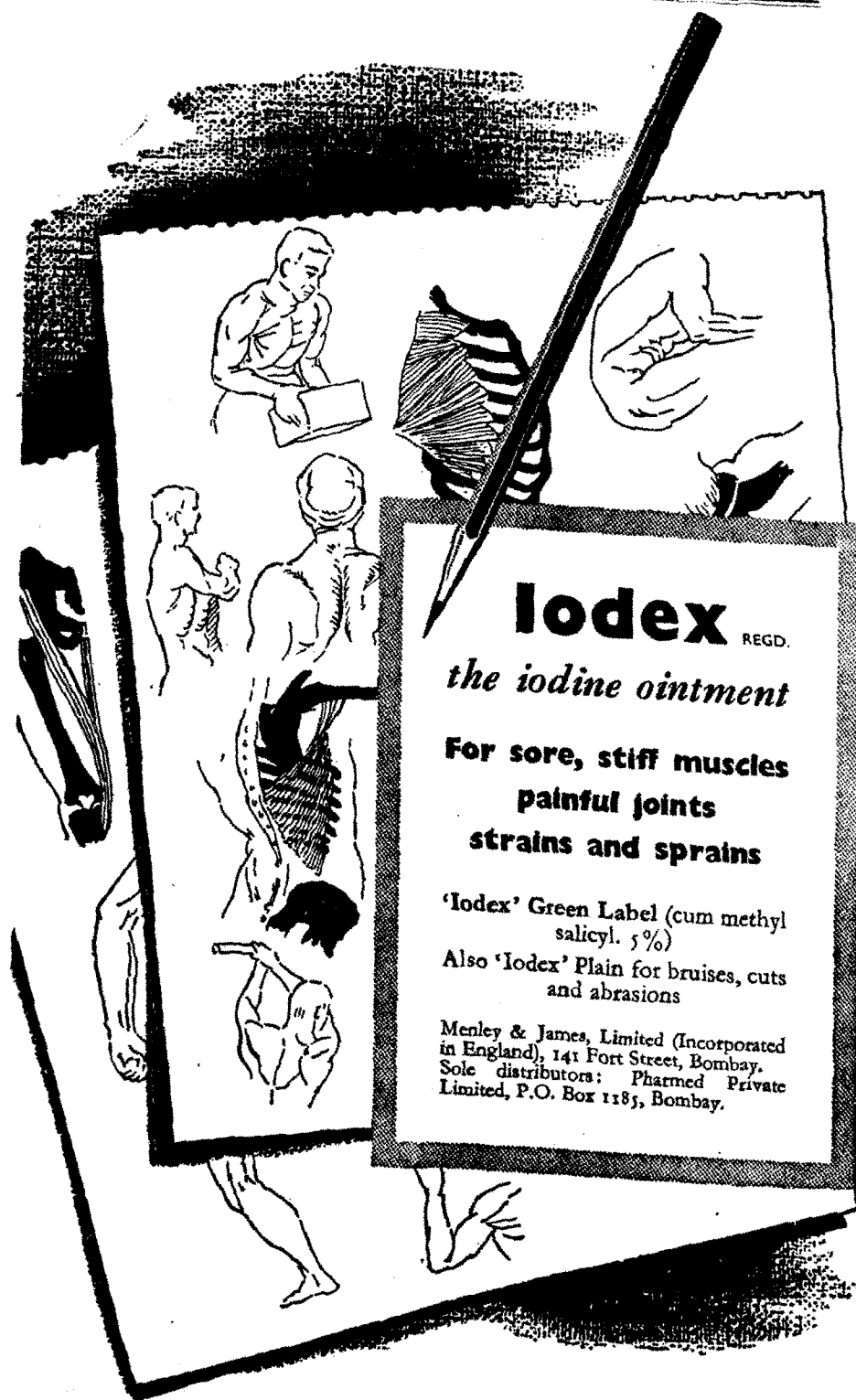
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ENVIRONMENT AND CANCER *

D. BHASKARA REDDY, M.D.,

Professor of Forensic Medicine, Andhra Medical College, Visakhapatnam

DISEASES result from the reaction of the cells of an organism with an animate or inanimate, extrinsic and environmental agent. Till about the early part of the nineteenth century the knowledge of the agents that caused diseases was deficient. It is only during the latter half of this century that rapid strides have been made in the intensive study of the pathogenic micro-organisms and also of the increasing role played by environment in the causation of diseases, particularly of cancer. With the countries changing from an agricultural to an industrial civilization, new physical and chemical agents came to be handled, and new techniques employed in handling and production. The chemical industry has excelled all others in the creation of this new artificial environment by producing new synthetic substances in large number for multitudinous purposes. Tarring of roads and various other factors have led to the constant inhaling of chemicals which are responsible for many environmental disorders. Occupational cancers which form one variety of environmental cancer have gained additional importance as the study of these neoplasms has resulted in the discovery and synthesis of a large number of chemical carcinogens some of which were found to be closely related to a substance occurring normally in the body, like bile and sex hormones or forming constituents of our food and cells such as cholesterol and Vitamin D. Thus occupational cancers have given impetus to the great advances made in our knowledge of cancer in general.

Very little was known about cancers of the organs 25 years ago and information was limited to cancers of the skin from occupational, environmental and medicinal contact with solar radiation, roentgen and radium radiations, and coal-tar distillates. A high incidence of bladder cancer had been noted in Egypt. Cancers of the lip and oral cavity in habitual pipe-smokers and in betel-tobacco chewers as well as abdominal cancers due to the constant application of heat were also known. Very little information could be gathered about these prior to 1925. Information was still lacking about the potential human cancer-hazards from exposure to a large number of chemicals. Some of these cancers could be produced only in experimental animals. Little attention was directed to the few well-known carcinogenic agents and the only known cancer in industry was traumatic cancer. With the rapid increase in factual information about occupational and environmental carcinogenic agents during recent years, there has been a rapidly increasing awareness and appreciation of these potential dangers in our new industrial environment.

* Specially contributed to the ANTISEPTIC

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From time to time there has been a marked variation in the incidence of cancer in all sites and in their distribution from country to country and also among different races. Cameron's record of the death-rates per 1,00,000 of the population in 29 countries and shows wide variations. It is highest in Switzerland (176) followed by a rate of 172·3 in England and 23 and 11 for Egypt and Mexico respectively. It may be assumed that biological factors may be responsible for bringing about such a wide variation in the incidence rates and also regional environmental carcinogenic factors may be mainly involved in bringing about these discrepancies. The relationship of environment to cancer can be studied by the changing phase of these growths in various organs.

The death-rates for cancer of the stomach among the Negro and white population, in the U.S.A., show wide variations being 14·4 per 1,00,000 in the Negroes as compared to 20·4 in the white population. It may look at first sight that certain hereditary racial factors may be responsible for these discrepancies and differences among racially different groups, which are however, subject to apparently identical environmental factors. But Wu and Loucks noted a high incidence of gastric cancer among the Northern Chinese, which was attributed to the existence of a possible carcinogenic factor in certain grains used in the manufacture of a strong native drink, to which 50% of gastric cancer patients were accustomed. Recently Berman analysed the bulk of the material concerning carcinoma of the liver, and brought out a well-written monograph. A critical analysis of the information concerning the causes underlying the remarkable variations in the frequency of primary carcinoma of the liver in population groups inhabiting different geographic areas and having different racial origins provides evidence favouring an environmental concept over a racial one. The incidence and topographical distribution of cancers of the skin including melanomas in various racial groups provide additional evidence of the greater importance of environmental carcinogenic factors over those of genetic origin.

The death-rate from cancer is higher in industrial areas than in the non-industrial or agricultural ones. This is well exemplified in the recent investigations of Stocks in Great Britain on regional and local differences in cancer death-rates; his report has revealed the existence of marked variations in death-rates from cancers of various organs in different parts of England and Wales. Similar reports have been recorded from the United States and Germany. In a statistical analysis of 2407 admissions to the tumour clinic, Schrek noted that cancer patients from rural areas representing 26·4% of all admissions provided 32·8% of all cancers of exposed skin, 44·3% of all cancers

of lip and 7% of gliomas of the brain. Kenneway and Kenneway concluded from their studies on the incidence of cancer of the lung and larynx that the incidence of cancer of the lung in both sexes and of cancer of larynx in men was higher in the urban than in the rural population of England and Wales. Similar results were also noted in Denmark (Clemmerson), which lay stress on the importance of environmental factors in causing lung cancer. We are now constantly inhaling the fumes and vapours of various gasoline and diesel engines, which carry carcinogenic hydrocarbons in them. These carcinogenic substances have been isolated from the air.

Some of the differences noticed in the incidence of cancer might be due to various socio-economic reasons as when people are exposed to particular exogenous carcinogenic agents. The incidence of cancer of the scrotum is higher in the lower classes due to the general lack of personal hygiene and cleanliness among them, and a consequent more intense reaction to the soot and grime on the skin. Clemmerson and Nielson showed that there was a more frequent and definite tendency for cancer of the uterine cervix to develop in the poorer classes in both married and unmarried women. Cancer in the tonsils was seen most frequently in steel workers and of the respiratory tract among engineers and foundry workers and grinders; cancer of the alimentary tract amongst furnace workers, suggesting that the carcinogenic factor was being inhaled or ingested in these trades. Hence the liability to cancers at different sites bears a definite relationship, connected with specific trades and occupations and with incidental carcinogenic exposures.

During recent times cancer of the lung has shown a great increase in its incidence and exhibited certain irregularities in its onset, and spread, and also as regards sex differences and in relation to different localities and regions. This is a common observation in all industrialized countries during the past 30 years. Whether the carcinogenic factors are present in the general environment, or in certain specified industries and occupations, or whether this results from cigarette-smoking during the past five decades has been the subject of a lively controversy and has provoked considerable researches and studies on the subject.

There has also been an increasing incidence in the morbidity and also in the death-rates in England and Germany due to leukæmias. No definite cause could be found. Probably the use of many chemicals in industry and medicine with their toxic, allergic and other reactions on the hæmopoietic system, may account for the increase noted.

Many chemicals can produce cancer and the specific carcinogenic agents in them have been isolated. The experiments in

this regard which started from the days of Kennaway and Cook (1932) who isolated the carcinogenic agent from coal-tar, are being continued in regard to various other chemicals also.

Neubauer (1947) collected the reports relating to 143 cancers, of skin resulting from arsenic medication and 24 occupational cancers from the World's literature. Arguello and Tello have studied a total of 148 cases of skin cancers 90 of which showed cutaneous manifestations of chronic arsenism. A vast amount of literature has accumulated on the relationship of lung cancer to the inhalation of arsenic. The arsenical element in tobacco smoke is blamed for cancer of the lung; asbestosis has been held responsible for the increase in cancer of the lung; 60 cases of cancer of the lung due to asbestos have been recorded.

Recent investigations by American chromate manufacturers have confirmed previous German observations that this occupational group exhibits a great liability to lung cancer as evidenced by the mortality and morbidity rates. Today the total number of chromate-cancer of the lung stands at about 125, chromate being thus apparently a carcinogen of high potency.

Recent work has shown that prolonged, low level occupational exposure to benzene results in the development of leukaemia, occasionally resulting in lymphosarcoma or chloroleukæmia. Occupational contacts with coal-tar, pitch, soot and creosote oil have resulted in cancer of the skin and during the past 12 years a considerable number of new cases have come to light. Petroleum products with high boiling points are extensively used for a variety of purposes, industrial and domestic. Serious attention must be paid in future to the possibility of a cutaneous or a respiratory cancer developing as a result of the incomplete combustion products from carcinogenic petroleum oils. Certain infectious agents, and certain habits and dietary conditions of the people have resulted in cancerous growths. The high incidence of cancer of the bladder in Egypt is due to infestation with bilharzia. Friedell and Rosenthal produced additional clinical evidence supporting the concept that chewing tobacco is an aetiological factor in the development of cancer of the mouth. Recent work shows that tobacco extractives may be responsible for the excessive incidence of oral cancer in certain parts of India. During the past decade a great deal of information has been added to the already existing evidence that multiple or single dietary deficiencies and dietary additives and contaminants might produce cancer in man. This is evident from the occurrence of primary carcinoma of the liver resulting probably from a dietary deficiency in the South Africans, now seen more frequently also in India. With regard to the excessive smoking of cigarettes and its relationship to cancer of the lung, a distinct parallelism has been recorded between the sale of cigarettes and the incidence of

bronchogenic carcinoma, which is seen more frequently in men than in women (*Doll and Hill*). Similarly cancer of the palate is common in the Northern Circars of India confined mostly to the Visakhapatnam District where the lighted end of the cigarette or cigar is kept inside the mouth and smoked. This leads to leukoplakia and ulcerative lesions resulting in cancer of the palate.

The data given above, clearly demonstrate the role of environment in the production of cancer. The increased longevity of the population today, inevitably leads to an increased frequency in the incidence of cancer, as many more of us reach the cancer age. So if the aetiological factors involved in various types of cancer due to industrial hazards can be ascertained, an earnest attempt may be made to prevent their occurrence by adopting suitable prophylactic measures.

A knowledge of the causes known to produce cancer of certain types, or suspected to cause certain other types should help in the elimination of such carcinogens met with in our daily life.

REFERENCES:

1. Arguello, R. A. and Tello, E. E. (1950)—*Rev. Fac. Cien. Med. Univ., Cordoba*, 8: 409.
2. Berman, C.—*Primary Carcinoma of Liver—A Study in Incidence Pathology and Aetiology*, London, H. K. Lewis Co. Ltd.
3. Cameron, C. S. (1953)—*Oral Surgery* 6: 11.
4. Clemmensen, J. (1947)—*Brit. Jour. Cancer*, 1: 253.
5. Clemmensen, J. and Nielson, A. and Jensen, E. (1952)—*Report of Symposium on Endemiology of Cancer of the Lung*.
6. Doll, R. and Hill, A. B. (1952)—*Brit. Med. Jour.*, 2: 1271.
7. Friedell, H. C. and Rosenthal, L. M. (1949)—*Jour. Amer. Med. Assn.*, 116: 2130.
8. Kennaway, E. L. and Kennaway, N. M. (1951)—*Brit. Jour. Cancer*, 5: 153.
9. Khanolkar, V. R. and Suryabai, B. (1945)—*Arch. Path.*, 40: 351.
10. Kini, M. G. and Subbarao, K. V. (1937)—*Ind. Med. Gaz.*, 72: 637.
11. Neubauer, O. (1947)—*Brit. Jour. Cancer*, 1: 192.
12. Reddy Bhaskara, D. and Reddy, D. J. (1954)—*Jour. Ind. Med. Profession*, 1: 429.
13. Schrek, R. (1945)—*Cancer Research*, 5: 539.
14. Stocks, P. (1952)—*Brit. Jour. Cancer*, 6: 99.
15. Wu, Y. K. and Loucks, H. H. (1951)—*Ann. Surgery*, 134: 946.

SOVIET MEDICINE—A WOMAN'S WORLD

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Kharkov Institute, for research on vaccines and sera, is run by a woman, Dr. Galina P. Cherkass.—(*Medical News*, Oct. 8, 1956 via *Current Medical Digest*).

THE IMPACT OF PSYCHIATRY IN DERMATOLOGY*

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INTRODUCTION.—The importance of psychiatry in medicine came to be recognized about 20 years ago when its application was confined to neural states. It has since been extended to the field of dermatology, as a result of the pioneering work of Theodore Sack. His concepts, like all new ones, had to pass through fire and to face more of opposition than of acceptance. Later work by Stokes, Buchmenn, Mackenna and Hodgson have conclusively shown that the skin reacts like a sensitive barometer reflecting the internal conflicts of men and women and exhibiting different patterns. The astute clinician will be able to correlate the specific syndromes to the manifestations of the disease.

In the words of Wittkower in terms of body language, eloquent for those who understand it, psychosomatic skin disorders often reveal some of the sufferer's emotional conflicts; and so psychosomatic factors do bear a definite relation to skin diseases.

We are still in our infancy in this branch, and only sporadic work has been done here and there. It requires a systematic approach and a good follow-up of cases, which will make all the difference and may alter the prognosis from a somewhat gloomy precarious one to the possibility of certain cure. I have in this paper set forth some reflections of mine stimulated by my clinical observations on emotional stress and strain.

Review of recent work.—A notable contribution was made independently by Stokes and Rogerson on the asthma-prurigo syndrome, and they concurred in the view that subjects of this syndrome exhibit insecurity, and inferiority complex, with a tremendous drive which Stokes, calls "a tension frame of mind." In 1940 Berker and Obermeyer observed the role of adverse social factors in the production of dermatosis and they believed it was due to neuro-circulatory instability. They classify all the factors coming under the category as neuro-dermatosis; to mention a few of them—pruritus, neuro-dermatitis (dry and wet), urticaria, alopecia areata, lichen planus, vitiligo and rosacea.

Mackenna (1944) went a step further and correlated the skin condition with personality types. He divided them into five categories:—*viz.*, low intelligence, hysterical, narcissistic, grossly anxious and obsessional.

Hodgson (1945) broadly fitted the skin condition into the spontaneous and frictional. He classified the basic skin types into: normal, ichthiotic, seborrhoeic and eczematous.

* Specially contributed to the *ANTISEPTIC*.

Some psychiatric considerations.—Psycho-somatic medicine comprises two factors:—psychological and physical. We are mainly concerned here with psycho-somatic disorders that have a direct and immediate bearing on maladies due to emotional causes. Generally those who are emotionally maladjusted are subject to these disorders. A triad of heredity, acquired-features, and mental factors is essential for causing this malady.

Heredity:—An apparent inheritance of the disease may be simulated by one member of the family who identifies himself with a previous sufferer in the same family. **Acquired features:**—Old scars of bones may be predisposing causes. **Mental factors:**—Two types of mental disorders are seen. One who is psychiatrically ill; and the other who suffers from character disorders. In the first case it transforms itself into a physical illness while in the latter it results in a nervous break-down. The latter group exhibits anomalies in thought, feeling and actions.

It is common knowledge that the behaviour of an individual and his reaction to a particular situation is conditioned by focal conflicts present in him and they show a similarity in the reaction to particular disorders. To cite a few examples, hypertensive people show conflicts over aggressiveness; and women with dysmenorrhœa exhibit conflicts over bisexual trends. It naturally happens that any additional load over the state reaches breaking point and shows itself as an expression of psycho-somatic disorders depending on the following backgrounds, *viz.*: (i) the nature of focal conflicts, (ii) hereditary predisposition and (iii) the psychological meaning of symptoms. The outcome of the conflicts is the urge to do something which the patient will never do in his saner moments.

Application of psychiatry to dermatological problems.—The question arises as to why in psycho-somatic disorders, the skin is affected and how it is brought about. The following points which exert some effect on the skin can be grouped into: (a) heredity, (b) previous personality, (c) focal points, (d) focal conflicts and (e) psychological meaning of symptoms.

Heredity:—Different individuals possess different types of skin and some are prone to exhibit emotional states more markedly than others. Hodgson considers that their skin reaction conforms to the basic types he has described. Another view is that particular types of individuals exhibit particular types of skin-reactions peculiar to them. Heredity is a predisposing cause and also an exciting cause, for stress and emotional strain determine the nature, duration and persistence of the skin-lesion.

Previous personality:—There seems to be a casual relation of personality make-up to the onset of the disease. Mackenna

states that the hysterical patients show dermatitis artefacta; obsessionals show neuro-dermatitis, pruritus, aniet vulvæ, seborrhœa; people with anxious temperaments show rosacea, pompholyx, acne. Exudative dermatosis is seen in narcissistic patients and the low intelligent group manifests all types of dermatoses.

Focal points.—The impact of personality make-up upon skin diseases covers a number of diseases which may be simplified broadly into four categories namely: (a) self-esteem, (b) sexuality, (c) aggressiveness, and (d) cleanliness.

Self-esteem:—The skin in the human, serves the purposes of self-display and self-decoration. The blushing of modesty in the shy woman is a conflict to show herself to advantage and to hide herself at the same time. It is as it were a compromise.

Sexuality:—The skin conveys affection, tenderness and sexuality. Again the blush of innocence of an young girl when she listens to a sensuous tale shows her conflict of having enjoyed the narration but her sense of morality does not permit enjoyment.

Aggressiveness:—It is the feeling of frustration expressing itself; as an escape he directs it on the skin, by scratching. A scratch represents the repression of hostile impulses and when confronted he scratches his head.

Cleanliness:—Cleanliness metaphorically denotes a clean conscience and those who have deviated from it naturally feel a sense of guilt.

Focal conflicts.—These four factors acting singly or in combination cause focal conflicts which result in skin reactions. Even a slight disturbance in the environments would aggravate the skin lesions causing them to flare-up. The lesions are primarily functional but may later develop structural changes. The relation of focal conflicts to physiological and pathological levels, is well brought out in the following statement.

TABLE I (After Wittkower)

Conflicts relating to	Physiological response	Pathological response	Examples
Self-esteem	Blushing	Spontaneous	Seborrhœa
Sexuality	Sebum production	"	Rosacea
Aggressiveness	Flushing	Frictional	Pruritus
Cleanliness	{ Itching Scratching	"	Prurigo simplex } Neuro-dermatitis }

Psychological meaning of symptoms.—Psychologically the skin is a barrier between the inner and outer worlds. In skin disorders both are affected. Skin disorders may be guilt-motivated as in (Rosacea, seborrhœic and eczematoid dermatitis), and its only subjective reference to the outer world may be the sufferer's urge to confess his guilt or the self-disfiguring effect.

Specific syndromes.—Brief mention will be made of the known conditions, viz.:—(i) Seborrhœic dermatitis, (ii) acne vulgaris, (iii) rosacea, (iv) pompholyx, (v) psoriasis, (vi) vitiligo, (vii) affections of unknown ætiology and (viii) some virus infections.

Case reports.—I would mention a few typical cases of psycho-somatic disorders, which I have come across in my long experience.

1. *Psoriasis*:—An energetic engineer aged about 35 came with a patch of psoriasis on the back of his right elbow. He was cured of the condition within a fortnight but came back again after two months with a more extensive spread of the condition which required more than a month's treatment this time. He came again for a third time a year later with lesions extending all over the body; naturally the treatment had to be a prolonged one.

The points of interest in this case are:—(a) At his first visit within a few days before the attack, he had trouble in his official career resulting in his dismissal. (b) A week before his second visit he had a financial crash, and (c) two days before his third visit, he lost his only daughter. Thus all the three attacks of psoriasis are referable to emotional disturbances.

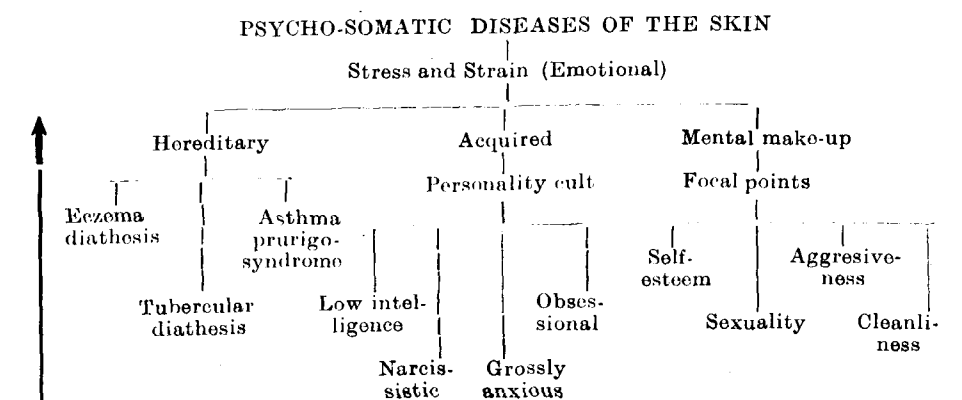
Plane warts and molluscum contagiosum:—A girl aged 18 years had plane warts distributed over the dorsum of both hands like a bunch of grapes extending over an area, 1½" in diameter. The parents were naturally worried as the girl was to be married and the prospect of the marriage was greatly jeopardized by this condition.

The girl confided to me that she was worried and anxious over the prospect of her being forced to marry a person whom she did not like. I advised the parents against their proceeding with that marriage, if the girl should recover. Accordingly the marriage was dropped and even without any treatment the warts disappeared!

2. The same girl came to me consult five years later when her trouble was molluscum contagiosum. A careful history elicited that she was again in some anxious state over her husband's delinquencies and when the cause was removed she was restored to normal health.

I have noted similar results in cases of lichen planus and in dermatitis herpetiformis.

In conclusion I shall give a diagrammatic representation of the various factors influencing psycho-somatic disorders.



Conclusion.—The difficult socio-economic conditions and the consequent stress and strain of modern life, with its increasing fastness and tempo create peculiar and new health problems which require to be solved by psychological remedies besides medicaments. Many skin disorders come into this category and need such aids, for being set right; the future holds great promise for this branch of medicine i.e., psychiatry.

Acknowledgement.—I am thankful to Dr. P. N. Behal, Hony. Dermatologist. Irwin Hospital, New Delhi, for his valuable suggestions. I am also obliged to Dr. P. N. Bhargava, Hony. Bacteriologist (Irwin Hospital) for his encouragement and guidance.

REFERENCES:

1. Mackenna, (1944)—Lancet.
2. Stokes, (1935)—J. Amer. Med. Assoc., 105 and Arch. Derm. Syph. (1946).
3. Wittkower, (1946)—Lancet.
4. Mackenna, (1950)—Modern Trends in Dermatology.

SURGICALLY MATURED ILEOSTOMIES AND COLOSTOMIES

It is only within recent years that the ileostomy problem has approached any degree of resolution. Previously, ileostomy has been misused, abused, misunderstood and grossly condemned.

The complications of ileostomy were well documented such as prolapse, retraction, skin irritation and erosion, fistula formation, obstruction, and fluid and electrolyte derangements. In 1941, Garlock indicated that placement of sutures between the mesentery of the ileum and the parietal peritoneum would prevent prolapse and retraction and this has proved to be true. The fact that ileostomy troubles were recognized was evidenced by the introduction of split thickness skin grafting of the ileostomy in 1941 by Dragstedt. This was taken up by Black and Sholl, who in 1954 reported on 80 cases. Although 72 patients eventually achieved a satisfactory stoma, the difficulties were considerable. A modification of this was advanced by Wells in 1952 when he advocated the use of a full thickness pedicle graft on the top side of the ileostomy with a split thickness graft to the underside. He appeared pleased with his results but this method has not been generally used. Turnbull in 1953 recommended that a mucosal graft of the terminal half of the ileostomy be fashioned one week post-operatively and sutured to the skin.

During the four years from July 1952 June to 1956, thirteen ileostomies in association with colectomy have been performed at Brooke Army Hospital. There were two classical ileostomies, five with skin graft, and six which were surgically matured. All the complications occurred in the classical and skin grafted groups. The successful classical ileostomy was our first attempt at surgical maturation to be performed one week post-operatively but it was short and matured by itself very quickly. Two years post-operatively, this patient continues to do well and by X-ray study shows no prestomal dilatation.

The proper use of ileostomy is in association with extirpation of the colon and should not be used by itself in treatment of such diseases as ulcerative colitis and familial polyposis. The concept of ileostomy dysfunction is now well documented and well understood.

The complications of ileostomy including obstruction and fluid and electrolyte difficulties are all due to ileostomy dysfunction, not to the ileostomy itself.

Surgical maturation of an ileostomy or colostomy at the time of operation is the procedure of choice whether it be the mucosal graft of Crile and Turnbull or the full thickness eversion of Brooke as utilized at Brooke Army Hospital.—(*Military Medicine*, June, 1957).

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INFANTILE DIARRHŒA*

S. SESHADRI DIXIT,
Medical Officer, Paper Town, Bhadravathi

I. General.—In our country one important cause for the high mortality amongst infants and children is the symptom-complex of diarrhœa. It is estimated that 1,22,000 children die of diarrhœa and dysentery every year and of these about 28,000 die within the first year of life. It may occur by itself or as a complication of other infections—which usually happens, consequent on dehydration, emaciation and anæmia, and has a fatal termination. High temperature, humidity, a heavy rain-fall especially during the summer months, a heterogeneous population, with varying diets, tastes and customs, relying on doubtful sources for food and drink especially in the rural areas, account for the alarming proportions which the disease assumes and levies a heavy toll of life in the new-born.

II. Aetiology.—1. *External*.—(a) The most common cause is error in diet. Breast-feeding diminishes the incidence of diarrhœa. Bottle-fed children have to depend upon varying sources for their milk supply, which is often impure and adulterated; (b) giving large quantities of food at frequent intervals, whenever the baby cries (for whatever reason) without allowing adequate time for the digestion of the previous feed, may cause diarrhœa from defective digestion, fermentation and irritation; (c) diarrhœa may also be caused by unwholesome food like unripe or over-ripe fruits, rich food or food-poisoning from rotting vegetables etc., and (d) it may also result from over-crowding, insanitary and unhygienic surroundings, like damp, dirt and dung-heaps.

2. *Internal*.—(a) Climatic conditions not only favour the growth of bacteria in food but also affect the infant's resistance adversely. (b) Specific organisms like *E. histolytica*, *Bact. pseudocarloinus*, *B. proteus* etc. may produce diarrhœic symptoms. (c) A few helminths are also known to cause intestinal irritation and diarrhœa in children. (d) In summer the secretion of hydrochloric acid in the stomachs of children is not much and so its sterilizing power is also less. (e) Certain infective diseases like tuberculosis, malaria, relapsing fever, typhoid are complicated by diarrhœa. (f) Diarrhœa may also be secondary to upper respiratory infections; some believe that the primary agent is a virus which gains entry into the oropharynx. Some consider that a primary infection of otitis media may lead to a secondary diarrhœa.

III. Pathology.—(1) Generalized increase in the vascularization; (2) a slight thickening of the mucous membranes; (3) congestion in Peyer's patches; (4) distention of the stomach and

*Specially contributed to the ANTISEPTIC

intestines are usually found and very rarely extensive inflammation may be observed.

Microscopically there will usually be a degeneration of mucosal cells and perivascular round cell infiltration. The kidneys, liver, heart and brain may show degenerative changes.

IV. Bio-chemical changes.—The gastro-enteritis is not merely a local lesion in the alimentary tract. By and large all the infant's tissues become involved and may result in 'dehydration,' which impairs the renal function. And due to the impaired renal function acidosis develops owing to the retention of acid metabolites which should normally be excreted in the urine. If diarrhoea is associated with vomiting, the loss of hydrochloric acid in the gastric contents may be sufficient to counter-balance the loss of base in the diarrhoeic stools. So there is a disturbance in the acid-base equilibrium.

V. Symptomatology.—(1) If the first portion of the small intestine is involved the motions are not very watery and contain particles of undigested food. (2) If the large bowels are involved the motions will be watery, profuse containing a lot of mucus. (3) If bile is passed unchanged the motions will be greenish in appearance. (4) But if there is defective secretion of bile due to a derangement of the liver, the motions will be of a pale whitish colour. (5) If there is excessive fermentation, the motions will be frothy and acidic. In acute infections griping pain in the abdomen, severe vomiting and a high temperature are noticed. In severe infections with a fulminating course the child becomes prostrated, with sunken eyes and hollowed cheeks, owing to dehydration and toxæmia. In chronic cases, emaciation, œdema of the legs and feet and æsthenic conditions of the heart are noticed.

VI. Classification.—(1) PRIMARY:—(a) *simple*:—semi-liquid motions are passed without much griping or pain; (b) *cloudy diarrhoea*—lumpy or cheesy stools containing particles of casein and also of a soapy substance derived from the fat of the milk and lime-salts; (c) *offensive or foetid diarrhoea*—indicating that the incompletely digested food is hurriedly passing into the colon—where it becomes a stinking putrid mass; (d) *violent watery or choleraic diarrhoea*—wherein severe constitutional symptoms indicate toxic bacterial poisoning and lastly; (e) *febrile or inflammatory diarrhoea*. (2) SECONDARY:—(a) *Parenteral*:—Any acute infection from outside the tract is enough to change the threshold and precipitate the diarrhoea.

Character of motions.—When the stools are green, it is called green diarrhoea. In most of the cases, this is due to the bile-pigment being hurried through the intestines—without letting them undergo the usual changes. Stinking and putrid

stools are due to the above cause or it may be due to stasis in the colon which will cause putrefaction. Lumpy and cheesy stools are due to undigested milk. An erythematous eruption over the buttocks develops owing to the presence of fatty-acids, butyric acid and its allies caused by an excess of fat in the diet. Frothy acid stools are due to an excess of sugar in the diet.

VII. Clinical picture.—There may or may not be a rise in temperature but in severe infective and parenteral diarrhoeas, high fever and dehydration will occur if the diarrhoea is not controlled. The child will become pale and restless, the anterior fontanelle loses its lustre, the eyes look sunken and the skin loses its elasticity. The tongue becomes furred and red. The abdomen becomes scaphoid and peristaltic movements of the small intestines may be visible. The pulse will be rapid and the heart sounds soft. If dehydration persists, oliguria gradually develops and in severe cases, anuria. Toxæmia may develop later, when the face looks livid and pinched. There will be restlessness, and then apathy, the eyes have a stare and respiration then becomes shallow. In infective diarrhoea, the stools usually contain blood and mucus but not in parenteral diarrhoea. Diarrhoea is sometimes a symptom of rickets; diarrhoea may occur during teething.

VIII. Complications.—Otitis media is both a cause and a complication of diarrhoea in children. Boils, eruptions, abscesses in the subcutaneous tissues and purpura are common.

IX. Prognosis.—The more severe the dehydration, the worse is the prognosis. The outlook in dietetic diarrhoea is better than in the infective and parenteral type. The type of infections and the sensitivity of the bacteria to chemotherapeutic and antibiotic drugs are important factors in prognosis. Skin complication is a bad prognosis, and thrombosis of the cerebral sinuses is positively dangerous.

X. TREATMENT:—The first step in treatment is to find the origin of the gastro-enteritis, which is not usually practicable. Treatment would therefore, consist of:—(1) prevention; (2) general hygienic measures; (3) symptomatic; (4) specific and (5) dietetic.

(1) & (2) *Prevention and hygiene*:—Boiled good quality milk should be given at regular times. Healthy and wholesome surroundings free from flies etc., must be provided and the infants should be guarded against chill and damp.

(3) *Symptomatic*:—Control vomiting and frequency of motions; give rest and warmth; replace lost fluid and treat the toxæmia and collapse.

(a) Starvation and elimination and control of dehydration are important. Milk should be stopped immediately and if there is

much vomiting, it is advisable to withhold all food for 24 hours—except sips of boiled water, barley water, or rice water or glucose, or orange juice;

(b) An initial purgative, half a teaspoonful of castor oil for a six months' old baby in order to get rid of any irritant is a sovereign step. Washing the colon with saline may also be good.

(c) Combat the dehydration by repeated sips of sterile water, glucose water, 5% albumen water, Hartman's solution (an isotonic solution of sodium lactate, sodium chloride, potassium chloride and calcium chloride) so as to total an ounce per hour. If there is vomiting, stop oral sips. If dehydration is severe, prefer the subcutaneous route and give normal saline with 2.5% glucose, the amount and speed depending upon the outlook and the power of absorption. If dehydration is very severe, the intravenous route should be utilized (half normal saline plus 5% glucose) and from 80 cc. to 300 cc. per hour can be given depending upon the age and size of the baby. Infusions into the peritoneum and the bone-marrow are fraught with risks and so must be avoided.

Dr. Aldridge gives details relating to the fluids for combating dehydration (see *Table I* below).

TABLE I

Fluid	Advantages	Disadvantages
Physiological saline	Easy availability	Risk of edema by adding electrolytes to the already concentrated blood
Dextrose solution 5% to 10% in water or in 4% dextrose in 0.18% saline	Diuresis; liver protection; and relief of ketosis	Occasionally pyrogenic breakdown properties from sterilization
Hartman's solution	Buffering action against alkalosis or acidemia	Not readily available
Blood or plasma	Replacement of protein-loss	Not always available; and when available tends to stop dripping

(d) In spite of adequate fluids, signs of toxicosis occur for which a bowel wash can be done as already stated. Adsorbents are useful. Carbo-kaolin and apple pectin may be used; for acidosis glucose and soda bicarb may be used.

(e) *Rest and warmth*:—The child must have full rest and the bare minimum of nursing attention. Warmth is provided by raising the room temperature, in preference to the use of hot water bottles.

(f) *Treatment of collapse*:—Brandy, Cardiozol, Caffeine, Sodi-benzoas or adrenalin, may be given.

4. *Specific treatment*:—This is possible when the exact cause can be ascertained: (whether it is due to errors of feeding, parenteral infections, or primary infections of the alimentary tract) by the history, physical examination and by the bacteriological examination of the stools. Errors in feeding may be corrected by preventive hygienic methods and by the starvation and elimination methods. Parenteral infections such as tonsillitis, coryza, otitis media, pneumonia, pyelitis, meningitis etc., may be treated on the particular lines suited for each, and the secondary diarrhœa by symptomatic methods. For primary infections of the alimentary tract, usually Bismuth carb in doses of not less than 5 grs. is recommended. As much as 20 grs. *t.d.s.* for infants may be given mixed with aromatics or in a mixture sweetened with glycerine.

For infective diarrhœa: chemotherapeutics and antibiotics are commonly used. We should choose one of the former which is not quickly absorbed, and will have a slow action (*e.g.*, Phthalylsulphathiazole on the infecting organisms. Among the antibiotics, Streptomycin combined with sulphanilamide is used in order to inhibit the development of resistant strains. Opium is valuable, but its use requires a very careful selection of cases and also the effect of the drug must be closely watched. It is indicated: (1) in cases of colitis where the stools are frequent and there is much straining; (2) when the stools are offensive, the tongue clean, showing that the peristalsis is only increased. Opium in such cases calms down the peristalsis and so prevents putrefaction and diarrhœa; and also calms down the reflex irritability in cases of lenteric diarrhœa.

It is contraindicated at the onset of the illness, when there are signs of collapse and also when the tongue is furred.

TREATMENT OF SPECIAL SYMPTOMS:—(a) *Hyperpyrexia* (if about 104°F):—Ice-bag to the head, and wet sponging; (b) *Collapse*:—Hot water bottle, brandy and adrenalin $m ii$ hypodermically every 4 hours; (c) *Irritation round the anus*:—Wash with dilute solution of Soda bicarb and smear the part with castor oil to which Zinc oxide is added (20 grs. to the ounce); (d) *Thrush in the mouth*:—Boroglycerine application; and for (e) *Restlessness*:—Chloralhydras is the best drug.

5. *Dietetic treatment*:—In most cases, diet regulation alone is sufficient to bring about the desired result; an increase of protein makes the stools firm and alkaline while an excess of carbohydrate produces loose motions and a high fat diet tends to aggravate the condition. Hence we may recognize 4 phases:—

The starvation stage:—May not exceed 12 to 24 hours, the idea being to stop the source of infection or the noxious exciting element in the diet.

Cereal diet:—Barley water, or rice water, is given with 3 to 5% of sugar for energy requirements. It ferments less and helps in weight-gain. The duration of this diet depends upon the clinical improvement manifested through facial expression, character of the stool and the interest taken by the infant in the surroundings.

Modified milk diet:—Butter milk which has a low fat content or protein milk which has a high protein content forms the basis of this stage.

Maintenance diet:—All the feeds of the previous stages are replaced by the diet used for the age. This may be breast milk, simple or skimmed milk.

Apple or banana diet may be used; the stool gives the indication about the disagreeing constituent of the diet and the need to modify it suitably. In *fermentative diarrhoea* cut off the excess of starch from the diet; avoid fruits and vegetables.

Putrefactive diarrhoea is controlled by a high carbohydrate diet. Skimmed or fat free milk and other fat free diets control *fatty or chylous diarrhoea*.

In *chronic diarrhoea* nutritional oedema is seen with puffy face, oedematous legs and feet, etc., for which barley water, bael extract, soft rice, potato, boiled plaintain etc, are added to the diet. Vitamin B is most useful. In severe cases, blood transfusion is needed,

Celiac disease:—A high protein and a low fat and carbohydrate diet with all vitamins will suffice.

Accessory treatment consists of re-mineralization, vitamin therapy and the use of digestive adjuvants.

Excessive loss of fluid from the body, depletes most of the salts from the blood and tissues which may cause in some cases, tetany and celiac disease. The important salts are calcium phosphorus, iron, sodium and potassium, which help in the metabolic processes as well as in enzyme action.

Vitamins:—Vit. B and Vit. C., are lost in diarrhoea and so require to be supplied in concentrated form.

Paper Town, Bhadravati.

DIABETES

M. Jersild (*Lancet*, November 17, 1956) discusses the use of insulin zinc suspension (lente) in diabetes. Generally, a diet of 2000 calories was allowed (carbohydrate 200 grammes, fat 93 grammes and protein 87 grammes). One thousand patients were controlled on insulin zinc suspension. Of these patients, 90% were controlled by insulin zinc suspension, with an average dose of 40 units. Insulin zinc suspension (lente) was given alone in 74% of patients, insulin zinc suspension (lente) with amorphous insulin zinc suspension in 12%, and insulin zinc suspension (lente) with crystalline insulin zinc suspension in 8%. Local reactions were rare. The conclusion was reached that lente insulins controlled diabetes in most cases.—(*Medical Journal of Australia*, 22-7-'57).

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Cases and Comments

THE ROLE OF THERAPEUTIC TATTOOING WITH MELADININE AND/OR INERT PIGMENTS IN THE TREATMENT OF LEUCODERMA

VASANT P. MEHTA, M.D., M.S., F.C.P.S., F.I.C.S.,
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LEUCODERMA or white skin is an acquired condition of hypochromic or achromic areas appearing on the skin due to a partial or total destruction of the melanin-forming function of the epidermis. This condition is also known as 'vitiligo.'

Aetiology:—Leucoderma occurs both in males and females although more of the latter generally seek treatment. It affects both white and coloured races but cosmetically, it becomes more obvious in coloured individuals. Patients developing leucoderma are otherwise healthy except occasionally when it is associated with recognized endocrine disease of the thyroid or pituitary gland.

Physiology and biochemistry of melanine:—The skin owes its natural colour to the presence of the pigment, melanin. This pigment is formed from tyrosine by specialized skin cells (melanoblasts) which are situated at the junction of the epidermis and the corium. Certain known factors act as stimuli to the melanoblasts which then increase in size, become dendritic and produce melanin. Some of these stimuli are ultra-violet rays, X-rays, radium, irritant oils like *babchi* and ammoidin majus.

The aminoacid tyrosine is converted into DOPA or Dihydroxy-phenyl-alanine by the enzyme tyrosinase which is active only in the presence of copper.

Inhibition of pigmentation:—The process of melanin-formation is interfered with by sulphhydryl compounds as they compete with tyrosinase in combining with copper which is essential for melanin formation.

Nutritional factors:—Diet deficient in tyrosine, copper, pantothenic acid and folic acid can predispose to leucoderma.

Adreno-corticotrophic hormone:—Melanosis occurs sometimes in patients receiving ACTH injections. This is largely due to the presence of large quantities of intermedin which is a hormone formed in the pars intermedia of the pituitary.

Treatment.—**GENERAL MEASURES:**—A general examination of the body should be made and any factors like septic foci, nutritional deficiencies, gastro-intestinal disorders if present, detected and treated. In patients showing no obvious cause it is a good rule to give a course of liver and vitamin B injections followed by such supplementary oral therapy.

LOCAL TREATMENT:—*Stimulation therapy*:—Medical measures are directed to stimulate pigment-formation by acting as specific stimulants to the dormant melanoblasts but these depend on the presence of some living melanoblasts in the apparently achromic areas. Common medical measures include ultra-violet irradiation, *Babchi* oil applications and injections, as also croton-oil applications.

What is the basis of the management of these cases with surgical therapy?—The absence of pigment, when it is very generalized becomes so much of an accepted fact that neither the patients nor their relatives worry about attempting therapy because of the common belief that such cases cannot be cured. Out of all the known surgical methods of treatment that have been tried, two or three appear to stand out as having produced often strikingly good results. What are the indications for treating this condition when the disease by itself does not in any way disable the individual or shorten his active life span? Various secondary problems, social and economic arise from this disease. If the person happens to be already married, the only reason that prompts the person to seek treatment is the ugly appearance when patches occur on exposed areas of the skin like hands, face, neck and legs. There exists a considerable amount of confusion among the lay people because nearly identical terms are used in the vernaculars for leucoderma and leprosy and the persons afflicted with this disease are therefore, shunned socially, which fact becomes gradually known to the patient and although he adapts himself to the situation, it continues to remain a permanent source of mental stress and anxiety to him. Very often patients have noticed that friends and relatives avoid drinking water, tea etc. in his house, without mentioning the reason.

Manifestations in the unmarried female patients:—It becomes a very difficult problem both to herself and to the parents and close relatives especially in India if she belongs to communities where pre-arranged marriages still continue to be the rule. Not only are the patients anxious to see that the parts affected are completely cured as soon as possible but they want to keep it a family secret in order to avoid serious difficulties at the time of the marriage. The problem assumes greater importance when there are one or two patches especially in covered regions such as the waist or the legs and none have appeared on the face or hands. Quite often these patches have been stationary for a number of years and if somehow the depigmented areas could be satisfactorily repigmented a major problem would be solved, although most patients would like to make it clear to the future husband beforehand that the pre-existing disease had been satisfactorily treated.

Surgical treatment:—To-day surgery has progressed so far that there is practically no branch of medicine in which surgical treatment has not been attempted.

Therapeutic tattooing with meladinine:—Meladinine is a proprietary preparation containing extracts of Ammoidine and Ammidine marketed by the Grimault Laboratories for the treatment of leucoderma. Oral and/or local treatment of vitiliginous areas with meladinine has been the latest development in the conservative treatment of leucoderma. Experience has shown that treatment with meladinine should not be carried out in a standardized, uniform manner for all patients. Early cases of leucoderma of less than 1 to 3 years' duration gave excellent results with meladinine used locally and/or systemically. However, it is a common experience to find that some of these patients will show a slight early reaction which tends to subside; or they would repigment partially leaving smaller achromic areas. In such patients the idea of *therapeutic tattooing with meladinine* occurred to me and the technique has been used by me as a very gratifying procedure in partially responded cases. At first the meladinine solution was tried in a very thin alcoholic solution; but it was found unsuitable for tattooing, purely because of mechanical considerations. Subsequently I powdered the meladinine tablets and prepared a thick paste by adding to it a little sterile distilled water. The thick paste is then taken on the tip of the electro-magnetic tattooing apparatus and slowly injected into the achromic areas superficially, sufficient to produce little or no capillary oozing from the skin, as otherwise any exudate of blood would wash out the medicine. A trial patch is selected and the result of intradermal injection is observed. If at the end of a week, some definite reaction is observed the patch is checked up till it shows satisfactory repigmentation. The rest of the patches are then treated similarly. There is a definite danger in going too deep for it may produce severe inflammation requiring discontinuation of the treatment and suitable antibiotic and anti-inflammatory therapy. I have used this method in suitable cases with very encouraging results.

Chemical method of pigmentation:—Chemical tattooing as done for corneal leucomas was done in the earlier cases where the achromic area was abraded with sand paper or a rotary grinder following which gold chloride and tannic acid solutions were applied to the abraded area. The major disadvantages of this method of treatment were that the degree of pigmentation could not be very accurately controlled while the permanency of this method of pigmentation was not very satisfactory.

Intradermal pigmentation:—By this method a patient is prepared as for a surgical operation and under spinal or general

anæsthesia intradermal pigmentation is carried out with the use of multiple tattooing needles mounted on a specially devised tip which can be fitted on an electrically driven tattooing apparatus or a dermajector. The depth of penetration can be controlled by a suitable guide. The pigments used should be insoluble, inert, stable to heat and light and non-antigenic. Required shades are prepared by a proper mixing of suitable colours. The actual technique is quite laborious and requires much experience and knowledge of the principles of colour mixing and shade matching. Patients having achromic areas of more than 5 years' duration with a completely white skin even under a binocular loupe are unlikely to respond to any stimulant line of treatment with meladinine or other medicines and are the best suited for artificial pigmentation using suitable matching pigments. Each patch may require two to three sittings to get a final satisfactory result.

THE COST OF DIAGNOSIS

Medical Progress has laid severe obligations on the doctor. In the matter of diagnosis it is often no longer possible to arrive at a full and complete diagnosis by clinical means alone. A careful history, full clinical examination, and long experience will often enable the wise practitioner to arrive at a working diagnosis, and his therapy is based on this working diagnosis. If anything more is required, he has to face the responsibility of advising his patient that ancillary methods of examination are necessary. The cost and number of these have mounted rapidly in the last few years. That this should be so is natural. The examinations of the blood, of the bone marrow, and of the various fluids and solids excreted by the patient have increased in number and complexity as our knowledge of disease has increased. The cost also of radiological examination has kept pace with the rising cost of living and the mounting costs of radiological equipment. These investigations have to be performed by or under the supervision of highly trained medical men, and doctors and technicians have to be adequately paid; the result is reflected in mounting bills. The patient at the end of a disease is often confronted with a surprisingly high doctor's bill for which he has very little to show and he sometimes holds his practitioner to blame.

It is a wise policy for the doctor, for his own protection to take his patient into his confidence as much as he can about the fees that are being incurred, and to remember that in due course there will come a reckoning.—(*South African Medical Journal*, February 9, 1957 via *Current Medical Digest*, June 1957).

THE EARLY DIAGNOSIS OF GLAUCOMA

Beckett believes that the field of vision test is the most practical way to detect early cases of chronic simple glaucoma, and that it should be used routinely on all patients over 40 years of age. Examination of the temporal fields with a 2/2000 white test object takes only two or three minutes, but the author feels that it should be done only by the ophthalmologist. Wherever people are rarely seen by a qualified doctor, the government should undertake a mass screening for glaucoma.—(*Trans. Ophthalm. Soc., Austral.*, 15: 39, 1957).



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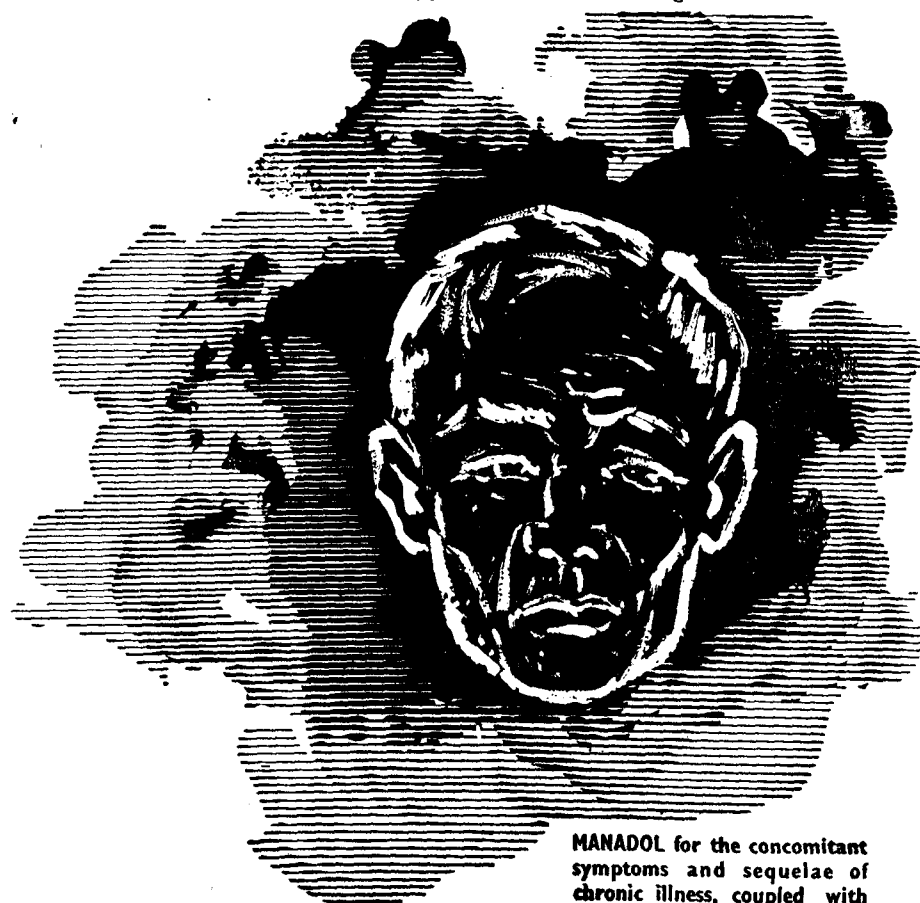
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LECITHIN—GLUCOSE TREATMENT OF OPIUM-ADDICTION

(Clinical Evaluation)

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AND

P. K. SHARMA, M.B., B.S.,
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THE treatment of opium addicts with lecithin-glucose was carried out in the District Jail, at Bulandshahr with promising results. Sixteen cases have been treated so far. The method employed was a sudden withdrawal from the start. Though a severe one, the method was found ideal and the withdrawal symptoms were not difficult to treat.

Lecithins belong to the group of phospho-lipids and represent a stage in the metabolism of fat. They are found in all animal and vegetable cells, and are intimately associated with all life-processes. They contain two fatty acids glycerol and phosphoric acid and a nitrogenous base choline. Liver and blood contain about 2% but egg-yolk contains more than 10% of this substance.

The role of lecithin in the treatment of opium addicts was first discovered in China. Mow in 1932 fed albino-rats with morphine for a long time and induced in them a state of chronic morphinism. Then the drug was withdrawn. The rats became sick, lost weight and began to die. Some of these rats were fed on lecithin before and during the withdrawal phase, and they remained healthy and did not lose weight. The general well-being of the lecithin-fed rats was remarkably good. These and later experiments showed that lecithin tones up the nerve cells of addicts by supplying lipo-phosphates.

The important factor associated with the drug-habit is the psychic element and the addicts had to be prepared mentally. An attempt was made to obtain from them details about their previous mode of life and how they picked this habit initially. Ample time was given to patients to describe their conflicts, mode of life and former surroundings. In each case a detailed chronological history was taken and recorded (*see Table I, p. 948*).

MANAGEMENT:—The patients were carefully watched and were not allowed to mix with one other. They were prepared mentally and needed plenty of reassurance and encouragement. As the patients were greatly afraid of the withdrawal symptoms, the fear had to be tackled individually and the patient was prepared to face the reality. During this time a thorough examination was made as detailed below and a proper history sheet was prepared of each case:—(a) General health, state of nutrition and weight; (b) the condition of the skin; (c) the

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condition of the heart, and blood-pressure; (d) the condition of the bowels and urine; (e) the mental condition including a thorough examination of the nervous system and (f) the condition of the kidneys.

TABLE I
Showing details of the history of the patients treated

No.	Age in years	Duration of the habit	Quantity of opium consumed daily in grains	How the habit started
1	28	10 years	20 to 30	In the company of <i>Fakirs</i> .
2	40	12 "	20	Bad company.
3	56	20 "	20 to 40	As a remedy for asthma.
4	26	6 "	10 to 20	As a remedy for cervical adenitis.
5	40	18 "	30	In the company of <i>Fakirs</i> .
6	25	8 "	10 to 20	From an addict neighbour.
7	32	10 "	15 to 30	As a sex-tonic.
8	50	20 "	30 to 40	While serving in an opium <i>Theka</i> shop.
9	65	15 "	20 to 40	From an addict neighbour.
10	45	12 "	20	As a cure for asthma.
11	73	35 "	20 to 30	In the company of addicts.
12	25	5 "	20	Bad company.
13	65	35 "	20 to 30	In the company of <i>Fakirs</i> .
14	32	3 "	20 to 30	As a sex-tonic.
15	32	8 "	20 to 30	Bad company.
16	42	6 "	10 to 20	As a cure for asthma.

TREATMENT:—Opium was not allowed for three days prior to the start of the treatment.

A powder containing calomel gr. iii to iv and Soda bicarb gr. x was given in the evening. Next morning Magnesium sulphate 3iv was given in a glass of water.

From the second to the eighth day lecithin powder (E. Merck) gr. x was given three times daily. Fifty to 100 cc. of 25% glucose solution was given intravenously, once or twice a day. Glucose was given also orally. In addition every case received as a routine (i) Fersolate (Glaxo) one tablet thrice daily; (ii) Multivitamin tablet one thrice daily; (iii) Thiamine hydrochloride 100 mg. in one cc. intramuscularly, every third day; and (iv) Vitamin C-200 mg. daily by mouth.

DIET:—Milk, rice and eggs were given during the early phase. After the third day bread, *dhal* and vegetables were also allowed.

TREATMENT OF WITHDRAWAL SYMPTOMS:—These were encountered from the first day and varied in different individuals. The patient complained of nervousness, general depression, cramps and pains in the limbs from the second day. Excessive vomiting and diarrhoea did not occur. Seven cases complained of general abdominal pain and discomfort on the third day. Insomnia was marked during the early phase. Some patients complained of a burning sensation in the back.

Broadly there were two types of cases:—1. Depression with collapse-like symptoms. In these cases Spt. ammon aromat m xxx, Coramine m xv with syrup of orange was given repeatedly.

2. Restless, excited type of cases with vague pains could not lie quietly. Serpasil 0.25 mg. *t.d.s.* proved effective in these cases. In three cases in whom cerebral excitement and insomnia were marked, Chlorpromazine 50 mg. given at 6 p.m. was sufficient to calm them down.

Results.—1. *Immediate*:—All the patients developed a distaste for the drug within two days of treatment and the craving for the drug disappeared completely in three to four days. The patients began to eat more and gain weight. They became confident and cheerful.

2. Eleven cases have been followed-up. Six are still in jail. They were discharged from hospital after treatment and have not taken any opium since then. In these six persons one to seven months have elapsed without the drug. They have gained from 8 to 10 lbs., in weight and are entirely different persons. Five persons who have gone out are also free from this habit and the excise authorities state that they are changed men.

Summary.—The results obtained with Lecithin-glucose treatment of opium-addicts are strikingly good and the following conclusions appear to be justifiable from the results obtained:—

(1) The treatment of opium-addicts with lecithin and glucose is a valuable measure; (2) the addict can be cured of the habit without severe withdrawal symptoms; (3) proper primary reassurance to the patient and a firm but kindly attitude on the part of the physician combined with skilful treatment of the physical symptoms of withdrawal form the key-note of success.

Acknowledgement.—We wish to express our grateful thanks to Dr. C. P. Tandon, P.M.S.I., Inspector General of Prisons, Uttar Pradesh for kind permission to publish this report.

A COMPARISON OF THE EFFECTS OF PHENOBARBITONE AND RESERPINE IN HYPERTENSION

A small controlled trial was made to compare the effects of reserpine and phenobarbitone on blood-pressure at the St. Mary's Hospital, London.

The patients submitted to the trial were 3 men and 8 women, aged 35 to 62, all of whom were considered to have essential hypertension on the basis of clinical, radiological, and bacteriological findings; 7 received reserpine ('Serpasil'), phenobarbitone, and control tablets, and 5 received only reserpine and control tablets. The dosage of reserpine was 0.5 mg. thrice daily, and that of phenobarbitone gr. 1/2 thrice daily; these dosages were thought to be roughly equivalent in sedative effect. The drugs and control tablets appeared identical, so that neither the patient nor the examiner knew which tablet was being taken, and the order of taking the drugs was at random. Each patient was treated for twelve weeks with each tablet and attended once weekly, at the same time of day each time. Blood-pressure was measured by the same person using the same sphygmomanometer each time. Blood-pressures were measured in the lying, sitting, and standing positions at each attendance.

When the results became available, it was evident that there was a considerable delay between the administration of reserpine and its effect on blood-pressure, sometimes amounting to four or five weeks. For this reason the reading during the first six weeks of each trial period were ignored, and only measurements in a 'steady state' during the second six weeks used as a basis for comparison.

Side-effects:—Three of the patients complained of nasal blocking during treatment with reserpine, but no other symptoms were observed. There was no subjective history of depression and no objective evidence of mental retardation.

Reserpine produced a significant ($p < 0.05$) fall of diastolic blood-pressure in each of the 7 patients treated with reserpine and phenobarbitone, and a significant fall in systolic pressure in 5 of them.

Phenobarbitone caused a significant fall in systolic pressure in 3 patients and a significant fall in diastolic pressure in 2. Although the blood-pressure rose in 3 patients treated with phenobarbitone, none of these rises was significant.

It is clear that phenobarbitone gr. 1/2 thrice daily has little or no beneficial effect on blood-pressure. Reserpine 0.5 mg. thrice daily invariably, and usually significantly, lowered the blood-pressure. The absence of any postural effect of reserpine on blood-pressure suggests that the mechanisms controlling normal blood-pressure were unaffected.—(*The Lancet*, February 23, 1957).

MANAGEMENT OF COLORECTAL POLYPS

Benign-appearing polyps of the colon and rectum should be excised, but total colectomy is not necessary even if histologic examination reveals cancer cells. Carcinoma found in adenomas that grossly appear benign rarely metastasizes and should not be considered identical with recognizable colorectal cancer.

Frank ulcerating cancers, familial polyposis, or polyps associated with carcinomas should not be simply excised.

Of 54 patients treated for benign-appearing polyps found to contain carcinoma, 47 were alive without recurrence or metastasis four to fifteen years later. Rectal polyps were coagulated and colon polyps removed by colotomy in most instances; in 8 patients with large lesions, resection of the colon or rectum was done.—(Turnbull, Jr., M.D., *Postgrad. Med.*, 21: 365-367, 1957 via *Modern Medicine*, June 15, 1957).



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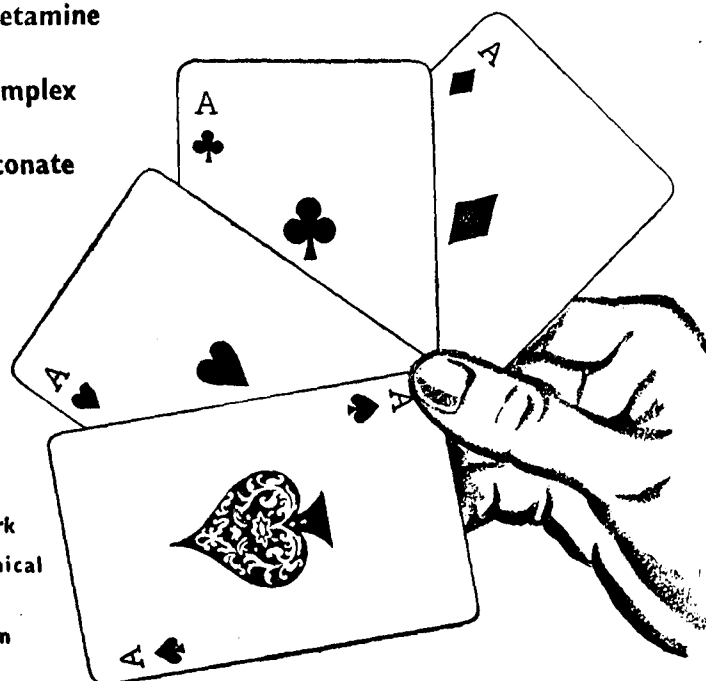
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OMNAMYCIN IN THE THERAPY OF GRANULOMA VENEREUM

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INTRODUCTION.—The victims of this distressing disease belong to the economically backward, sexually promiscuous, under-nourished and unhygienic sections of the population with little or no resistance against infectious diseases. In a chronic, slowly-spreading cutaneous disease like Granuloma venereum, with no tendency to spontaneous healing, the continued susceptibility of the ætiological agent to specific therapy is to a significant extent conditioned by the natural immunity mechanism of the host, although it is accepted that the infective agent may develop drug resistance in its own right. It is also a matter of common experience that initially susceptible micro-organisms develop resistance more easily and quickly to Streptomycin than to the other antibiotics. A retrospective study of streptomycin therapy of granuloma venereum during the past eight years has revealed a progressive increase in the percentage of drug resistance from 1.76 to 13.2 among 389 patients treated at the Institute of Venereology.

Omnamycin, a combination of streptomycin, penicillin and a non-specific antigen called Omnadin has been claimed to augment the defensive powers of the host, in addition to the specific beneficial effect of the antibiotic compounds of the drug. It is further claimed that a smaller total dosage of the drug may suffice to effect a cure. Hence a therapeutic trial of the drug in the treatment of venereal granuloma was started when adequate quantities of the drug were made available through the courtesy of the German manufacturing firm 'Hoechst' of Frankfurt. Omnamycin is a white powder containing streptomycin, penicillin and Omnadin, the last of which is a sort of non-specific antigenic cocktail of the metabolic products of non-pathogenic organisms, bile lipoids and animal fats etc.

Material and methods.—Clinical trials were started on the 11th June 1956. All the patients in this study were hospitalized and careful records of the clinical findings and laboratory investigations were maintained. In every case, the diagnosis was established by the microscopic demonstration of the characteristic intra-cellular Donovan organisms from the tissue spreads. During the period of the study and up to the time of reporting, 17 men and 10 women were treated. The duration of the

[951]

disease, varied from 2 weeks to 2½ years. Twelve of the 17 men patients and 9 of the 10 women patients, were untreated fresh cases who attended the Institute for the first time. The remaining, 5 men and one woman had received some treatment elsewhere, prior to their visit to the clinic.

The total dosage of Omnamycin for the treatment of a case was arbitrarily fixed as 10 g. administered at the rate of 0.5 g. of the aqueous suspension twice a day for 10 days, irrespective of the duration or extent of the disease. In 20 of the 27 patients, the lesion was confined to the external genitalia. In 5 of the remaining 7, the lesions had extended to the inguinal, anal and perianal regions. In this series there was one male patient with genital granuloma who developed a painful tender fusiform swelling of the lower and of the ulnar border of the right forearm, three months after the appearance of the lesion on the genitals. Radiogram revealed a destructive osteomyelitis of the ulna and aspiration biopsy of the unbroken swelling revealed an almost pure culture of Donovan organisms—a rare case of systemic infection.

Results of therapy.—The causative agent disappeared from the surface scrapings within an observation period of 6 days from the commencement of therapy and the clinical lesions in the successful cases, healed within a period of 18 days. Of the 17 men, patients three did not respond to a single course of therapy. One of them required a second course of Omnamycin for complete healing, and the other two were resistant clinically and bacteriologically to the second course, but were cured with 20 g. of parenteral Chloromycetin. Three male patients defaulted from observation when they were showing signs of healing. Of the 10 women patients, 9 were completely healed during the period of observation and only one patient went away before completing the therapy.

Toxic reactions.—No toxic reactions were observed among the patients under study.

Follow-up.—As all these cases of Granuloma venereum came from mofussil areas, they could not be got at for a check-up. It is presumed that the cured cases have not relapsed. A two-year follow-up is essential to assess the permanency of cure.

Conclusions.—Two out of 27 cases of Granuloma venereum exhibited clinical and bacteriological resistance to Omnamycin even to a second repeat therapy. The remaining 25 patients were responsive to therapy although in four, the complete healing of the lesions could not be observed during the period of hospitalization. From our observations in this limited study, a smaller dose of Omnamycin has been found to be effective in the therapy of Granuloma venereum and it therefore, deserves a further extended trial in a large number of cases.

The authors acknowledge with thanks, the help rendered by Dr. N. Krishnamurthi, M.A., M.B., B.S., D.V., Research Assistant at the Institute of Venereology, Government General Hospital, Madras.

A CASE OF CEREBRAL APOPLEXY CAUSED BY SNAKE-BITE

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MANY varieties of poisonous reptiles abound in this part of India, and several cases of snake-bite are reported. A hundred cases of accidental snake-bite have been treated successfully in this hospital over a period of about 10 years.

The largest number of cases occur in summer when, owing to the unbearable heat of the sun, these reptiles come out of their lairs at night and prowl about. Most of our snake-bite cases were males who came from villages where they live in crowded tenements filled with lumber which offers a suitable hiding place for these snakes. They are loath to kill the serpents out of religious sentiments. Only one of the 100 cases we treated at this hospital died with severe extravascular hæmorrhage.

Snake venom.—Fresh snake-venom is a clear transparent fluid and contains 50% of water. It becomes an yellowish granular mass on drying with its toxicity maintained for indefinite periods. It is a mixture of a variety of poisons:—A powerful fibrin ferment; an anti-fibrin ferment; a proteolytic ferment; cytolyisin; an agglutinin; neurotoxins and a heart stimulant.

Fifteen to 20 mg. of the venom proves fatal to the average healthy adult. A poisonous snake usually injects 20 to 30 times this lethal dose. Instantaneous death occurs when the injection is made into a vein.

The anti-snake venom used in our hospital is a polyvalent lyophilized dried serum of all the 4 common varieties of Indian snakes, prepared by the Haffkine Institute at Bombay. The dried serum can be stored for years without deterioration of its efficiency; it is administered by the intravenous route; serum reaction is transitory and can be controlled by suitable treatment. In one of the 100 cases, cerebral hæmorrhage occurred with characteristic signs of apoplexy. The patient died of respiratory failure, 26 hours after admission.

Case report.—G. R., a healthy young farmer, aged 30, was bitten by a small sized non-hooded snake known as *Bandli*, at 2 p.m. on 10-10-'57 while working in the field. The bite was over the dorsum of the middle and ring finger at its proximal phalanx. He however returned home after tying his turban around his wrist which he however, removed 15 minutes later owing to severe pain.

Within half-an-hour he felt a burning sensation in his head and started bleeding from his gums. He was admitted as an in-patient at 5 p.m. on 10-10-'57 with a pulse-rate of 90/pm.; respiration 22/pm. and temperature of 100°F.

He had a burning sensation all over the body; and a swelling in both forearms, one half of which showed definite tenderness; there was epistaxis; hæmatemesis; and restlessness. The pupils were both equal and reacting. The patient was fully conscious. The area of the bite was incised and washed with a weak solution of Pot. permanganate. Reconstituted serum 20 cc., was given intravenously. Immediately after the injection the patient showed a severe reaction with vomiting, burning sensation in the abdomen, and itching all over the body; restlessness increased, the pulse became rapid but showed good volume and tension; the respiration became hurried. This was however combated by $\frac{1}{2}$ cc. of adrenalin subcutaneously; and the hæmorrhage, by Cal. Gluconate; Coagulum Ciba; Vit. C; Vit. K; and Clauden.

On 11-10-'57 vomiting progressively increased. The swelling in the forearm ascended to the full arm and the continuous oozing of blood did not respond to anti-coagulants.

At 4 p.m. the patient complained of dimness of vision. He was lethargic with muscular disability. The left pupil was dilated and fixed while the right was normal and reacted to light. Two more ampoules of Antivenom were given intravenously.

In the evening he fell into a deep coma with shallow respiration; convulsions set in and there was rigidity of the right leg with plantar flexion; knee and ankle jerks increased; ankle and patellar clonus was present on the right side; the sensory paths were practically normal; both pupils were fixed and dilated; the temperature was 106°F. in the armpit; the pulse was good in volume and tension; but respiration became shallow and difficult.

Artificial respiration and oxygen were given without any improvement. Coma deepened and respiration stopped. The heart continued to beat for sometime.

Summary.—A case of cerebral apoplexy with extensive extra-vascular hæmorrhage following a snake-bite is reported. Treatment, in 100 cases when instituted early was successful. A premature removal of the ligature, helped the venom to circulate and exert its deleterious effect quickly. Want of adequate transport facilities in the desert area where the slow moving camel is the only means delays patients from getting immediate and adequate treatment.

Acknowledgement.—I am grateful to my colleague Dr. R. P. Bansal, for his co-operation and to the ward staff for vigilant watch over the patient.

REFERENCES:

1. J. P. Modi.—Medical Jurisprudence.
2. Beaumont : Medicine.
3. Bed-side Medicine.

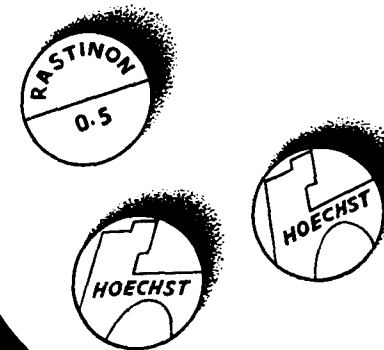
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Editorials

THE NINETEENTH INTERNATIONAL RED CROSS CONFERENCE

THE 19th International Red Cross Conference was formally inaugurated on the 28th of October 1957, by India's President Dr. RAJENDRA PRASAD, at New Delhi, at which the representatives of 84 nations were present—a record gathering in the history of the Red Cross Movement. The 24th Session of the Board of Governors of the League of the Red Cross Societies was held on the previous day under the Chairmanship of Mr. JUSTICE EMIL SANDSTROM of Sweden, at which important business relating to the working of the various national societies and their needs was transacted. Rashtrapathi RAJENDRA PRASAD referred to the special significance of the present World Conference which was held at a crucial period of the world's history, in a revolutionary era of scientific advancement with the advent of atomic and nuclear energy and the attempted conquest over space. "These achievements would have been hailed as great gifts of modern science to mankind, but for their grave potentialities and apprehended possibilities of being employed as devastating instruments of war and destruction of the human race.

"Coupled with this eventuality, is the mounting degree of suspicion, fear, misunderstanding and frustration, which are a constant threat to world peace. Humanity thus seems to be groping in the dark at the cross-roads of destiny, not knowing whether man will attain mastery over his creation of scientific miracles or race extermination." It was appropriate therefore, that the emphasis in the Conference should have been on the subject of "the protection of humanity by the banning of atomic experiments," in which India, the host country, is deeply

interested, as civilian defence has become an extremely complicated problem in this nuclear age.

Our Prime Minister Shri JAWAHARLAL NEHRU, speaking on this momentous occasion told the distinguished international audience that had gathered, that "the old approach of waiting for the war to happen and then trying to mitigate the evils is hardly adequate to-day and that the only correct approach we should make now is that of tolerance and avoidance of all violence and hatred, which should for ever continue to be the essential basis of the activities of the Red Cross, being in tune with the message of Ashoka and the cherished ideals of Mahatma Gandhi, the Father of the Nation." NEHRUJI called upon the Red Cross to consider how best it could function effectively in this age of the 'cold war.' He commended to the distinguished audience which more than any other group of people represented the touch of healing, the soothing touch, that "what the world badly needs to-day is the balmy touch of healing not only to the ailing physical body but also to the tortured mind of humanity."

Ambassador ANDRE FRANCOIS PONCENT of France who is also the President of the French Red Cross Society, pointed out the dangers humanity faced by the latest scientific discoveries and urged that the Red Cross should tackle the problem in a practical way and keep itself completely aloof from politics of any kind. But, he added, the desire to observe rigorous political neutrality must not prevent the Red Cross from backing up, with its moral prestige, any and all efforts undertaken towards the disarmament or a partial or total renunciation of the production and use of weapons of mass destruction which should be placed under real and efficient control.

RAJKUMARI AMRIT KAUR, Chairman of the Indian Red Cross and President of the Red Cross Conference—the first woman ever to hold the position—said "though the clouds of mistrust and suspicion still continue to darken the horizon, the spirit of an organization such as ours will help in its own way to dispel those clouds and the friendly co-operation which is the hall-mark of the Red Cross work will strengthen us to go forward with faith and hope to serve mankind." She recalled that the sheet anchor of Red Cross ideals was humanitarianism and the guiding star was strict impartiality.

Delegates from several communist countries—the Soviet Union, China, Poland, Bulgaria, Rumania, Yugoslavia and Czechoslovakia—urged prohibition of the use of nuclear weapons in any future war, when the Humanitarian Law Commission of the International Red Cross met on the 29th October 1957 to discuss draft rules for the protection of the civilian population during the wars. After much discussion for 2 days a Compromise Resolution approving the draft rules was passed on

31-10-1957, with only Yugoslavia abstaining and none voting against. The resolution was presented by a six-member Drafting Committee set up by the Commission to reconcile the divergent views expressed during the previous two days' discussions on the draft rules.

The General Commission of the International Committee of the Red Cross adopted a number of reports and also appointed a Sub-committee of four delegates to draft a resolution on the subject of provision of facilities by Governments for Red Cross relief work, like easing of *visa* regulations for Red Cross personnel, and exemption of customs and other duties on articles intended for Red Cross Relief. Reports on the progress in the medico-social sphere of Red Cross work in various countries were read at the meeting of the Medico-Social Commission. Newly developed methods of artificial respiration, and provision of Red Cross relief facilities in rural areas were some of the developments mentioned in these reports.

The atmosphere in which the Conference was conducted was unfortunately marred in the closing stages by an unpleasant and totally irrelevant political issue which related to the seating of the delegates from Formosa, where Chiang Kai-Shek's vestigial Government continues to maintain that they are the sole representatives of the Chinese peoples! The United States of America knows but too well that India, the host country, has recognized only one China, that of the People's China. The U.S. Delegation's insistence on calling Formosa, the Republic of China and seeking to admit its representatives under that title and at the present Conference was, to say the least, an affront to India, which she should have been spared, since it was definitely too late for her to decline to hold this World Conference in her territory, as the U.S.A. did on an earlier occasion.

This Conference was certainly not the forum for introducing an old controversy which ought to have been ventilated at diplomatic and political conferences. That it *was* introduced is an indication of the trend which is unfortunately growing stronger and yet more strong, of importing politics into every aspect of national life. As matters stand at the moment, the seating of the Formosa Komintang delegation at this Conference, which had almost concluded its session has, as one of our esteemed contemporaries rightly pointed out the other day, "left the way open, if such a contingency may be imagined, for the secession of many nations from this great international organization. It is the world as a whole which will be the loser. The United States and the Formosa Government have gained nothing but a singularly empty victory!"

Here then is a case in which, to our mind, reason has been sacrificed to political prejudice and a ludicrous sentiment has been sought to be satisfied at the expense of courtesy. This short-sighted action on the part of the U.S.A. delegate has also created an embarrassing situation for the Red Cross of India, the hosts at the New Delhi Conference. The Indian Government delegation has expressed its sympathy and understanding of the position taken up by the Indian Red Cross Society, though it did not walk out as other delegations did.

It is our firm belief that this unfortunate but retrievable situation can still be composed. Has not U.S.A. accepted as a partner, because of exigencies, West Germany against whom two sanguinary wars were waged in the last 50 years? If this issue is allowed to remain raw, the prospects of World Peace for which the U.S.A. has been striving so earnestly, will recede and perhaps vanish. The introduction of politics into the working of humanitarian organizations is indeed deplorable and *must stop; the sooner the better.*

WHO'S RURAL HEALTH CONFERENCE FOR S. E. ASIA

INAUGURATING the WHO's Rural Health Conference for the S. E. Asian region at the Vigyan Bhavan in Delhi on the 14th of October last Shri D. P. KARMARKAR, the Union Health Minister, stressed the importance of enlisting the enthusiasm and active support of rural communities in rural health programmes. The desired good results cannot be achieved unless they were backed strongly by programmes of rural reconstruction. Committed as we are to the objective of a Welfare State on a Socialistic pattern and consisting as we do, of a huge population, four-fifths of whom live in the numerous villages of the land, our health problems are naturally and essentially problems of rural health and environmental sanitation. The standards of health obtaining in our villages at present are pathetically poor; these standards, as we all know, are closely linked with the economic and social structure of the community, which requires a thorough reorientation in the light of the modern achievements of other lands. Improved medical care, proper and adequate nutrition and well-organized sanitary environments have together brought about a great increase in the average length of human life in the United Kingdom, the U.S.A., and other western countries. Even in India the expectation of life has been raised appreciably during the last quarter of a century. But this increase has not been anything like what has been achieved in western countries. We are still, say, about a hundred and fifty years behind them in this respect.

An appreciation of the vital roles of the basic requirements in regard to the promotion of rural health and the provision of the necessary agencies for the implementation of the tasks before us, must therefore, precede or at least accompany the development of such health services as may be necessary for ordered progress. This, we believe, is precisely what our Community Development and National Extension Service Programmes are meant to fulfil in the scheme of things. The Union Health Minister very properly stressed that "the need for a balanced development in various spheres must not be lost sight of and the tendency to bring into the field unrelated movements involving wasteful overlapping or wide gaps must be resisted. The problem of personnel requires a close and detailed study from several angles, e.g., the training of the requisite number of enthusiastic workers and the orientation of the training courses with a predominantly preventive and rural bias." In this context we would refer to the research project recently undertaken by the Centre with the help of the Ford Foundation in order to assess how far rural activities have met the objectives, in what manner they require to be modified, and how the response of the community can be stimulated and canalized in the desired direction. This study will, we are sure, yield interesting and useful results, although it is too early to expect any definite conclusions.

The importance of family planning work in the programme of rural health centres was emphasized by Mr. KARMARKAR and later by Lt. Col. C. K. LAKSHMANAN, the Director General of Medical Services and Leader of the Indian Delegation to this conference at the plenary session held on the 15th October 1957. Col. LAKSHMANAN pointed out that family-planning had not so far been accepted widely as an integral part of rural health work. "But we feel that this cannot be put off any longer, and if what we are attempting today in the field of rural health is not accompanied by a movement directed to population control, we may not go very far", said he.

This is a new field but rupees six crores have been provided in the Second Plan for the implementation of family-planning and it is proposed to open 2,500 clinics. So far 186 clinics have been opened in the villages and 112 in the towns. Five regional centres are to be set up to train the social workers who are attached to these clinics. This is a small beginning but we are glad the need for family-planning has at last been realized.

It was indeed excellent advice that Col. LAKSHMANAN gave when, referring to some important problems pertaining to rural health services in India, he stressed the need for co-ordination among the staff and the administrative departments. Irrespective of the political or administrative structure of the Government the community development machinery must have

incorporated into it the means of consultation and collaboration both at the stage of planning and that of execution.

He sounded a note of warning, on the basis of experience in India, "against the danger of the tendency on the part of the administrative departments not accepting full responsibility for activities, the direction of which emerges from a source other than the normal or usual one."

One great and serious difficulty in the way of rapid progress of health schemes, lies in obtaining women personnel, as lady health visitors, nurses and midwives. This difficulty is really more acute in the matter of rural-health-promotion. The ten thousand hospitals and dispensaries that we have in India at present are totally inadequate for a huge population as big as that of India. Hospitals are certainly very expensive to start and maintain but it must be relatively easier and cheaper to multiply small maternity and child welfare centres in the rural areas. More than 200 new centres were added during the first Five-Year Plan period to the previously existing 1651 centres, many of which have been set up in cities and towns, although the Bhore Committee felt that a network of primary health centres should be established in the villages. Since the inauguration of the Community Development Projects, about 700 such rural centres have been put into operation. In addition to these, specialized programmes were worked out for the eradication of Malaria, leprosy, tuberculosis and filariasis and as Dr. C. MANI, the WHO Regional Director of S. E. Asia, very aptly remarked the outcome of these campaigns has no doubt been spectacular but, malaria for instance having been brought under fairly effective control, other fevers and illness which had been obscured by malaria have come to light. Therefore, the imperative need for a broader base for a public health programme has become evident if effective and lasting benefits are to be realized.

The acceptance by the countries of South-East Asia of the concept of a rural health unit as the medium for providing a programme of integrated health services to a fixed population group within a limited rural area has posed its own problems in the organization, administration, staffing and financing of rural services and we have no doubt that these problems will be solved through the united cooperative effort of all agencies working for the benefit of the country.

VASOCONSTRICTIVE EFFECTS OF TOBACCO SMOKE

J. W. Ackstein *et al* (*Am. Heart. J.*, March 1957) found in 28 out of 31 experiments with medical graduates that smoking two cigarettes resulted in reduction in the flow of blood in the foot by an average of 22%. The range was from 9% to 55%. There was no significant difference in the range or in the average values when the temperature of the room was lowered from 83° to 68°F. or when the subjects had abstained from smoking for one or two days previously.—(*Medical Journal of Australia*, 27-7-57).

PROGRESS OF PÆDIATRICS IN INDIA

(Welfare of the Child)

THE Pædiatric Centre and the Institute of Child Health were inaugurated at the Niloufer Hospital at Hyderabad on Monday the 11th November, 1957 by Dr. S. RADHAKRISHNAN, Vice-President of India. He also laid the foundation stone of the Out-patient Department of the Centre in the presence of a distinguished gathering. Shri BHOMSEN SACHAR, Governor, presided. In the course of his inaugural address Dr. RADHAKRISHNAN said that the present age was witnessing rapid advances in science and also increasing unification of the world, as evidenced by the keen interest and active collaboration shown by world organizations like the WHO and UNICEF in regard to various welfare institutions, like the presently launched Pædiatric Centre. "Nations can ill afford to live in isolation any longer" said he, "but will hereafter have to compete with one another not in making weapons of destruction and death, but in trying to relieve human suffering and therefore, this act of collaboration is an indication of future events, not portents of death but welcome signs of a happy human community." If one nation suffers, the whole world suffers. If one nation prospers, it benefits the entire humanity. This is an age of the common man, some people call it the age of the common child. In other words, we are now paying more attention to the well-being and health of children. The statistics of infant and juvenile mortality, will give some idea not merely of statistics but of those statistics in fact, in terms of human sorrow and misery, both for mothers and children.

In the present set-up, countries are judged not by their general character but by their achievements in art, science, medicine, surgery and in short in all that pertains to the healthy and happy existence of the people. These go to build the greatness of a nation. So all attempts to promote human welfare must be directed primarily in preparing the children of the land for the new world which is emerging, by taking into account the physical, moral, mental and even spiritual health of the growing child. As Dr. RADHAKRISHNAN very aptly put it "Every child is an experiment in life. An adventure so to say, in a huge common endeavour. It should be our aim not to spoil this kind of natural innocence of the child, but educate the child in a way in which the natural instincts are properly developed and make every child feel that there is one race and one world and that is the race of humanity."

The old adage relating to "a healthy mind in a healthy body," very properly relates to the child more than to the adult and if our children are properly cared for and trained to follow

healthy and hygienic habits of living they will grow to be healthy adults, parents and useful citizens.

The new Pædiatric Centre and the Institute of Child Health have been designed and established, we are told, with a view to freeing the children from physical ailments and also making them worthy citizens of the new world. We learn that the Institute will offer excellent facilities for research; so far we have been the "beneficiaries of what others have done in other lands and we have not ourselves been benefactors in this direction," said Dr. RADHAKRISHNAN.

This centre is one of the five to be established in the Second Five-Year-Plan at a cost of Rs. 40 lakhs, and it should, when fully developed, be able to carry out important researches into the various problems relating to child welfare, and children's diseases.

The message from the WHO which was read out by Dr. NAUGHTEN of that organization, pointed out that in India considerable attention was being paid during recent years to the maternity side at the expense of the care of the child. He expressed the hope with which we are in hearty agreement, that this Institute would give equal attention to the preventive and the treatment-side of children both in service and in teaching. We may add that particular attention should be devoted particularly to the research side, to the training and preservation of mental health in the growing children, such as would effectively prevent indiscipline, delinquencies and criminal tendencies developing in them.

ROENTGEN THERAPY FOR RECTAL CARCINOMA

High-voltage roentgen irradiation is the most satisfactory treatment for inoperable carcinoma of the rectum.

Roentgen therapy completely or partially relieves pain, tenesmus, mucous discharge, and bleeding in most patients. Obstructive symptoms which would otherwise necessitate colostomy may disappear. In a few instances, local disease is completely controlled by irradiation.

Roentgen rays generated at 1,000 k.v. are administered by a 5- or 6-field crossfire technique. A depth dose of 120 to 140% of the skin dose is thus delivered to the true pelvis. Since significant differential absorption in bone does not occur with high-voltage therapy, adjustment for the pelvic girdle need not be made in drawing isodose charts.

Irradiation is given five days weekly for six weeks; a total tumour dose of 6,000 r is given, if possible. In about 50% of patients, cystitis, colitis, enteritis, or other side reactions may necessitate interruption of therapy. Vaginitis and perineal and anal skin reactions are seldom severe. Late complications of therapy include rectovaginal fistula, chronic radiation necrosis, and fibrotic stenosis of the rectum.—(*Am. J. Roentgen*, 76: 1956 via *Mod. Med.*, 15-1-1957).

Special Feature :

NEWSLETTER FROM THE UNITED STATES

THE coexistence in a significant number of persons of two apparently unrelated disease entities may point to a common aetiology, thus providing valuable information on two otherwise baffling conditions. Leukæmia and mongolism occur simultaneously more often than might be expected by chance alone. Krivit and Good reported their findings in the September issue of the *Journal of Diseases of Children* (94: 289, 1957). Results of a four-year study show that leukæmia and mongolism occurred simultaneously in 34 American children who were under four years of age. Mongolism is thought to result from some physical, chemical, or infectious stress exerted on the foetus between the sixth and ninth prenatal weeks. Results of the study suggest that a similar developmental factor might be responsible for leukæmia.....It may be possible to prevent mental and physical retardation in patients with congenital hypothyroidism. Thyroid hormone is essential for the development of nerve sheaths which insulate nerve strands. If the nerve sheaths are absent, the result is, in effect, a short circuit. Children who are born with this condition often become feeble-minded. A report from the University of Michigan credits Beierwaltes and Lowrey with the discovery that immediate diagnosis of hypothyroidism in newborn infants and prompt administration of thyroid hormone substitutes promote formation of nerve sheaths and permits development of normal intelligence. Physical signs at birth that lead to suspicion of hypothyroidism include high birth weight, umbilical hernia, eating and breathing difficulties, constipation, retarded growth, dry skin, lethargy, and extreme sleepiness. If one or more of these conditions are present, laboratory tests should be performed to rule out the possibility of hypothyroidism.....Rabies can spread from one human being to another. In the light of this possibility, Meyer in the September 14 issue of the *Journal of the American Medical Association* (165: 158, 1957) advises that anyone coming in contact with a person suffering from rabies should receive anti-rabies vaccine. Meyer points out that the saliva of a rabid person contains the rabies virus which can enter an open sore or cut of someone caring for the patient.....Infection of the respiratory tract with the salmonella organism is not a common occurrence. The gastrointestinal tract is probably the portal of entry although there is some evidence that the genito-urinary tract may be secondarily responsible. Weiss and co-workers report in the May issue of *The American Journal of the Medical Sciences* (233: 487, 1957) on their experience with four cases of salmonella pleuropulmonary disease. Only one patient had symptoms of gastroenteritis even though the salmonellæ are primarily enteric organisms. All patients received broad-spectrum antibiotics and chloromycetin was considered the drug of choice.A new blood test makes it possible to diagnose myocardial infarction when other methods fail, according to MacDonald and co-workers reporting in the September 7 issue of the *Journal of the American Medical Association* (165: 35, 1957). Lactic dehydrogenase (LDH) is an enzyme which is released into the blood stream when muscle cells have been destroyed. This test is similar to the transaminase test developed in 1955, but has two additional advantages. The LDH level in the blood remains higher for a greater length of time and the test is simpler to perform. The LDH level is also high in the presence of other diseases, but when used in conjunction with the usual diagnostic tests for acute myocardial infarction, confusion is usually eliminated. Some diseases simulate myocardial infarction, but do not raise the LDH level so that the test has a valuable place in differential diagnosis.....Hair cutting before brain surgery often creates serious psychological problems for women, according to J. M. Williams speaking before the Annual Congress of the International College of Surgeons. Williams describes a new technique which eliminates the necessity of hair cutting. The

patient is asked to shampoo her hair preoperatively at least five times with a surgical detergent to which is added a sterilizing chemical. She uses the same comb, bobby pins, and rubber bands throughout all the washings and brings her comb to the operating room with her. The surgeon then wets her hair with another antiseptic solution and parts it exactly where he will make his incision. He then combs the hair away from the portion either side and sprays a non-lacquer wave-setting compound over all the hair until it is set securely. After the operation, the incision is sutured with stitches that are a contrasting colour from the patient's hair. In 20 operations using this technique, no infections were reported. Dr. Williams states, however, that long hair is easier to handle than short, and that the technique is difficult to use on women with very tight, curly, stiff, or wiry hair. Appearance of oedema in late pregnancy can be a serious condition. According to Ford and Moyer, reporting in the December issue of *General Practitioner* (14: 123, 1956), oedema may be caused by several conditions. It may represent the worsening of a latent disease such as congestive heart failure or nephritis, or it may indicate an impending toxæmia. Even without these possible complications, a normal pregnancy presents certain definite salt retention problems. For instance, since the blood volume increases approximately 50 per cent, there is a positive salt balance which reaches a peak by the 36th week of gestation. Another consideration is that the gravid uterus exerts greater pressure on the intra-abdominal veins. Whatever the causes of oedema of pregnancy are, the result is greater tubular reabsorption of sodium and water. Reduction in amount of salt ingested should be advised and if oedema persists the reabsorption can be blocked by using an appropriate potent oral diuretic agent such as Neohydrin. Examination of cells shed from tissues of the mouth can facilitate early detection of oral cancer, according to Silverman, Jr. and co-workers at the University of California. Cells are swabbed from a suspected lesion and examined microscopically. Sixty patients whose mouth lesions did not warrant surgical biopsy were given the cell examination. Four of these patients were found to have malignant lesions, and these findings were subsequently confirmed by biopsy. However, the cell examination method is considered an adjunct to the biopsy method, not a substitute for it.

DISEASES OF REPRODUCTIVE ORGANS IN WOMEN

Three New York physicians say that elderly women are much too tolerant of troublesome symptoms caused by diseases of the reproductive organs. Of 680 women surveyed, only 69 complained of any symptoms although examination revealed the presence of more than 6,085 separate causes of distress among them. Some of the disorders found were as serious as cancer. The women ranged in age from 38 to 111 years. They were examined only with regard to the reproductive tract. Despite the youth of some of the women, all were classified as elderly since all showed physical evidence of ageing. There was no direct relationship between the condition of the reproductive organs and the number of children born. Women as old as 80 and over still showed evidence of sex hormone activity which was found among 10 patients between 55 and 80. The tissue age of 4 patients over 81 was similar to that of women in their 50's. The life expectancy of women has increased from 48.7 years in 1900 to 72.4 in 1950, but there has been no change whatsoever in the average age of menopause. This results in an increased number of women facing the years between menopause and the end of life and emphasizes the importance of attention to problems in this span of years. Since many of the women showed an astonishing intolerance to symptoms the observers concluded that routine health examinations during these years were of the utmost importance for the discovery of pathological conditions including cancers.—(*British Journal of Clinical Practice*, March 1957).

GLEANINGS FROM THE MEDICAL PRESS

OPHTHALMOLOGY

The management of the red eye in general practice.—(F. W. Newell, *Jour. Louis State Med. Soc.*, 108: p. 211, via *S. S. Review*).

Red eye may occur in a variety of conditions ranging from a self-limited catarrhal conjunctivitis to an acute glaucoma which can cause blindness within a few hours. It is most important for the general practitioner to distinguish quickly between minor and vision-destroying processes, especially between conjunctival injection and deep ciliary injection which occurs in iritis, glaucoma and corneal inflammation.

Dangerous conditions are indicated by a blurred pattern of the iris, irregular pupillary margins, sluggish or absent reaction of the pupils to light, and reduced vision. Vision is never affected in superficial conditions.

Indications and treatment are described for stye, chalazion, blepharitis, and bacterial conjunctivitis. A surprising number of patients present themselves with a sub-conjunctival hæmorrhage which has usually occurred spontaneously. While this is not important to the eye itself, it may be a sign of serious organic disease. *Virus inflammations* of the cornea are becoming increasingly serious, and the general practitioner is warned against using cortisone or its derivatives in these cases.

If angle closure glaucoma or acute iritis is recognized with certainty, the physician should use Diamox and atropine respectively before the patient is rushed to a specialist.

Uveitis in association with rheumatism.—(M. J. Hogan, S. J. Kimura and P. Thygeson, *A.M.A. Archives of Ophthalmology*, 57: p. 400, March 1957).

The occurrence of acute iritis of a recurrent type should always lead to investigation for evidence of associated joint disease.

Of the chronic diseases rheumatism

ranks first in incidence, and it is second only to nervous and mental disorders as a cause of disability. Rheumatoid iritis occurs in two forms: acute recurrent, affecting one or both eyes; and chronic, affecting both eyes. The acute form responds rapidly to topical corticosteroid therapy. The chronic form, which occurs most often in the severer type of joint disease, does not respond to any type of treatment. Ocular involvement may precede onset by one to four years.

Still's disease (juvenile rheumatoid arthritis) frequently has an associated chronic bilateral iritis which persists in spite of treatment and leads to band keratopathy and cataract.

The ætiology of Reiter's syndrome is still in doubt. Symptoms of this disease are conjunctivitis, urethritis and arthritis. Ocular lesions last two to four weeks, and subside spontaneously.

Recurrent uveitis with mucocutaneous lesions was first recognized as bilateral, usually affecting one eye at a time. In the early stages inflammation is mild and transient, but as the condition develops the attacks become more violent and lead to progressive visual deterioration. A diffuse uveitis occurs, but the anterior segment seems to be principally affected. Vitreous opacities may be extensive. The attacks last two to three weeks and recurrences often take place at fairly fixed intervals. Isolation of a virus from the vitreous has recently been reported.

OBSTETRICS & GYNÆCOLOGY

Progress in gynæcology.—(*The British Journal of Clinical Practice*, April 1957).

Pelvic tuberculosis:—Partly owing to the virtual disappearance of the grosser forms of chronic inflammatory appendage disease due to pyogenic infections, and partly to the immense strides recently made in the treatment

of other forms of tubercle, tuberculous disease of the genital tract has begun to attract greater attention than hitherto. Pregnancy has recently been reported following treatment for proved endometrial tubercle, an achievement previously unheard of, and in great contrast to the necessity for advising hysterectomy even in young women barely a decade ago, should the disease be found localized to the pelvis. A word of warning seems necessary. The disease, quite unsuspected, is sometimes found during routine endometrial biopsy for sub-fertility, and should this step be omitted, then the disease might well have escaped detection. There are some who believe that this form of tubercle shows a marked tendency to spontaneous healing, without ever giving rise to symptoms, and that repeated biopsies as a test of cure following prolonged streptomycin therapy are to be discouraged. Nor can it be denied that instances are occurring where living tubercles continue to be found in the Fallopian tubes even after intensive therapy with this antibiotic has produced negative endometrial biopsy. The ability of this powerful drug to eradicate the disease from all parts of the pelvis is therefore, open to question. The dangers of this form of therapy are well known, and permanent damage to the vestibular apparatus seems a very high price to pay for even a long-desired pregnancy, when it is acknowledged that successful nidation of the ovum following intensive treatment is at best an extremely infrequent sequel. Admittedly combined chemotherapy reduces the risk of 8th nerve damage, but those of cautious disposition will think seriously before offering prolonged therapy in uncomplicated cases. Gross pathology is neither resolved nor controlled by streptomycin and PAS.

A comparative study of ergometrine and "methergin" used in the management of the third stage of labour.—(*The Medical Journal of Australia*, 3-8-1957).

The routine use of ergometrine maleate in the management of the

third stage of labour was introduced at the Royal Women's Hospital, Melbourne, in 1951. The most satisfactory routine was the intravenous injection of 0.5 milligramme of ergometrine immediately after the delivery of the baby, and an intramuscular injection of a further 0.5 milligramme after the expulsion of the placenta. During the last year, the value of "Methergin" (methylethergometrine tartrate) was assessed and compared with the results achieved by this scheme of management with ergometrine maleate.

Four aspects of the actions of these two drugs were studied. These were the rapidity with which they caused completion of the third stage, their influence on the incidence of post-partum hæmorrhage, the degree to which they affected the frequency of manual removal of the placenta, and finally their relative vaso-pressor properties.

1. The use of ergometrine and "Methergin" in the management of the third stage of labour has been studied in more than 4000 deliveries.

2. There was no significant difference in the influence of ergometrine and "Methergin" on the rapidity of completion of the third stage. This was completed with both drugs within ten minutes in nearly 87% of deliveries.

3. The post-partum hæmorrhage rate with "Methergin" was approximately 60% greater than with ergometrine. It was 2.3 per 100 deliveries with ergometrine and 3.6 per 100 deliveries with "Methergin."

4. The manual removal rate with ergometrine was nearly 40% greater than with "Methergin." It was 5.6 per 100 deliveries with ergometrine, and 4.1 per 100 deliveries with "Methergin."

5. Ergometrine more often caused a rise in blood-pressure than did "Methergin." This was more frequently evident in patients already suffering from hypertension. Attention has been drawn to the possible dangers of this vasopressor action.

SURGERY

Anteversion of the femoral neck as a cause of failure in the treatment of congenital dislocation of the hip.—(*The Journal of The Bowman Gray School of Medicine*, February-March 1957).

Anteversion of the femoral neck is found to an abnormal degree in nearly all cases of congenital dislocation of the hip.

Anteversion of the femoral neck is a primary aetiological factor in congenital dislocation of the hip, and unless corrected, is the major cause of failure in treatment of congenital dislocation.

The most satisfactory method of correcting anteversion is the subtrochanteric derotational osteotomy which is rapidly gaining popularity. This procedure is done just below the neck and trochanters of the femur. Its advantages are:—(1) one has good control over the fragments and can see and feel the relationship of the head and neck to the acetabulum, so that proper positioning of the fragments can be obtained and (2) it affords the removal of one of the strongest forces tending to rotate the head and neck anteriorly out of the acetabulum, i.e., the gluteus maximus muscle. Its point of insertion is along the spiral line of the femur which is largely on the distal fragment in this procedure. As this fragment is rotated outward, the point of action of the muscle is moved more posteriorly so that its rotational force is weaker.

Laryngeal granuloma after intubation.—(*The Lancet*, February 23, 1957).

A granuloma involving one or both vocal cords is a rare complication of endotracheal anaesthesia. In recent years it has been gaining recognition as a clinical entity and this increase reflects the wider use of intubation in modern surgery. Discussing these granulomas, Epstein and Winston (*J. Laryng.*, 1957, 71: 37) record 10 cases treated at the Royal National Throat, Nose and Ear Hospital in London. All the patients were adults, and women outnumbered men by 4 to 1. The

relatively small laryngeal aperture in the female may make women more susceptible. Direct injury to the larynx during the introduction of the tube seems to play only a small part, since most granulomas followed an easy intubation, often performed with the aid of muscular relaxants. Pressure of the tube in the glottis is probably the most important cause; and this view is supported by the fact that the granulomas always arise on the vocal process of the arytenoid and by the demonstration (*New Eng. J. Med.*, 1953, 248: 1097) of the spring-like action of the flexible endotracheal tube, which exerts pressure posteriorly in the larynx, increasing so as the head is flexed. The rigid bronchoscope, on the other hand, lies against the anterior commissure, and a granuloma has never been recorded as a sequel to bronchoscopy.

The vocal process of the arytenoid forms a rigid unit; the mucoperichondrium is firmly adherent to the cartilage it covers and there is no sub-epithelial connective-tissue layer to allow the epithelium to move on underlying structures. Injury in this region leads to ulceration and the formation of non-specific granulation tissue. Constant trauma from the opposite vocal process causes the granulation tissue to proliferate, and it becomes epithelialized and presents as a sessile granuloma. Healing takes place by fibrosis, which narrows the base until the granuloma becomes pedunculated. This process may continue until the granuloma is shed and expelled. Usually it remains, causing irritation, hoarseness, and sometimes stridor.

When an ulcer is seen on the vocal process after an operation involving intubation, the development of a granuloma may sometimes be prevented by insisting on strict voice rest. At a later stage, the removal of a sessile granuloma exposes a large bare area which gradually heals by granulation, so that the granuloma may recur. Provided the airway is adequate removal should, therefore, be deferred until the granuloma is pedunculated; and it should be followed by absolute vocal rest.

MEDICINE & THERAPEUTICS

Oral insulin substitutes.—(M. J., 2: 171-182, May 1957, Glasgow, via *Journal American Medical Association*).

It is now widely accepted that the toxic potentialities of carbutamide (BZ 55) preclude its clinical use. Tolbutamide (D 860), however, in which the amino group of carbutamide has been replaced by a methyl group, may be sufficiently free from undesirable attributes to permit its therapeutic application. The long-term effects of tolbutamide or any other hypoglycæmic agents which may be produced in the future will have to be critically studied with particular regard to their possible toxic effects, to the feasibility of giving them indefinitely without loss of effect, and to their influence, if any, on the progression of the degenerative complications of diabetes. If the answer to these questions should prove satisfactory, then their general therapeutic use would be justified. Even then, diabetic patients would still have to restrict their diet and about 50% of them would continue to have satisfactory control by this means alone. To substitute hypoglycæmic sulphonamide therapy for dietary restriction would be quite unjustified and would merely encourage the persistence or development of obesity. However, about 70 to 80% of middle-aged or elderly nonobese patients with relatively mild stable diabetes who, in addition to dietary restriction, require a small or moderate daily dose of insulin, would be able to discard their insulin syringes and be treated with tablets taken by mouth. Such patients, however, account for only 1 in every 4 or 5 diabetics presently receiving insulin.

It should be recognized that the hypoglycæmic sulphonamides are merely "oral insulin substitutes" for a limited number and type of diabetic, patients and they are in no respect "oral insulins." The administration of insulin itself is still the only treat-

ment to which diabetes will always respond, whatever its type or severity. Insulin has withstood the test of time, it is safe and free from toxic attributes, it can be given indefinitely without any loss of effect, and it corrects all the presently known metabolic consequences of diabetes. Any alternative for it should possess all these properties, and it is clear that these sulphonamide derivatives are deficient in several respects. To be influenced or dominated by the preference of diabetics for a new form of treatment simply because it is more convenient and acceptable than the injection of insulin would constitute a disastrous failure in professional responsibility.

Epilepsy due to mitral stenosis.—*Brit. Heart J.*, 19: 159-163, 1957 via (*Modern Medicine*, July 1, 1957).

In patients with mitral stenosis, epileptic seizures may ensue if emboli from the left atrium cause cerebral infarction. Correct diagnosis allows control of seizures by anticonvulsant therapy in most instances.

Embolism and consequent cerebral infarction are most likely: (1) after the onset of atrial fibrillation which allows clot formation in the left atrium and atrial appendage; (2) after mitral valvulotomy; or (3) with tight mitral stenosis and high atrial pressure, especially if the valve is rigid or calcified.

Coexisting evidence of systemic embolism suggests that emboli are responsible for seizures in some instances. Seizures after infarction in vital areas of the brain are often associated with other evidence of permanent brain damage, such as hemiplegia. Lesions in other areas of the brain may cause no immediate symptoms other than momentary faintness but may later develop into foci of epileptic activity; time of onset of seizures in relation to the heart disease is probably the most helpful diagnostic feature in these cases.

REVIEWS OF BOOKS

Diagnostic Surgery—By PRAVAT C. SANYAL, F.R.C.S., Late Professor of Surgery, Medical College and Hospital, Calcutta, Late Professor of Surgery, National Medical College, Calcutta. With 386 illustrations and coloured plates. First Edition, August, 1957. Pp. 684. Publishers: Sri Aurobindo Ashram, Pondicherry. Sole Distributors: M/s. Popular Book Depot, Lamington Road, Bombay 7. Price Rs. 22-50.

This is a very useful book which will be a companion to undergraduates in their studies. Beginning with a chapter on case taking, it proceeds in a systematic manner, to deal with Injuries, Ulcers, Infections of the Hand, Diseases of the Bones, Joints, and the Central Nervous System, Swellings of the Neck, Swellings of the Breast, Diseases of the Chest, Abdomen, Rectum, Genital System and the Urinary System. Each Chapter is treated in an essentially practical manner and the method of examination of the Diseases of the Joints, of the Spinal Cord, of the Peripheral Nerves, of Lumps in the Breast, of Swellings in the neck and of swellings in the Anterior Abdominal Wall, is described in a very practical manner. The illustrations are very good and the printing and get-up are also commendable. It will be a very useful book for students of medicine.

—U.K.R.

Parasitology—(Protozoology and Helminthology) in relation to Clinical Medicine—By K. D. CHATTERJEE, M.D., Associate Professor of Medicine, R. G. Kar Medical College and Physician, R. G. Kar Medical College Hospital, Calcutta. With 76 illustrations including 6 coloured plates, 1957, Pp. 185. Published by the author, 6, Amrita Banerjee Rd., Kalighat, Calcutta. Distributors: S. Bhattacharyya & Co., 50-2, Dharmatala Street, Calcutta 13.

[Price Rs. 12-50.

This book has been developed from the author's previous book entitled 'Parasites and Parasitic Diseases.'

The present volume has been reduced to a handy size. It however contains all facts which medical students should be familiar with. The book has been divided into four sections. The first is an introductory chapter describing the terminology and general principles of parasitological studies. Then there are 2 sections on Protozoology and Helminthology. In each section the parasites of man have been classified and described under main headings such as Geographical distribution, habitat, morphology and life cycle. There is an appendix containing useful chapters on examination of the stool and examination of the blood for parasites, cultural examination and examination of biopsy material. The illustrations are very good and very apt. The coloured plates are very illustrative. The printing and general get-up are also good. The subject matter throughout the book is well presented and so it will be very useful to medical students, to whom we commend this book. U.K.R.

Anæsthesia for Nurses—By ERIC GODWIN, L.R.C.P., M.R.C.S., F.F.A.R.C.S., Consultant Anæsthetist to the Croydon Group of Hospitals, 1957. Pp. 98. Publishers M/s. John Wright & Sons Ltd., Bristol 4. Price 9/6d.

This book is an amplified version of the lectures given by the author to student nurses and pupil midwives. Beginning with a chapter on the History of Anæsthesia, the book deals in the succeeding chapters, with Respiration and Circulation, Pre-operative Management, General Anæsthesia, Post-operative Care and Complications, Shock and Local Anæsthesia. There are chapters on Applied Pharmacology, Anæsthetic Apparatus and Pain Relief in Midwifery. It is a very useful book for Nurses. U.K.R.

Annual Report of the Calcutta School of Tropical Medicine and the Carmichael Hospital for Tropical Diseases, 1955-56. Copies available with

the Superintendent, Government Printing, West Bengal Government Press, Alipore, Calcutta.

This is a record of the very useful work done in the School of Tropical Medicine during the year 1955-56, and reports from the Professors of Tropical Medicine, Entomology, Bacteriology and Chemistry. We get an insight into the work done in the departments of Kala-azar Research, Leprosy Research, Pharmacology and Serology, from the scientific papers published by the members of the Staff and from the account of the work done by the staff of this school in the fields of research and teaching. The

Director and the staff of this very popular institute deserve to be congratulated.

U.K.R.

BOOKS RECEIVED

Artificial Insemination in the Human—By A. SCHELLEN. Pp. 420. Cleaver Hume Press Ltd., 31 Wrights Lane, Kenricington, London, W. 8. Price 72s.

Particulate Clouds: Dusts, Smokes and Mists—By H. L. GREEN AND W. R. LANE. Pp. 425. E. & F. N. Spon Ltd., 22, Henrietta Street, London, W.C. 2. Price 70s. nett.

NEWS AND NOTES

G. C. I. M. Hostel Association

The inaugural function of the Government College of Integrated Medicine Hostel Association was held on Tuesday the 15th of October 1957 when Dr. D. V. Venkappa, President-elect of the Indian Medical Association and Lt. Col. Dr. Thayumana-swamy, Director of Medical Services, Madras participated. In a memorandum submitted, the Association requested the Government to maintain the present status of the College and wanted a status to be given to the G.C.I.M. Diploma in keeping with the instructions imparted and to include it in one of the schedules of the Indian Medical Council Act, 1956 and urged on the Government to give equal facilities to G.C.I.M. Diploma holders to take up post-graduate studies in different branches of medicine and surgery.

Pharmaceutical Congress

The 10th Indian Pharmaceutical Congress, 1957 will be held in Bombay commencing from the 28th December 1957. Under the Presidentship of Dr. A. Nagaraja Rao, Industrial Adviser to the Government of India. Dr. P. M. Nabar, former Drugs Controller of India, and now Officer on Special Duty, has been invited to be the President of the Association for the next year. Symposia have been arrang-

ed in the following sections: Professional Development, Pharmaceutical Education, Distribution, Industry, Drug Control and Legislation, Hospital Pharmacy, Ayurvedic Pharmacy, Pharmaceutical Chemistry, Pharmacognosy, Pharmacy and Pharmacology.

For details apply to: The Genl. Secy. of the Association, 2, Heysham Road, Calcutta-20.

Proposed Amendment to rule 25 of Madras Manufactured Drugs Rules

Resolutions were passed by the members of the Indian Medical Association both at Salem and at Tanjore, protesting against the proposal of the Government of Madras to amend Rule 25 of the Madras Manufactured Drugs Rules by introducing a new rule requiring every approved medical practitioner to maintain an account, in the prescribed form, in respect of manufactured drugs other than prepared opium, possessed by him for use in his practice, and such accounts to be open for inspection by the Excise, Police and Drug Control Department officers.

Smoking, Drinking and T.B.

Dr. Benjamin on their relationship

Excessive smoking or alcoholism may interfere with proper nutrition, cause increased cough and thereby lower resistance to disease specially

tuberculosis, says Dr. P. V. Benjamin, Tuberculosis Adviser to the Government of India, in an article entitled "Smoking, Drinking and Tuberculosis" published in the latest number of the "Bulletin Devoted to the Prevention of Tuberculosis," issued by the Director-General of Health Services.

It is, therefore, necessary, he says, to advise tuberculosis patients to refrain from smoking. If an alcoholic individual gets tuberculosis, continued alcohol consumption will cause progression of the disease thereby making the treatment more difficult.

Heart, Lungs Transplant

Two U. S. scientists report they are making progress towards the day when mankind will be able to store human hearts and lungs under refrigeration for use after accidents or serious illness. Drs. Watts R. Webb and Hector S. Howard, both of the University of Mississippi, have told the American College of Surgeons they have already successfully transplanted these major organs in a laboratory animal, and kept it alive for almost a full day in one experiment.

Russia Offers 11 Scholarships

The Soviet Government has offered 11 scholarships to Indian nationals for post-graduate study or research during 1958-59 in basic sciences, technology, agriculture and medicine.

The value of each scholarship, tenable up to three years, is Rs. 809.52 per month with exemption from tuition fees, free hostel accommodation, free medical aid, book allowance, clothing allowance and cost of tourist second class passage both ways, says a Press note issued by the Union Ministry of Education and Scientific Research.

Training in T.B. for Health Visitors

A nine-months' training course for Tuberculosis Health Visitors will be held from January 1958 under the auspices of the Tuberculosis Association of India.

The course will be conducted by the Association in the New Delhi Tuberculosis Centre, the College of Nursing,

the Lady Reading Health School and Lady Linlithgow Sanatorium, Kasauli.

The training covers lectures and demonstrations and intensive training in first aid, home-nursing, anatomy, hygiene, communicable diseases, public health administration, social welfare economics, etc.

T.B. Clinics to be Upgraded

The Tuberculosis Clinics in the Government Headquarters Hospitals in Tanjore, and Coimbatore, and at the Erskine Hospital, Madurai, will soon be upgraded. The Union Government has offered assistance for each clinic in the form of X-ray and laboratory equipment.

Rajkumari Amrit Kaur Honoured

The Great Gold Medal of Honour, highest distinction of the French Red Cross was presented to Rajkumari Amrit Kaur, President of the Indian Red Cross, at a function held at the French Embassy here at Delhi on Thursday the 7th November 1957.

Also at the same function, Sardar Balwant Singh Puri, General Secretary, and Mr. Jolly, Deputy General Secretary, of the Indian Red Cross were presented the Medal of Honour and the Gold Cross of the French Red Cross respectively by Mr. Francois-Poncet, President of the French Red Cross and Chairman of the Standing Commission of the International Red Cross.

WHO Expert on India's Medical Services

"Indian medical establishments are showing tremendous and enthusiastic development," declared Dr. A. W. Woodruff, Wellcome Professor of Clinical Tropical Medicine in the London School of Hygiene and Tropical Medicine, on 10-9-57.

He visited India as a consultant to the World Health Organization.

Writing in the "British Medical Journal," Dr. Woodruff adds that "between Britain and India great mutual respect and good-will have grown up and this fund of goodwill is everywhere apparent in acts of kindness and hospitality which are

continually being shown to the British visitor to India."

He tells how the number of medical colleges in India has increased from 17 in 1947 to 42 at present and how admission of students to them grew from 2,500, in 1950 to 3,500 in 1955 and points out that Rs. 150,000,000 is being spent on improving existing training and hospital facilities.

The new medical college at Nagpur is described as "outstanding" in both conception and execution.

Indigenous systems ;—Dealing with attempts to revive the ancient systems of treatment—the Ayurvedic and the Unani, together with Homoeopathy—Dr. Woodruff declares that "current opinion and pronouncements from leading Indian politicians indicate that it is unlikely that India will reject modern scientific medicine on any significant scale to return to the older systems and the whole pattern of recent medical developments supports such a view."

But, says the article, "investigations are proceeding to determine to what extent indigenous systems can be developed and regulated for medical relief in the country and in the interest of humanity. It is to be hoped that in this as in all medical matters, politicians and ministers can be constrained to accept facts instead of expressing and attempting to legislate on the basis of their personal opinions."

PREPARATIONS AND INVENTIONS

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Integrated Medicine—Research Essential

Presiding over the inaugural meeting of the Students' Union of the Government College of Integrated Medicine, at the Panagal Hall of the College, Poonamallee High Road, on 13-9-'57, Mr. M. A. Manickavelu, Minister for Public Health and Revenue, said that the Government were fully aware of the need for development of this institution on right lines, particularly bearing in mind the objects with which it was started, and that they were considering how best the students who passed out of the institution could be utilized. He made it clear that the Government were earnest in developing the institution on indigenous lines and were doing their best. It was not enough to speak merely about the glory of ancient medicine. If they wanted to develop it, they had to undertake proper research, find out old text books, study them and put them on a scientific basis. There was much to be done by way of research, he added.

Dr. P. S. Natesan, Assistant Director of Medical Services, in his inaugural address pointed out that medical science had no barriers. He expressed the view that the students of this institution were having a peculiar advantage, in that they not only studied the indigenous system but also learnt the modern system of medicine. They should therefore, utilize their knowledge to the best use of mankind.

and Phenobarbitone, have proved, that they are free from toxicity either immediate or delayed.

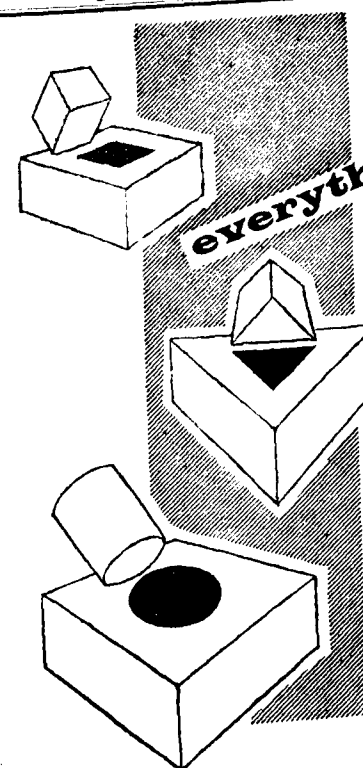
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CORRIGENDUM

Reference : November 1957 issue, *Antiseptic*, p. 845—ISOTOPES in MEDICINE. (A Review) : The names and designations of the authors should read as under :—

NAUNihal SINGH, M.B., B.S., Demonstrator, Department of Physiology AND J. C. SACHDEV, M.B., B.S., M.Sc., Ph.D., (Physiol.), Professor and Head of the Department of Physiology, M. G. M. Medical College, Indore.



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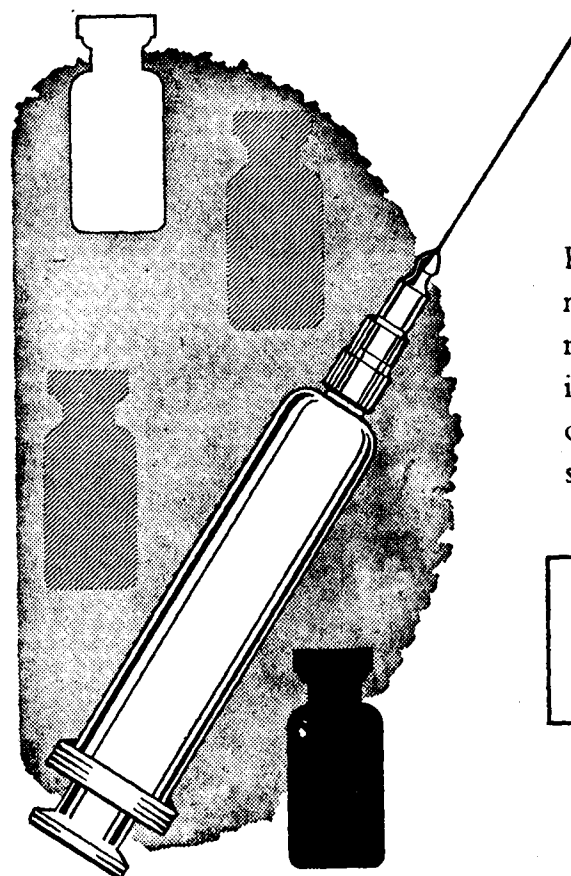
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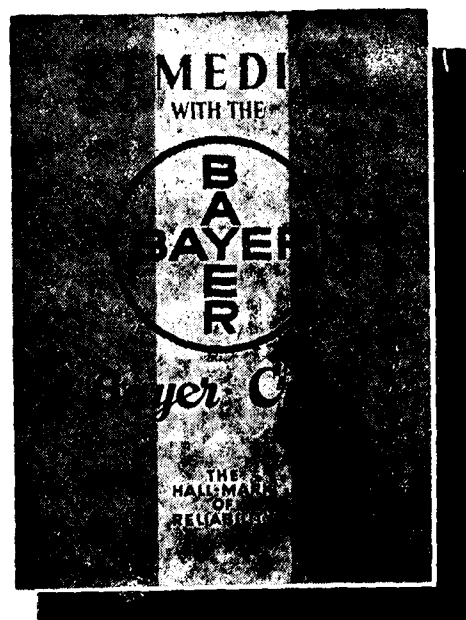
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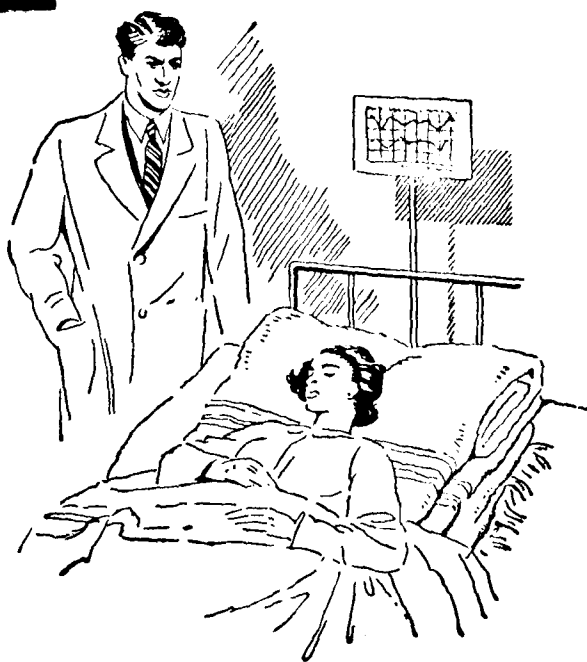
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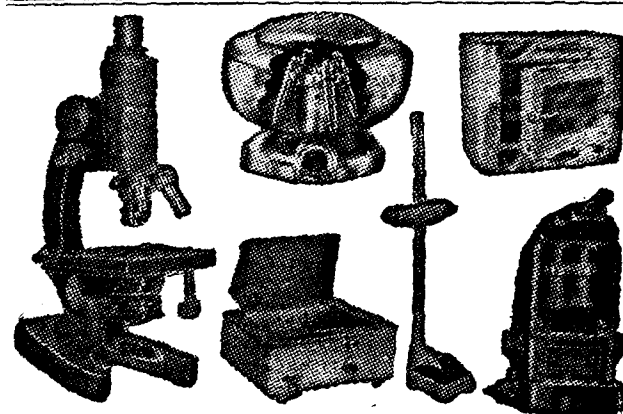
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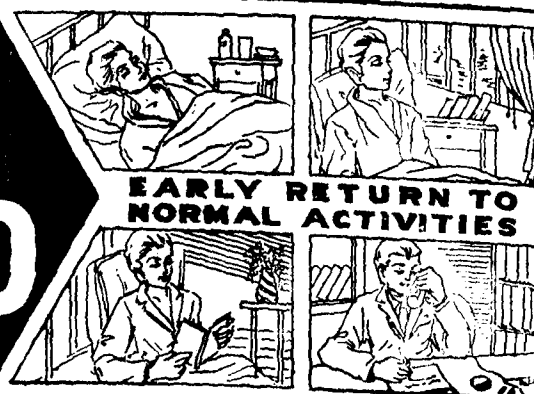
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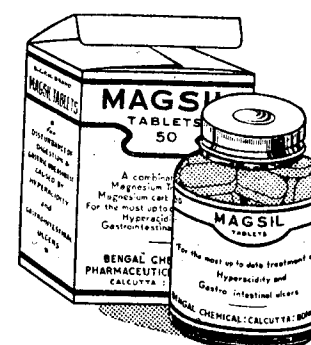
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