

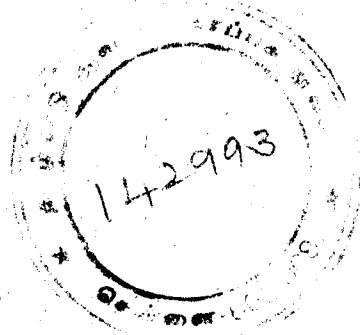
NH

NO. 6

MEDICAL SURVEILLANCE SURVEILLANCE.

JUNE - 1939

JL
L: 4: 7: 21, N 31 No.
N 39. 8. 6.
142993



635

MEDICO-SURGICAL SUGGESTIONS

Vol. VIII.

JUNE 1939.

No. 6.

*Verified
M*

GLAXO LABORATORIES LIMITED,
Greenford, Middlesex, England.

Representatives in India :

H. J. FOSTER & CO., LIMITED.

P. O. Box 202, Bombay. P. O. Box 2257, Calcutta.
P. O. Box 108, Madras. P. O. Box 244, Lahore.

PRICE REDUCTION

Glucose-D (Glaxo)—the established source of energy—can now be prescribed even more freely than hitherto. This latest price reduction—closely following the introduction of the 4-oz. pack,—means that your poorer patients can now benefit from the glucose therapy which years of actual clinical practice have proved the best.

Glucose-D (Glaxo) is the only preparation of its kind which contains measured amounts of Ostelin vitamin D. Moreover, its therapeutic properties are further enhanced by the addition of calcium glycerophosphate, the proper assimilation of which is ensured by the Vitamin D. Thus in illness the patient's muscle tone is sustained, and normal rhythm of the myocardium promoted.

GLUCOSE-D

(GLAXO)

MEDICO-SURGICAL SUGGESTIONS

A MONTHLY JOURNAL OF PRACTICAL MEDICINE & SURGERY

Editor : Dr. P. R. Venkappaya.

VOL. VIII

JUNE 1939

NO. 6

CONTENTS

ORIGINAL ARTICLES	PAGE
"Pyorrhoea Alveolaris" By Dr. S. K. Gupta, B.D.S., (P.B.)	193
MODERN METHODS OF TREATMENT—	
Año-Rectal Fistulae By R. A. Hall	198
Causes of Internal Hemorrhoids—By Charles J. Deurek, M.D., F.A.C.S.	203
The Diagnosis and Modern Handling of Patients with Cutaneous Syphilis By Herbert S. Alden, M.D., Jack W. Jones, M.D.	208
Treatment of Heart Failure By Mr. Gnanaratham, Cooke, M.D.	214
EXTRACTS	219
CORRESPONDENCE	224
MEDICAL NEWS AND NOTES	226
MEDICAL DIRECTORY	228

Annual Subscription : Rs. 5 ; foreign : 10 sh. ; Single Copy : As. 8.

Sample Copy for 4 As. Stamps.

Office of the Editor & Publisher : 179, Mint Street, Madras, India.

NOTICE

Original articles, case reports, and other topics of medical interest are cordially invited, and are accepted only with the distinct understanding that they are contributed exclusively to *Medico-Surgical Suggestions*. Manuscripts should be typewritten. All communications in regard to editorial business, books and journals for review and exchange, samples of drugs and instruments, etc., should be addressed to the Editor. The Editor accepts no responsibility for views expressed by contributors.

All business communications should be addressed to the Manager, *Medico-Surgical Suggestions*. Only approved advertisements will be admitted, and the Manager reserves the right to exclude any advertisement which is against medical ethics.

ABSCESSIN

TABLETS

Composition :

27 JUL 1939
Sulphur and Sulpho-
guaiacolate of Potash
Yest Bismuth. Nuel
taste correctives, sugar.

Specific remedy for
ALL STAPHYLOCOCCAL
and **STREPTOCOCCAL** Infec-
tions Boils, Furunculosis, Pimples,
Cellulitis, Eruptions (moist & dry),
Abscesses (dental & tonsilar both
follicular and suppurative) etc. etc.

*It increases the defensive power of the body by multi-
plying the leucocytes.*

Absolutely non-toxic,

No contra-indications,

No harmful after effects.

Sold in tubes of 10 tablets at Rs. 1-12.

AD. MEYER

11/2, STEPHEN HOUSE,
CALCUTTA.

AD. MEYER

247, ANGAPPA MICK ST.,
MADRAS.

AD. MEYER

MORADABAD,
U. P.

When ordering please mention *Medico-Surgical Suggestions*.

A Warning from Polynesia

Most medical men know the story of the New Zealand Mandate after the War, where medical warnings were disregarded. A year of Prohibition in a Polynesian Island brought a steep rise in the infantile mortality rate, with an equally enormous increase in still-births and miscarriages. Scientific investigation revealed that the monotonous diet of the islanders depended entirely on the prohibited "toddy" as their sole source of Vitamin E. Although such an extreme case is unlikely to arise in India, there is no doubt that the sudden deprivation of alcohol will necessitate adjustments in diet among those who have been accustomed to even small regular quantities of liquor.

Hall's Wine has clearly-defined food properties both as a matured wine, extra rich in iron-salts and in its added medicaments, which greatly increase its caloric value. Hall's Wine requires no activity of the digestive system for assimilation, and actually improves the general metabolism.

The physical functions of Hall's Wine are thus to assist a weakened digestion, to provide energy and tone, and to build up haemoglobin in the blood, while improving its circulation. Its stimulus, though mild, is quite definite, and alleviates the nervous distress of a patient who is trying to do without accustomed alcohol.

Where a stimulant tonic is indicated, Hall's Wine may be prescribed with perfect confidence.

HALL'S WINE

Tonic Restorative



Distributors: L. HALL & CO., LTD.

P. O. Box 133,
Calcutta.

P. O. Box 84,
Lahore.

P. O. Box 14,
Karachi.

P. O. Box 466,
Bombay.

H.W. 21

When ordering please mention *Medico-Surgical Suggestions*.

TABLETS CERELEXIN COMPOUND

White Coated

Yeast and Liver Concentrates.

EACH TABLET CONTAINS:

Vitamin B.....80 International Units.
Vitamin G.....25 Sherman Units.
Iron Approximately 10 mg.

DOSAGE:

Prophylactic: 3 to 6 tablets daily. For frank deficiency, 3 tablets repeated three to four times daily may be indicated.

CERELEXIN COMPOUND is prepared by a highly developed concentration process, from liver and carefully selected medicinal strains of brewer's yeast. Cerelexin compound tablet contain not only the assayable vitamin B1, and flavin but also all of the other biologically demonstrable factors of the complex —B2(G). Thus where the need for vitamin B is suggested, the prescribing of Cerelexin Compound tablets assures that the patient is receiving all of the known factors of this complex in their *Natural Form*.

Supplied in bottles of 50 and 200 tablets.

COMPRESSED TABLETS CEVITAL (CEVITAMIC ACID, UPJOHN) 25 Mg.

Orange flavoured

Crystalline vitamin C in palatable form

One tablet is equivalent in vitamin C to approximately 1½-rd ounce of fresh orange juice. CEVITAL (Cevitamic Acid) is indicated for prophylaxis and treatment of scurvy and prescorbutic conditions. It is useful as a means of ensuring an adequate vitamin C intake for patients who are allergic to or dislike fruit juices, and is a desirable supplement to Sippy, ketogenic, and other diets which are deficient in vitamin C.

DOSAGE:

2 to 4 tablets once or twice a day.
In bottles of 30 and 100 tablets.

CODCENTRATE CAPSULES

Prepared from a concentrate of natural cod liver oil, they contain no other fish oils or synthetic vitamins. Codcentrate capsules furnish a convenient method of administering natural vitamins A and D to adults who do not want to take cod liver oil itself.

They are odourless and tasteless. Since the oil itself is largely removed in making the concentrate, they are not fattening.

Each capsule furnishes a quantity of vitamins A and D approximately equivalent to one teaspoonful of U.S.P. cod liver oil.

Each package of 80 codcentrate capsules is, therefore, approximately equivalent in vitamins A and D to 10 ounces of U.S.P. codliver oil.

DOSAGE:

1 to 2 capsules three times daily.
In bottles of 80 and 1000 capsules.

Manufactured by:

THE UPJOHN COMPANY,
KALAMAZOO, MICHIGAN, U.S.A.

Sole Agents:

T. M. THAKORE & CO.,
43, Churchgate Street,
Fort, Bombay.

Branch:

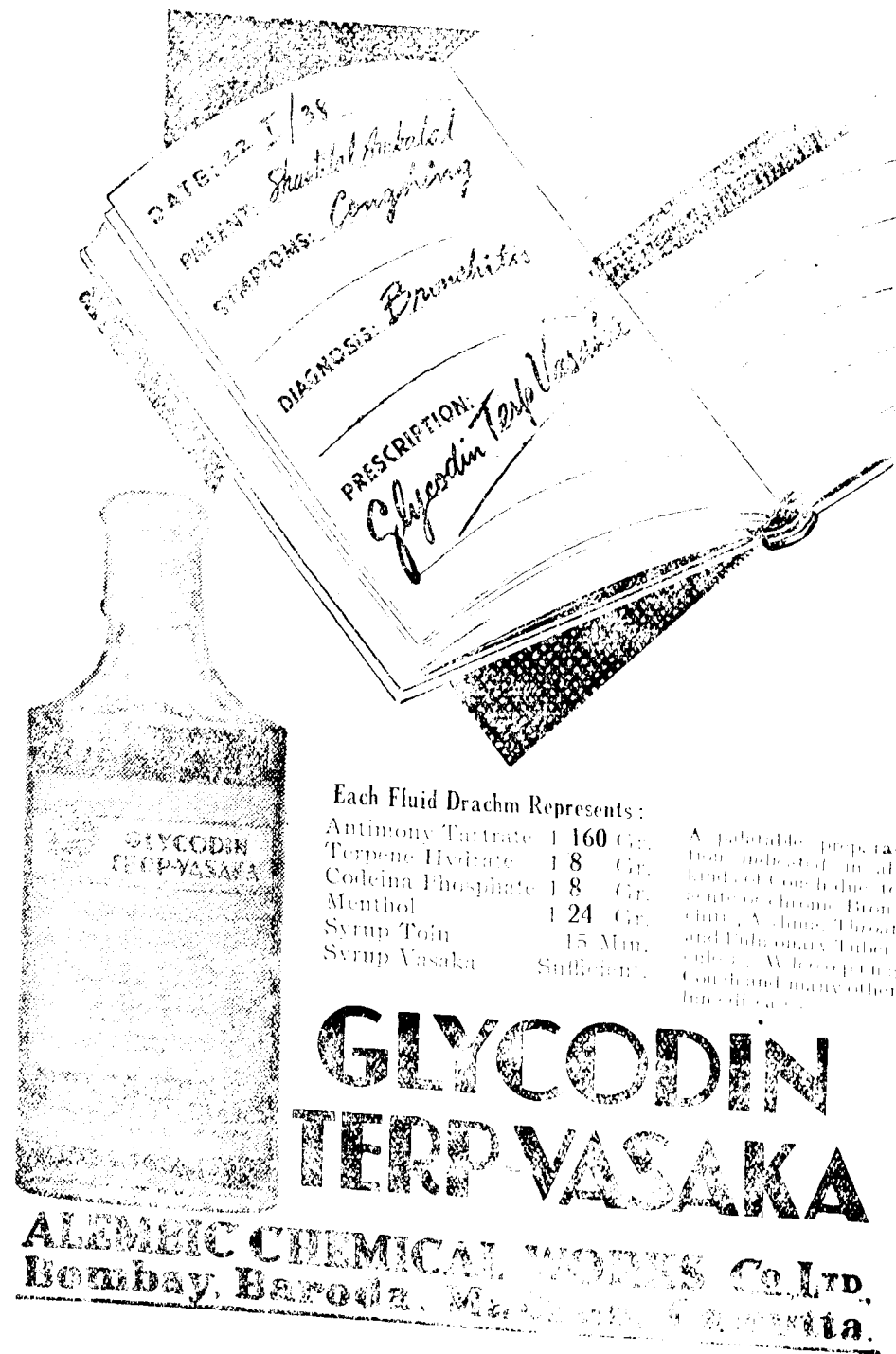
5, Sunkurama Chetty St,
G. T., Madras.



Branches:

CALCUTTA, KARACHI, LAHORE, RANGOON, NOVA-GOA.

When ordering please mention *Medico-Surgical Suggestions*.



DATE: 22 I/38
 PATIENT: Shantilal Ambekar
 SYMPTOMS: Coughing
 DIAGNOSIS: Bronchitis
 PRESCRIPTION:
 Glycodin Terp Vasaka

Each Fluid Drachm Represents:

Antimony Tartrate	1 160 Gr.
Terpene Hydrate	1 8 Gr.
Codeina Phosphate	1 8 Gr.
Menthol	1 24 Gr.
Syrup Toin	15 Min.
Syrup Vasaka	Sufficient.

A palatable preparation indicated in all kind of Cough due to acute or chronic Bronchitis, Asthma, Throat and Pulmonary Tuberculosis. Will soothe and soothe many other kinds of Cough.

**GLYCODIN
TERP VASAKA**

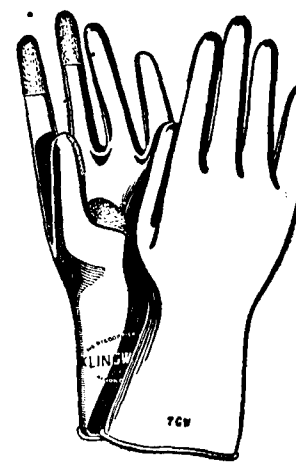
ALAMBIC CHEMICAL WORKS Co. Ltd.
 Bombay, Baroda, Madras, Calcutta.

When ordering please mention Medico-Surgical Suggestions.

BOMBAY SURGICAL Co. for EVERYTHING SURGICAL

UTILITY GLOVES

— FOR ALL PURPOSES —



SINCE HANDS SUFFER MOST FROM DRESSING AND GENERAL HOSPITAL WORK, DISHWASHING, HOUSEWORK, GARDENING, IT IS THE WISE WOMAN WHO TAKES THE PRECAUTION OF WEARING THESE **SPECIAL** RUBBER GLOVES TO PROTECT HER MANICURE, TO KEEP HER SKIN FRESH & YOUTHFUL. NO LONGER IS IT A BOTHER TO WEAR THESE SPECIAL WELL-FITTING GLOVES. THEY

PROTECT YOUR HANDS !

“GRIPWELL” GLOVES (GOODRICH MAKE)—

Made of pure Latex rubber by the patented Anode process. Will defy age deterioration for years. Rigid reinforcement pads on thumb and fingers insure a firm grip on wet instruments, slippery articles, dishes, etc. Palm pad reinforcement assures longer service at point of wear. Ample gauntlet length for greater protection. Shaped to fit wrist and forearm, yet allows for free and natural hand movements. Special “Rub-X” finish on inside surface causes these gloves to slip on easily.

DOMESTIC GLOVES (“S-R” MAKE)—

These gloves possess the same characteristics as above and equally durable. “Rufftip” fingers and palm are made to protect your hands. The famous Seamless quality. Made by the manufacturers of the well-known “MADERITE” Surgeons Gloves, unequalled at their price.

NEW SUCTION-GRIP SURFACE GLOVES (“S-R” MAKE)—THE “PRINCESS”

You will have a better grip in these latest Latex gloves — particularly in soapy water. Stronger, softer, firmer grip with a new suction-grip surface: Their surface is made up of thousands of tiny suction cups. These “Princess” Gloves feel soft to the touch and has beautiful velvety finish, yet they have an almost unbelievable gripping quality. Put a glove on, notice how smoothly and easily your hand slips into it, then palm down pull across any smooth surface. Their ready resistance is your answer.

All the above three kinds of Gloves are put up in individual cartons, and they are sterilizable. Sizes 6, 6½, 7, 7½, 8, 8½.....Rs. 2-8-0 per pair.

BOMBAY SURGICAL Co.

Phone: 41936]

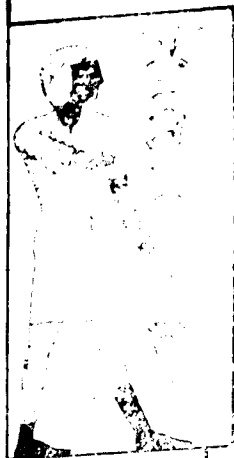
New Charni Road ... BOMBAY

[Wire: ‘SURGICO’

Obtain your supplies from one Reliable House. Catalogue Available.

When ordering please mention Medico-Surgical Suggestions.

the use of the term "information" is not an adequate preparation for the use of the term "information science". The use of the term "information science" is a preparation for the use of the term "information science".



OVATION

A liberal supply for clinical trial sent free on request.

JAMES WRIGHT LTD.

CALCUTTA BOMBAY
MADRAS & KARACHI

M. 257.

When ordering please mention: *Making Surgical Suggestions*.

CALSOLA

Calcium-Sodium Lactate suitably flavoured, in bottles of 36 tablets $7\frac{1}{2}$ grains each. An effective form of Calcium.

Administration to aid the formation
of healthy bones and teeth.

Eminently suitable during pregnancy and invaluable to nursing mothers.

GLUCAL

Calcium-Gluconate

Glucal Syrup contains Calcium Gluconate combined with Potassium Guaiacolsulphonate Pepsin and other valuable ingredients, for Coughs, Colds and all affections of the Chest and Respiratory tract.

GLUCAL GRANULES

Calcium Gluconate in the form of
Granules in bottles containing 2 ozs.

GLUCAL TABLETS

Calcium Gluconate 5 grs. available
in bottles of 50 and 100.

WEP

is the latest scientific discovery and is introduced as a sure specific for the treatment of fungus skin diseases commonly known as "Athletes' foot," Ringworm, etc., caused by the infection of parasitic fungi, such as *Epidermophyton rubrum* and other dermatophytes.

BRONCASTHMIN ELIXIR

Full adult dose containing $\frac{1}{4}$ gr. each of Ephedrine Hydrochloride and Codein Phosphate combined with Therapeutic doses of Wild Cherry, Grindelia, Euphorbia, Caffeine and suitable flavouring agent.

For the treatment of **ASTHMA**,
BRONCHITIS, and other spasm-
dic conditions of the Bronchi.

GIVES IMMEDIATE RELIEF.

WILFRED PEREIRA, LTD.,

QUALIFIED CHEMISTS,

Head Office :—VEPERY, MADRAS.

Local Branch:—25, Mount Road, Madras.

Mofussil Branches:—Ootacamund, Coonoor, Kotagiri and Coimbatore.

When ordering please mention *Medico-Surgical Suggestions*.

PAINS

PILES

Against
the blast of
Pains and Piles.

They Stand
like
two strong Pillars.

NANALA

For all sorts of Pains,
Headache, Earache, Tooth-
ache, Cuts, Blows, Colic
Pain, Gouty, Rheumatic or
Muscular Pain, Sciatica,
Lumbago or Pains after
Child Birth

— **NANALA** —

The Universal Pain-killer

D. B. L.

TABLETS.

PILENA

Pilena Tablets are the
easiest means to get rid of
all kinds of painful Piles.
Those who prefer Oint-
ment for Local use in Piles

SHOULD USE

— **PILE-MO** —

In a collapsible tube with elonga-
ted nozzle for easy application.

Dr. BOSE'S LABORATORY LTD. :: CALCUTTA.
BRANCHES AND AGENCIES THROUGHOUT INDIA & BURMA.

When ordering please mention *Medico-Surgical Suggestions*.

MEDICO-SURGICAL SUGGESTIONS

VOL. VIII

JUNE 1939

NO. 6

Original Articles.

"PYORRHOEA ALVEOLARIS."

BY DR. S. K. GUPTA, B.D.SC., B.O., (PB.)

*Surgeon Dentist and Laboratory Clinic,
Railway Road, PASRUR, District, Sialkote (Pb.)*

SYNONYMS.

Periostitis Alveolaris Dentalis; Spungy gums; Chronic general
Suppurative Periodontitis; Rigg's Disease; Paraodontosis; Suppu-
rative gingivitis etc., etc.

DEFINITION.

(1) It is a disease of the teeth beginning at the gingival border
with progressive destruction of the alveolar walls and accompanied
by a flow of pus.

(2) It is a pyogenic inflammation of the gums (probably due to
Entamoeba Alveolaris) causing suppuration of the peridental mem-
brane of the root of the teeth thus tending loosening the teeth by
detaching them from the surrounding alveolar tissue.

(3) It is an infective disease of the sockets of the teeth, lead-
ing to the formation of a purulent discharge around the teeth; and
if neglected, to caries of the bony sockets and lastly to loss of the
teeth.

ONSET.

Insidious, relapse frequent.

Age:—After middle, 30 to 50 years.

Sex and Caste:—All castes are affected, persons using vegetable
diet with proper cleanliness of the mouth and teeth, having more
alkaline reserve are found less affected and hence it is said that
herbivorous animals are scarcely affected. Males and females both
suffer from this trouble.

AETIOLOGY.

It is a troublesome disease of the gums and teeth and it is
increasing every day in India. It is due to neglect on the part of
the people in keeping their mouths clean. Small particles of food
collect between the teeth and under the gums causing them to
swell and form pus which is swallowed down all the time.

It seldom occurs before that adult age and may often be traced to insufficient care of the teeth, so that particles of food lodge beneath the margins of the gums, or tartar collects around the teeth; hence a soil is prepared for bacterial infection.

As is known to us, the buccal cavity gives shelter to many micro-organisms (e.g., Pneumococci, streptococci, staphylococci, tubercle bacilli, micrococcus catarrhalis and the like) but bacillus streptococcus is suspected as the most frequent offender in producing this disease.

CAUSES.

Pre-disposing Causes :—

(A) LOCAL :

- (1) Malocclusion of teeth.
- (2) Formation of spaces between the teeth by the recession of the gums.
- (3) Localised malnutrition.

(B) GENERAL :

- (1) Hereditary.
- (2) Injury and breach in the gum tissue.
- (3) Systemic diseases like Tuberculosis, Diabetes, Brights disease, Syphilis, Gout, Anaemia and infectious diseases etc., by lowering the vitality and weakening the bacteriolytic activity of the buccal secretions.

Exciting Causes :—

(A) ACCUMULATIONS OF FOOD-STUFFS :

Food and other particles being accumulated on the gums, teeth and on its inter spaces, thus causing prolonged irritation due to uncleanness.

(B) LOCAL IRRITANTS :

Accumulation of tartar, betel nut and frequent chewing of pan, excessive smoking etc., are also causing factors. Badly fitting crowns or fillings, extra teeth and over crowded teeth produce and prolong irritation.

(C) BACTERIA :

It is believed to be due to Entamoeba Alveolaris but from further researches, it is found that other pyogenic bacteria e.g.,

streptococci, staphylococci, pneumococci, spirochete etc., play part in causing the disease.

Pyorrhoea Alveolaris is not a primary condition or disease but a symptom and hence the chief causes to produce this symptom are as follows :—

(a) Abnormal tissue resistance.

(b) Mechanical irritation.

(c) Chemical irritants.

(a) *Abnormal tissue resistance* :—It is caused by faulty diet, improper closure of the teeth during mastication, lack of sufficient lime salts in the body e.g. Pregnancy, Scurvy, Rickets, other constitutional diseases, digestive disturbances, Diabetes, Nephritis, blood diseases (Arterio-sclerosis) heredity, unbalanced condition of nervous system, abnormalities of the teeth, gums etc., act in causing the trouble.

(b) *Mechanical irritation* :—Mechanical irritation is caused by imperfect closure of the teeth during mastication, accidental injury caused to teeth and gums, improper dentistry, formation and accumulation of tartar or other foreign bodies.

(c) *Chemical and other irritants* :—Metallic substances e.g., mercury, phosphorus, lead poisoning etc., excessive smoking (due to nicotine), constipation auto-intoxication, alcohol lowers the resisting power of the tissues of the gums. If the persons consume food in its more natural state, which will help in the full development of the teeth and all the structures of the mouth, to have the masticatory action properly carried out. The Salivary glands assist in the process of digestion providing sufficient saliva in preserving the teeth and preventing the acid erosion from bacterial infection.

PATHOLOGY.

The inflammatory process starts at the margin of the gum and hence the dental periosteum and surrounding alveolar wall are involved ending in necrosis.

TYPES.

1. *Local Form* :—The dentine is seen denuded, where the enamel of the gum, epithelium peridentine and cementum come together by the deposits. The morbid process begins as a chronic marginal atrophy of alveolar process, causing gradual loosening and separation of teeth, forming pockets between the teeth and the gums, which are filled in with granular tissue resulting in subsequent ulceration of soft paradental parts.

2. *Systemic Form* :—It may arise from vascular disorder in the pericemental membrane following upon constitutional diseases. Woski classifies pyorrhoea into vertical, horizontal and the mixed types.

SIGNS AND SYMPTOMS.

1. Congestion of the tags of the gum in the spaces between the teeth.
2. Congestion spreads to the whole margin of the gum.
3. Gums slightly swollen and bluish in colour.
4. Gums bleed to the touch.
5. Gradual recession of the gums by the destruction of the margin.
6. Formation of the pus sockets by the destruction of the bone.
7. Oozing out of the pus at the gum margin.
8. Exposed roots covered with dark tarter.
9. Foetid discharge.
10. Foul offensive breath.
11. Gradual looseness and falling out of the teeth.
12. Congestion of the whole mucous membrane of the mouth, including the tongue and the tonsils.
13. Very unpleasant taste.
14. Recurring hæmorrhage staining the pillow at night.
15. General malaise and debility.

A very notable feature is the marked absence of pain in these cases. It is only occasionally present and is then due to rheumatic diathesis or due to neuralgia caused by septic infection from the mouth.

It is indeed unfortunate that Pyorrhoea Alveolaris is a painless process and its septic effects go on steadily increasing in virulence without drawing attention to the seat of origin.

STAGES.

First Stage:—Bleeding of the gums and angry appearance of the margin of the gums.

Second Stage:—Pus at the gum margin.

Third Stage:—Loosening of the teeth.

COMPLICATIONS AND SEQUELAE.

Pyorrhoea Alveolaris sometimes excites grave general and local troubles and many medical men attribute to pyorrhea the majority of human ailments. The ingestion of pyogenic bacteria and their toxins acts injuriously upon the gastric and intestinal mucous membrane so that the natural anti-septic powers of the gastric juice are lost or diminished and thus systemic diseases ensue which are as follows:—

1. *Diseases of the digestive system*:—Tonsillitis, pharyngitis, dyspepsia, gastritis, gastric and duodenal ulcers, enteritis, appendicitis, cholecystitis; and some writers say that after the removal of oral sepsis an improvement in carbo-hydrate tolerance in diabetes mellitus follows.
2. *Diseases of the cardio-vascular system*:—Endocarditis and Arterio-sclerosis.

3. *Diseases of the blood and ductless glands*:—Anæmia and Hodgkin's disease.

4. *Diseases of the nervous system*:—Neuritis, Neuralgia, Sciatica and allied disorders.

5. *Diseases of the respiratory system*:—Naso-pharyngitis and otorrhoe are secondary to an unclean mouth, suppuration in the maxillary antrum, Pneumonia etc.

6. *Diseases of the uro-genital system*:—Nephritis.

7. *Diseases of the eye*:—Iritis, irido-cyclitis, retro-bulbar optic neuritis.

8. *The rheumatic group of diseases*:—Rheumatoid arthritis, arthritis deformans, osteo-arthritis and fibrositis.

It is not my wish to exaggerate the importance of oral sepsis as a factor in the production of systemic diseases, but rather to point out that physicians and Dental Surgeons should be alive to its significance and potentialities.

DIAGNOSIS.

Careful examination reveals its condition. As several teeth are generally effected in which lower incisors are generally attacked first.

Osler's Test:—If a thread drawn between the teeth at the gum margin, the condition is detected if offensive order clings to it.

(i) A smear made from scrapings of the living tissue beneath the gum edges stained with Wrights stain or with Leishman's and is examined with the oil immersion lens, the Amœba are found.

(ii) A smear is to be made of the exudates with pus and dried in the air; the smear is then fixed over the flame and stained a few seconds, while still warm, with Thionine solution. The stain is washed with water and the slide dried and mounted in balsam with cover glass or examined in immersion oil. Entamoeba are stained distinctly, cytoplasm is stained light purplish violet, nuclei a deeper redish violet. Ingested R.B.C. and other materials undergoing digestion in the body of the organisms.

DIFFERENTIAL DIAGNOSIS.

It is difficult to diagnose from alveolar disease, overlying necrosis, due to poisoning by mercury, lead, phosphorus or other substances used industrially. Syphilitic or Tubercular lesions of the gums, etc. may cause confusion. Gingival lesions (caused by scurvy) resemble closely pyorrhoea, which could be differentiated by examining scrapings microscopically.

PROGNOSIS.

It is a most obstinate and protracted trouble which requires early proper and persistent care in order to effect eradication. If neglected it causes many diseases as stated above thus lowering the vitality of the body ending in bad results.

(To be continued.)

Modern Methods of Treatment.

ANO-RECTAL FISTULAE*

R. A. HALL,
R.S.O., St. Mark's Hospital.

TREATMENT OF FISTULAE.

As already mentioned, fistulae result from the imperfect healing of an abscess; for some reason not adequately explained the walls of an abscess do not adhere and heal across in this region except in a small proportion of cases. Such healing may be called 'healing by third intention.' Healing by 'second intention,' that is, by the growth of epithelium from the skin edge over the granulations of the wound, occurs with great facility, and this forms the basis of operative treatment of fistulae to-day. In practice this is brought about by converting the narrow track into a wide, shallow, relatively flat open wound. It can only be done in the complete fistula by dividing the tissues that intervene between the fistula and the bowel. The walls are then shaped so that they remain apart till epithelialization is complete.

Before outlining the treatment of individual cases, a word is necessary about prophylaxis. As has been said the most important single etiological factor is the occurrence of an abscess. Many of these are seen by a medical man and left till 'pointing' demonstrates to doctor and patient alike that an abscess is about to burst. By this time the abscess has in all probability extended in several directions and is also about to point into the bowel. It is in this way that what was originally a simple abscess has ramified through the tissues and become a complicated fistula. Therefore, at the earliest moment that an abscess is diagnosed, and induration, not fluctuation, is the sign to look for here, it should be incised. Simple incision is however, not enough, for the cavity would then have to heal by third intention which rarely occurs in this region. In addition it is therefore necessary to remove the roof of the cavity, and to make the wound relatively flat. At the same time a probe should be passed to seek the presence of the internal opening which in the late abscess is so often already present.

Before discussing the treatment of specific types of fistulae the effects of cutting too much sphincter muscle must be considered. These are incontinence and prolapse.

Incontinence.—Everyone supposes himself to be familiar with the condition, and might imagine that the patient would make the diagnosis himself. This is not invariably the case. One pictures the

* This is the third instalment of "Ano-rectal Fistulae." First and Second instalments appeared in the April and May issues of the Journal.

patient as subject to repeated 'accidents' and rarely clean. When the whole sphincter mechanism has been destroyed what in effect remains is a perineal colostomy. It will be remembered that the colon is quiescent for long periods, between which there are waves of 'mass peristalsis' which tend to empty the whole colon. These occur at regular intervals, and give the patient warning of impending bowel action. During the remainder of the day onward passage of contents is largely brought about by the *vis a tergo* of further contents introduced into the caecum.

The colon concentrates faeces, and stores them till a peristaltic wave empties it preparatory to receiving the next twenty-four hours' supply. While the colon behaves in this normal fashion, a perineal colostomy is as satisfactory as an iliac one except as regards position. It is only when liquid faeces or flatus in large quantities reach the rectum that the patient misses his sphincters. Many seem to avoid the occurrence of either. Such patients usually complain, sometimes bitterly, of the discharge of mucus from the anus. Varying degrees of incontinence, depending upon different degrees of impairment of the sphincters can be recognized, but a patient whose musculature is otherwise normal can maintain continence, if only a part of the deep external sphincter and pubo-rectalis remain. Such patients may be temporarily incontinent, but within a few weeks with the disappearance of inflammatory fixation of the sphincter and the hypertrophy of the remaining muscle they regain full control. The criterion of continence used throughout this article is the ability to retain a two-pint enema of soap and water while walking to the lavatory.

Prolapse.—With the loss of the sphincters, incomplete rectal prolapse, or prolapse of the mucous membrane, is prone to occur. When the pubo-rectalis is also destroyed the complete variety is likely, and growing ever larger is often a greater source of trouble to the patient than the loss of his sphincter control.

TREATMENT OF SPECIFIC TYPES OF PYOGENIC FISTULAE.

1. *Low anal.*—A grooved director is passed along the track and the intervening tissues are divided. These will be the skin, the skin of the anal canal, the subcutaneous tissues including the external haemorrhoidal plexus, and the subcutaneous external sphincter. It is desirable that all wounds involving the anus should be triangular in shape, the apex being in the anal canal, so that during healing the internal part of the wound will heal before the external part, and that all overhanging edges should be removed to prevent their adhering to the base of the wound and leaving a residual track. Where a submucous track is present it must be opened up. The mucosa is however a very vascular membrane, and cutting should be reduced to a minimum to avoid haemorrhage. The vessels run more or less in a vertical direction, and cuts should be made parallel

to them wherever possible, a great deal can be done by the use of setons or strangling ligatures.

2. *High anal.*—The same technique is adopted, but a wider area of skin requires removal to make the wound flat. To do this extension of the wound laterally is usually adequate, but in very large resections the tuber ischii may limit extension in this direction, in which case the wound should be curved backwards towards the coccyx. In the majority of fistulae in which the internal opening is in the posterior part of the anal canal the exact level of the internal opening can usually be ascertained and hence its relationship to the sphincters determined. In anteriorly placed fistulae however the ano-rectal ring is not so well-defined, and some doubt may be entertained as to the level of the fistula, in this case a stout ligature may be passed through the main track and tied loosely. This is stated to fix the muscles so that they may be subsequently divided without their retracting; this is almost certainly a fallacy but further examination of the conscious patient may demonstrate that there is voluntarily contracting muscle above the level of the ligature. The use of a strangling ligature to cut through muscle does not appear to the writer to have any place in the surgery of fistula, there is doubt if the inflammatory reaction around does fix the muscles and prevent their retraction and even in the hands of those surgeons who state that they obtain this result, complete pelvi-rectal fistulae are not treated thus for fear of producing incontinence.

Much confusion has arisen from erroneous statements that the whole of the external sphincter can be divided—(usually stated 'cut once at right angles to the direction of the fibres, if the internal sphincter be left intact'). The internal sphincter is not the guardian of continence but the external sphincters, and should these be cut completely continence will be irretrievably lost however the cutting is done. A thin portion of the deep external sphincter and the pubo-rectalis will maintain function.

Posteriorly as has been mentioned already, tracks tend to deviate from one or other side of the midline, and they may extend in both directions to form the well-known 'horse-shoe' fistula. Horse-shoe fistulae are usually high level in type, in that their internal opening lies above the intermuscular sulcus. There may be in addition a track running through the levator when it would be equally correct to call it a pelvi rectal fistula. Low level fistulae may also be horse-shoe shaped.

All these are treated on lines similar to unilateral fistulae according to their level, but the two wounds communicate one with another and with the anus posteriorly.

Where a wound is made close to the anal margin the tissues of the perianal space rapidly become oedematous and form bulky tender swellings which interfere with subsequent dressings, and mar the

flatness which it is so desirable to obtain. This tissue should therefore be sacrificed at the operation, one third of the circumference of the anal skin is sufficient for subsequent regeneration.

3. *Pelvi-rectal fistulae*.--The same principles obtain, but if an internal opening be present above the ano-rectal ring, the fistula cannot be opened into the bowel. Fortunately these cases are rare as they cannot be cured with certainty. The blind external variety, which is the common type, is curable by wide external drainage alone. After a probe has been passed into the wound, a curved incision is made at about one inch from the anus, *i.e.*, a little to the inner side of the probe. The incision extends no further forward than the level of the mid-point of the perineum so as not to injure the uro-genital triangle which lies anterior to this point, and reaches backwards towards the coccyx, its posterior extent depending upon the depth of the fistula. It is then deepened into the fat of the ischio-rectal fossa, and by dissecting a little medially the sphincters are identified and carefully preserved. On still further deepening the wound the inferior haemorrhoidal vessels and nerves are encountered and these can be cut with impunity on one side. The main track now passes through the levator ani, and by cutting outwards on to the probe lying in the track, this opening can be found and enlarged. After trimming away the perianal skin between the wound and the anus, nothing further requires to be done to the medial wall, but the lateral wall should be pared away till the cavity is a wide trough. This should be carried backwards so that the wound becomes a gutter with a level floor. There are no important structures either laterally or posteriorly to interfere with this wide resection.

Certain pelvi-rectal fistulae are complicated by a track running in to open at the ano-rectal ring as in the high anal variety (the same condition has been referred to under previous headings as a high anal fistula with a pelvi-rectal extension). This internal opening should be treated where sufficient sphincter remains above it by laying it open into the bowel.

Where an internal opening is present above the ano-rectal ring, wide external drainage alone may be enough to effect a cure but this is by no means certain. A preliminary colostomy, to divert the faecal stream may assist healing by reducing the infectivity of the rectum.

POSTOPERATIVE CARE.

It is no exaggeration to say that the best operative treatment in the world will be ruined by bad after-care. Dressings must be carried out conscientiously and methodically. The rationale is the insertion of a thin layer of gauze into the depths of the wound, lightly, without packing, so that the walls are kept apart and prevented from 'bridging.'

After operation the patient's bowels are kept confined and the dressings unchanged for three days to allow a barrier of granulations to form. In wounds involving the anal canal, a small rubber tube should be inserted at the end of the operation. The functions of the tube are mainly to support dressings tucked into the anal canal but also to allow the escape of flatus and blood if haemorrhage occurs into the lumen of the rectum. At the end of twenty-four hours a small quantity of olive oil should be run in through the tube, and the tube is then withdrawn, care being taken not to disturb the gauze the ends of which are lying in the anal canal. The oil is usually retained without difficulty and softens any scybala that may have reached the rectum. On the second night a mild purge should be given to obtain a fluid motion on the following morning. Patients with small wounds are allowed up on the third morning to the bath, in this the dressings will often soak off if they have not already come away during defaecation. On and after the third day all patients have two baths a day, after the baths their wounds are well irrigated and then dressed. If the patient has his bowels opened at a time other than immediately prior to the time for his bath, the whole routine is repeated after each bowel action.

Prior to the insertion of the dressing the nurse should gently separate the walls, and break down the bridging that will almost certainly have occurred in the depths of the deeper wounds. This step is of fundamental importance, it only requires to be forgotten once for a residual track to form and spoil the whole result. The dressing should then be inserted, but it must be done lightly, as packing is likely to delay healing indefinitely.

These wounds are in early days likely to be exquisitely painful, so much so that in the case of some of the larger ones it is necessary to diminish the number of dressings and do these under light anaesthesia, evipan being extremely useful. Nothing has been said about the solutions used for dressings, in the opinion of the writer little importance attaches to these. For routine use the practice of the hospital is to use a weak hypochlorite solution, while at a later state epithelialization appears to be stimulated by the use of Lotio Rubra or Scarlet Red ointment. It is probable that other applications could be used with equal effect.

Low anal fistulae usually require a period of about three weeks in hospital, the larger wounds require correspondingly longer before healing is complete. In suitable selected cases the length of time can be reduced by the application of Thiersch grafts, but this method is inapplicable to the majority of cases as in the best circumstances a number of missed tracks may only be discovered on routine dressing.

TREATMENT OF TUBERCULOUS FISTULAE.

This depends upon the extent of the fistula and on the general state of the patient. In the first category, complete pelvi-rectal

fistulae, and in the second, fistulae which occur in patients with tuberculous rectal ulceration or gross open chest lesions may prove incurable, but even so a wide external drainage operation may be a worth-while palliative procedure. Many such fistulae are in reality terminal events for the patients, colostomy has been suggested and often practised, but it should be remembered that the colon is probably the seat of tuberculous ulceration even though there are no symptoms of it. In such a case the colostomy and the surrounding skin become ulcerated, and the continuous discharge from the colostomy makes the patient's remaining life intolerable. With the exception of these cases, the majority of tuberculous fistulae are curable. Operations on the lines already laid down should be performed, but in addition it is desirable to fulgurate the wound thoroughly with diathermy to destroy any outlying tuberculous disease that might otherwise be left behind. The post-operative care does not differ that of the pyogenic fistula.

The treatment of fistulae complicating or complicated by malignant disease is the treatment of the new growth, and the same applies to those fistulae complicating other rare rectal diseases, and are not within the scope of this article.

(*University of Leeds Medical Magazine, Vol. 9, No. 1.*)

CAUSES OF INTERNAL HEMORRHOIDS

CHARLES J. DRURCK, M. D., F. A. C. S.

Chicago.

Internal hemorrhoids are varicosities of the superior hemorrhoidal vessels and arise entirely within the anus. They begin at the points of anastomosis between the portal and the caval systems. These anastomoses are numerous. The most common origin is at the level of the valves of Morgagni about a half inch above the anal orifice, and from here they gradually extend up to the larger trunks and plexuses. Even normal veins are somewhat enlarged in this situation and are called glomeruli.

Hemorrhoids occur in two distinct types, the small capillary and the large venous.

A capillary hemorrhoid is a small tumor rarely larger than the end of the little finger and sometimes as small as a pinhead. It is an arterial naevus, spongy in texture and resembling a strawberry. Early in their existence, these tumors have a granular surface covered with a thin wall and are likely to bleed. Later, a plastic exudate and thickened areolar tissue covers the vessel; hemorrhage

then occurs less readily. The gentlest examination or even the passage of the feces may be sufficient to start hemorrhage. I recall one case in which bleeding was profuse while the pile was found to be no larger than the head of a black pin. Excessive hemorrhage, particularly if spurting in character, is pathognomonic of capillary hemorrhoids. Frequently large amounts of blood are lost and a number of deaths have been recorded from this cause. Of course a large capillary or arteriole is necessarily involved here.

This tendency to profuse bleeding makes a capillary hemorrhoid much more dangerous than the venous variety. In the palliative treatment this distinction is imperative, because the patient may be exsanguinated while the physician is temporizing with injections of styptics. The capillary piles do not protrude or cause any of the pain or discomfort attendant upon the venous variety. Hemorrhage itself is the cardinal symptom and requires energetic or even heroic treatment.

The venous hemorrhoids are of more common occurrence than the arterial. The pile may appear as a good sized tumor, frequently a half to an inch across its base and covered with a livid bluish and glistening mucous membrane. Matthews reports seeing one as large as a small orange. These venous hemorrhoids are situated in the submucous connective tissue. They begin with venous pools and are composed of a dilated and varicose vein, with its capillaries, and also the arterial capillary supply. They are located, usually, one on each side of and slightly in front of the posterior commissure and on the right and sometimes left of the anterior commissure. Sometimes the whole anal ring is a mass of varicose veins, especially when due to diseases of the heart, liver or kidney, and this varicose condition may extend the whole length of the rectum.

Sometimes several small veins may be twisted together into one mass. The sacculations and varicosities are limited to the venous vessels and do not affect the arteries. The tumor is not wholly composed of veins, but around this mass of vessels there is a fibrous capsule which sends trabeculae (partitions) in between the veins. The mucous membrane covering the pile is chronically inflamed and the walls of the veins are easily thickened by this inflammatory hypertrophy; later they are extremely thin, with nothing but an endothelial covering. Sometimes such vessels may form large venous pockets.

Internal hemorrhoids are brought on by anything that increases local blood pressure. Man is the only animal assuming an erect posture during most of the waking hours. In this position, of course, a heavy column of blood must be lifted through these veins continuously for many hours. During our whole active life, there is the predisposition to the formation of hemorrhoids, and only some little local congestion or inflammation is required for the varicosities

to develop. For this reason proctitis is a very common cause of hemorrhoids.

The Relation of Proctitis to Hemorrhoids. Early in my work I noticed this association of hemorrhoids with proctitis. The acute catarrhal proctitis is often met with and always you will find an edematous mucous membrane with its hemorrhoidal vessels engorged. As the proctitis subsides the hemorrhoidal edema and engorgement also is reduced and finally disappears. If, however, the proctitis persists as a subacute or chronic form, the hemorrhoids also continue and a gradual hypertrophy of the mucous membrane results. This increases the bulk and weight of the mucosa, which separates and slides down on the areolar tissue until it is grasped in the sphincter. The spaces of the submucosa about the hemorrhoid are filled with connective tissue. Later, when the proctitis reaches the atrophic stage, the hemorrhoids remain, because of this connective tissue infiltration which permanently constricts the venous overflow.

Now a second factor enters. The descending fecal mass, acting in the reverse direction on the veins, distorts the latter further and tears more mucosa from the muscular wall. With each bowel movement, the hemorrhoidal mass acts as an obstruction, as the feces are forced through. This increased muscular action drags down the hemorrhoid and the adjoining mucous membrane until they prolapse, thereby increasing the size of the hemorrhoid itself. Finally when they have attained considerable size, they prolapse easily and act as foreign bodies tending to excite the sphincter.

Causes of Hemorrhoidal Congestion. Hemorrhoids brought on in the manner described are the result of digestive disturbances, the improperly digested or fermenting bolus acting as an irritant. In this way, constipation is a frequent cause, while the vein is ruptured by the frequent engorgement and stretching due to the passage of the feces. Thus it is that drugs used to relieve the constipation (aloes, senna, calomel, gamboge) also frequently congest the rectal circulation. Warm enemas also act in this manner. Certain articles of food, by irritating the mucous membrane, cause increased peristalsis or tenesmus and thus provoke hemorrhoids. (Notable among irritating comestibles are spices, peppers, mustard, sauces, radishes, water-cress, tamales, chili con carne and pickles, also alcoholics and tea.) An excess of a carbohydrate diet that cannot be cared for by the liver blocks the portal circulation and later the hemorrhoidal vein. These dietetic changes account for the apparent influence of the seasons upon the hemorrhoidal circulation. As the warm spring weather comes the system can not dispose of the same amount of carbohydrates as it had been accustomed to do during the winter, and so the load is thrown upon the portal circulation.

Besides constipation there are other conditions that cause straining or a bearing down and thus tend to congest the pelvic venous current; among these particularly, are stricture of the rectum or urethra, stone in the bladder, an enlarged prostate gland, the pregnant uterus or a myoma of that organ, pelvic exulcerates, adhesions, even a retroverted uterus. It is well to bear each of these conditions in mind, because a patient may consult you when suffering from one of them, and at the same time, complain of hemorrhoids. The hemorrhoids do not require treatment directly, being wholly dependent upon the underlying conditions. In this same manner, all those occupations that increase the abdominal or pelvic pressure will induce hemorrhoids such as severe muscular exertion or prolonged standing or sitting still, especially if on a vibrating platform, as in the case of railroad men or teamsters. Desk workers also frequently are sufferers, owing to sitting in a bent-over position, which crowds the abdominal contents toward the rectum.

One other class of positive causes of hemorrhoids is disease of the heart, liver or pancreas and syphilis. Since the exciting cause in this class of cases cannot be removed there is no hope of curing the hemorrhoids, and a tentative treatment is all that can be undertaken.

Hemorrhoids Occurring During Pregnancy and the Puerperium. The physiology of the female pelvis constitutes an etilogic factor in the production of venous stasis, and therefore is a cause of hemorrhoids, which does not have to be reckoned with in the male. Unquestionably, the most important of these functional factors is pregnancy, which imposes upon the hemorrhoidal veins such a continuous pressure, or else so violent and sudden a pressure during labor, as to make the occurrence of piles a very frequent complication.

There are many other conditions which cause straining or bearing down and thus congest the pelvic venous current.

Constipation is the rule during pregnancy because of displacement of the bowels, abnormal innervation, general inactivity of the woman or interference by the enlarged womb with the bearing down efforts during defecation. One or more of these factors, together with the increasing abdominal tension, determine hemorrhoids as a common complication of pregnancy or the puerperium even in women who have been previously free and who may completely recover after confinement until the next pregnancy, when they may have a recurrence. Sometimes these piles are very troublesome and occasionally serious. Anal fissures are frequently associated.

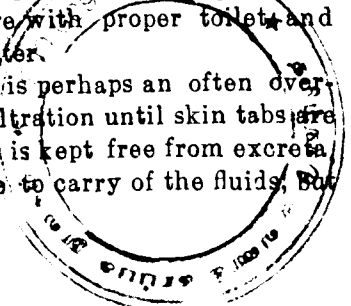
Hemorrhoids developing during pregnancy usually involve the internal hemorrhoidal vessels and very considerably in the disturbances which they cause. In some patients they may be easily controlled and the fullness and tenesmus relieved or made bearable with

cold compresses and a sedative ointment. In severe cases there is usually associated varicosities of the legs and vulva which altogether make a most unhappy woman. The vaginal vessels may be as varicose as the hemorrhoidal and the vaginal walls protrude through the vulva just as the rectal walls are forced out of the anus. These patients, because of the increased abdominal pressure together with autointoxications and faulty eliminations, demand energetic treatment. The varicosities of these vessels unless promptly relieved become permanent with all the attendant train of evils. Sometimes in severe cases these hemorrhoids swell up, over-distend, rupture and bleed and even become gangrenous sloughs while the gravid woman is reduced to invalidism. This dangerous condition and much of the suffering may be prevented by the physician watching his patient's elimination, and by proper exercise and the avoidance of promiscuous use of harsh cathartics at this time.

In a second class of patients the internal hemorrhoids cause but little annoyance during pregnancy, but they engorge and bleed during labor. Both these and the previous varieties predispose to perineal lacerations and some accouchers remove the swollen piles during labor, while others recommend waiting until after the puerperium. During the lying-in period both of these varieties cause a great deal of distress. If the internal hemorrhoids protrude they should be replaced and held back during labor as carefully as during the puerperium. Much can be saved by a competent accoucher. Of course, no attempt should be made to push external hemorrhoids within the anus.

A third variety of hemorrhoids occurs in patients who have not had any evidence of piles during their pregnancy but who have had long and exceptionally hard or instrumental labors. Sometimes the hemorrhoid may be seen during a labor pain or is found the next day. There is usually but one or two piles. Sometimes a definite pile is not found, but the blood extravasates into the edematous tissues. This kind of hemorrhoid is due to the hydrostatic wedging apart of the different structures as the serum is effused into the peritoneum and about the anus by each propulsive labor pain. This increased succulence or edema of the parts, together with the crowding of the baby through the passage, drives the fluid between the connective tissue, thus separating the skin and the muscular walls. As this fluid is only slowly absorbed, it leaves the pouching skin tabs as a consequence. Unless these skin tabs are prevented from forming during the puerperium they will interfere with proper toilet and lead to pruritus and necessitate removal later.

Overfilling of the bladder or sigmoid is perhaps an often overlooked cause of the persistence of this infiltration until skin tabs are formed. If your puerperal patient's pelvis is kept free from excreta, the lymph circulation will have a chance to carry off the fluids, but



they cannot do so if the distended bladder or rectum presses upon the lymphatics.

Another factor to be remembered is that with the woman lying on her back the lymphatics and venous circulation must be lifted the height of the sacrum to get out of the pelvis. As both of these systems have poorly supported vessel walls, which are already weak and boggy with softening, the lifting of this column of fluid further slows the circulation. It is therefore essential that the lying-in woman be turned occasionally to assist the pelvic circulation and that the back and the sacral regions be massaged and the legs passively exercised.

(Illinois Medical Journal, Feb. 1939.)

THE DIAGNOSIS AND MODERN HANDLING OF PATIENTS WITH CUTANEOUS SYPHILIS

HERBERT S. ALDEN, M.D.

JACK W. JONES, M.D.

Atlanta.

"Life is short and the art long, the occasion fleeting, experience fallacious and judgment difficult."

When reflecting on the difficulties of guiding the patient with cutaneous syphilis through the diagnosis, explanation and treatment of his disease, the above aphorism of Hippocrates repeatedly comes to mind. It is particularly applicable to syphilis, because the time for its diagnosis is often short and fleeting and it requires a finesse and judgment in which our experience does not always chart a true course. It is the use of our common sense added to new methods and a much needed enthusiasm that seems to us to be the keystone in the eradication of syphilis in the United States, particularly in the Southern States, wherein 65 per cent of all cases occur.

A word or two about the use of the word "modern." Syphilis as a disease of man has been known and talked about for many years. Certainly, it is as old as our Americas and probably much older. The Chinese, the Chaldeans, the Greeks and the French all had a word for it, but no knowledge of its cause and little of its treatment. The practitioner of the early 1900's as a clinician was probably a better diagnostician of cutaneous syphilis than we are today with our minds befuddled with laboratory tests. He knew of

lib.
gis
C
Cok

the extent of its ravages, of its contagiousness, of its clinical appearance and of its often venereal origin. But Victorian prudery hampered its control, its discussion and probably much of the advance of knowledge about it. And above all he lacked our efficacious modern treatment and modern diagnostic aids, our health departments and our modern mind. Some physicians are still Victorian in their attitude toward syphilis as a public health problem and also as to treatment and to diagnosis; hence the word "modern."

We will all agree that the early recognition, diagnosis and immediate treatment of syphilis is paramount in its cure and control. Since the earliest lesions are mainly on the skin it behooves us to study its cutaneous manifestations. *The first rule in diagnosis is that the spirochete may enter skin or mucous membrane at any point.* The initial lesion of syphilis is not always venereal—it may, and has been observed in every portion of the body, from the top of the head to the toes. One can cite instance after instance where early diagnosis has failed because of lack of this one guiding principle. The lips, tongue and tonsils are often involved and often the diagnosis of chancre is not considered. This is true less often of the fingers of nurses and doctors. The anus and breasts should never be overlooked as chancre areas. The appearance of the chancre is the same wherever found:

1. It is acute—that is, seldom of more than three weeks duration. Acuteness, however, refers to time, not intensity, for it is often.

2. Painless and to the patient more or less insignificant. Herein lies a mistake often made in accepting the patient's version of his trouble and with a hasty examination passing the trouble by with a casual air.

3. It is an ulceration of no particular characterization—it may be hypertrophic or cu-shaped, oval or round, multiple or single.

4. The edges are usually firm and hard. This is due to the characteristic lymphatic infiltration, almost invariably present in syphilis of any tissue; therefore.

5. There is almost invariably a nearby satellite, painful, enlarged lymph node.

6. In soft tissue such as the lip, tonsil, scrotum and particularly the vulva, the lymphatic response is great and there is excessive edema—a characteristic sign. This is peculiarly characteristic in chancre with phimosis of the prepuce.

Rarely is there such a thing as a "typical hard chancre." All ulcerations with any of the above characterizations should be suspected and *the second rule is: Examine the patient all over and undressed.* A general efflorescent secondary eruption may be present, sore throat or moist papules in the mouth, anus or vulva and often loose

or falling hair. The casual "short arm inspection" of the penis protruding from buttoned trousers is inexcusable—at least lower the trousers and examine the inguinal nodes.

All of this is clinical and should lead to a strong presumptive diagnosis, but this should compel the *third rule*: *Always collect serum from the ulcer* for dark field examination either personally or for your State Board of Health. Do not pass up this procedure as difficult, unhandy or impossible. It is easy and simple. A rubber glove, a piece of gauze, and a capillary tube to collect the serum and vaseline to seal the ends is all that is necessary. This can be sent to a nearby laboratory or to the State Board of Health. To neglect this is one of the major serious mistakes that is made. The other mistake is the interpretation of a blood Wassermann or Kahn test taken at this time. Although, the spirochete invades the blood stream almost immediately after entrance to the skin, the blood has not had time to develop any immune bodies to the infection and the blood Wassermann will invariably be negative, and both physician and patient will be lulled into a fool's paradise. The darkfield may be negative for many reasons, such as secondary infection, application of antiseptics and poor technique. Repeat the test and repeat the test after saline dressings. Remember the diagnosis of syphilis is a great responsibility, but telling the syphilitic patient that he does not have syphilis almost amounts to a crime, for he is more than liable to disseminate his disease unconsciously.

The fourth rule is: Discuss the patient's disease with him fairly and frankly; although he may have little more than a guilty conscience, one must talk of the possibilities of syphilis so that one may substantiate a presumptive clinical diagnosis with (1) history of contact and (2) further laboratory procedure. It is all important that the approach neither be ribald or casual in tone, nor moral or religious in attitude, since either of these airs will cast a spell about that will often sadly interfere with a diagnosis. It is estimated that on an average in the United States each person with contagious syphilis infects more than one other. Therefore, if we are to accomplish anything in lowering its incidence in our community we must inquire dilligently into past contacts and warn seriously of the danger of future contacts. Many times past contacts such as wife, children or friends can be examined and treated before it is too late to effect a cure. By the co-operation of the patient he will often act as chief investigator or one may enlist the help of public health department. Smith and Brumfield in Virginia have shown in many instances that transmission sequence of syphilis by the above methods. In one case in a period of two months they were able to trace sixteen cases, eight primary eruptions and eight secondary eruptions in nineteen patients examined. Such findings should impress upon us the importance of this rule.

The importance of these diagnostic rules and methods cannot be stressed too often nor too firmly. Let us school ourselves to treat the patient with primary syphilis as an ill patient deserving of all the care and diagnostic acumen that we have at hand; care for him as you would a patient with acute appendicitis or scarlet fever. To treat a patient for supposed syphilis at this stage as a diagnostic test is inexcusable, and still worse to give any treatment as a "prophylaxis."

The secondary eruption of syphilis is due to the dissemination of the spirochete by the blood and lymph. It is well to remember that it not only occurs on the skin, the mouth, throat, anus and vulva, but there is similar tissue response in the liver, spleen, intestines and in some instances in the brain and meninges. The secondary eruption evidences an immune process of the body—just as the eruption in chicken-pox, scarlet fever or the rose spots of typhoid fever. The physiopathology is the same here as in the chancre excepting it is more general.

The individual eruptive lesion of secondary syphilis is in reality an actual or embryonic chancre. It occasionally assumes the appearance of a chancre. This is particularly true in the mucous patches of the mouth, of the anus and in condylomas of the vulva. Each is teeming with spirochets and at this stage your patient is most contagious and dangerous to others. As in the chancre there is no typical secondary eruption. However, it is usually characterized by certain clinical appearances.

1. It is nearly always generalized—scalp with hair loss, mouth, skin of the face, palms and soles and around anus and vulva.

2. It is more *under* the skin than *on* the skin; hence, backing away from your patient in a good light will often make the eruption more prominent.

3. The mucous membrane lesions are oozing, soft, multiple and conspicuously painless.

4. The lesions are often unusual in their arrangement and grouping. They may be gyrate, circular or grotesque in appearance.

5. There are usually symptoms of mild illness, sore throat and lymph node enlargement.

After all, the diagnosis in this stage depends on acute observation of the examiner, a complete examination and a history. Now the Wassermann or Kahn blood test is positive 95 per cent of the time and is diagnostic. In handling the patient the approach and the responsibility of the physician is as important as it is in the primary stage.

There is another form of cutaneous syphilis which is clinically indistinguishable from the chancre or secondary eruptions, known as the "mucocutaneous relapse." This is in essence the reoccurrence of contagious lesions in an untreated or poorly treated syphilitic

patient months or even years after the original invasion. In order to understand this process, the sequence of changes that occur in the early months of the disease must be recalled. The spirochete invades the tissues and immediately proliferates from the center outward, marked by a dense accumulation of lymphocytes and plasma cells which is inversely proportional to the growth of the organism. If the defense is strong there is less multiplication and as the lymphatic tissue gains the upper hand the organism fragments, disseminates and the process repeats itself endlessly in the secondary eruption, through latency and recurs again in late syphilis. Hence the chancre is more of a *type* of reaction than it is a clinical entity. If the initial lesion clears up as a natural process of immunity and no treatment is given, this natural immunity may be depressed in six months and a mucocutaneous relapse occurs identical with the original and yet the patient will not be conscious of any recent contact and his history may be misleading. Statistics have shown that 26 per cent of relapses occur within six months, and 29 per cent occur in the succeeding six months, and by two years 85 per cent will have occurred. These relapses can be entirely prevented, however, with some form of early treatment.

The primary and secondary stages of syphilis represent the golden opportunity for treatment, and since this opportunity is discoverable only in a fleeting moment and by definite well-tried methods, we have tried to stress these stages of syphilis emphatically. The treatment of syphilis presents another problem—a problem which has been stabilized and emphasized so clearly in the publications of the Committee on Syphilis of the League of Nations, and published in practical form in the Journal of the American Medical Association, as well as in the reports placed at every physician's disposal by the U. S. Public Health Department, that only a little emphasis will be necessary here.

Congenital syphilis is absolutely preventable by intensive treatment even as late as the sixth month of pregnancy. It behooves us all to eliminate, if possible, syphilis as a factor by examination, Wassermann tests and history, from every pregnant woman who consults us. Unfortunately many women consult the doctor too late in their pregnancy for prevention and another golden opportunity is lost. But the child may have syphilitic lesions of a cutaneous nature. These lesions may be both of the early and late varieties and even may be a mucocutaneous relapse.

Congenital syphilis is not hereditary syphilis. There is no such thing as hereditary syphilis. Syphilis of this type is an infection acquired by the fetus from the mother. Many, many years ago before our modern conception of syphilis and when it was associated with degrading sin and mid-Victorian morality transcended the scientific and practical mind, some idiot brought forth Biblical quotations to

show that families were *tainted with syphilis* "The sins of the fathers will be visited unto the sons even to the fourth generation" was whispered from mouth to ear over the whole community. The use of the word 'fathers' has held on in the minds of many and has brought about a familiar fear that is totally unwarranted. The old law about congenital syphilis still holds true: The father may have syphilis and the child be normal, but the child will probably have syphilis if the mother has syphilis. The mother may acquire syphilis from the father in its active form but not from the spermatozoa or semen. Recent attempts to inoculate rabbits with syphilis from semen of men known to be syphilitic have failed. It is not infrequent that a father and good husband may have cerebrospinal syphilis acquired previous to marriage, and it behooves the physician to handle the remainder of the family with extreme delicacy.

Due probably to the general increase in good antisyphilitic treatment, we are observing and less of the late gummatous type of cutaneous syphilis. The present senior medical student will probably not see a single case. The gumma of the skin leaves a well marginated punched out ulceration caused by the gangrenous destruction of tissue in the intense blood vessel infiltration and thrombosis so characteristic of syphilis in any organ. Since the nerve endings are destroyed and sloughed off with the other tissue one of its chief characteristics is the lack of pain. The lack of pain even in a large sloughing ulcer seems to leave most of the patients altogether lacking in excitement or apprehension over their trouble. These late cutaneous lesions seem to be uncommonly grotesque in the conception and arrangement. They are serpiginous, cinctate or arciform in character and arranged in groups in areas curiously inaccessible to ordinary trauma. Their very appearance excites suspicion immediately. But the process does not occur all in one moment and so it is frequent to observe sloughing with granulation and scarring all in the same area as if the inflammation occurred in a regular sequence of events.

In these late lesions the blood Wassermann test is more often negative and if taken seriously the Wassermann is a hindrance to diagnosis. Since the syphilis is usually many years old, it is good diagnostic procedure to observe immediate improvement under treatment. A few doses of potassium iodide and mercury by mouth usually result in rapid healing and improvement. This, however, to repeat a warning, should never be done in early syphilis.

Since there is at this stage very little hope of cure and since the patient may have cardiovascular lesions or cerebrospinal lesions, it is eminently wise to treat almost exclusively with bismuth or mercury. But your patient is deserving of a complete physical examination, especially neurologic examination to rule out other manifestations of his disease. A spinal puncture here is as important as it is after the first year of treatment in the acute syphilitic.

In conclusion let me say that we are aware that the cutaneous manifestations of syphilis are only a mirror of the patient's deeper disease and that treatment and handling should be at all times for the patient and not his dermatologic manifestations. But we are also aware that the early diagnosis of his condition is mainly cutaneous and it is for this reason that we have stressed and repeated what is considered the better and modern methods of approach. In observing syphilitic patients here and there is in the last twelve years, we have been impressed so many times with the effect of the little things that all of us are liable to neglect. Some of these things come under the head of ordinary courtesy, tact, interest, sympathy, honest approach and explanation, a deep sense of consideration of patient's mental and moral make-up and an honest effort to help him out of his difficulties with his family, friends and above all with his conscience.

(The Journal of the Medical Association of Georgia, Feb. 1939.)

TREATMENT OF HEART FAILURE.

BY MR. GUNARATNAM COOKE, M.D.

It is not my intention to make a comprehensive survey of the detailed treatment of heart failure. I propose to deal with only one or two major aspects of the problem that concerns us in this country. As clinicians we are accustomed to two main varieties of heart failure.

1. The sudden acute failure in pneumonia and other acute infections.
2. The gradual failure in (a) chronic valvular disease, (b) myocardial degeneration.

DIGITALIS.

I do not want to discuss the familiar therapy by digitalis and other members of its group except to emphasise some of the general principles that should govern its administration.

As the result of prolonged storage in the tropics Tr. Digitalis is apt to lose its potency. Every care should be taken to keep it in completely filled and air tight bottles. The date of its preparation should be known.

Whatever preparation is used, it should be biologically active and standardised. It should be administered with an intelligent appreciation of its mode of action.

There are available, however, reliable proprietary preparations specially recommended for use in the tropics. I use exclusively Digifortis. It is desirable to use always the same proprietary preparation whose degree of potency the physician has become quite familiar with. Pandigal is well spoken of and appears to have a special attraction of the drop bottle in which it is supplied. I have an aversion for drop bottles for, one drop is not always one minim. It varies in quantity according to the angle at which the bottle is held, the rate of the drops, sometimes a difference of 10 to 15 minims in one drachm. In hospital practice it is an advantage to be able to add the required dosage of digitalis into the mixture at the time of administration.

Patients should never be relied upon to add the digitalis for themselves. A minim measuring glass should always be insisted upon if the digitalis is to be added for the mixture at the time of administration.

DOSAGE.

Although digitalis has been used by physicians for more than 100 years, it is probably the most abused drug in the practice of medicine. There is always a reflex urge to prescribe it in every case of heart disease even without a proper indication. The dose of digitalis depends on the urgency of the case, the degree of failure and the amount of digitalis the patient has already taken.

The dosage should be so graded as to bring the patient under the maximum influence of the drug within a safe period.—Digitalisation as distinct from digitalis intoxication.

I work on the rule of one minim for every pound weight of the patient, making due allowance for the oedema. This is a very rough method but serves as a very useful guide.

Allowing 120 lbs. as an average weight of an adult in Ceylon, I do not exceed 120 minims in the first 24 hours. The 1st dose is half the total weight...60 minims. It takes 6 hours for any quantity of digitalis to have its full effect and therefore big doses like the above are not repeated till the full 6 hours have elapsed.

The 2nd dose is half the 1st...30 minims.

The 3rd dose is half the 2nd...15 minims.

The 4th or last dose in the same...15 minims as the above.

It has been reckoned that an adult patient can metabolise and excrete 22 minims or thereabouts in 24 hours, so that during the period after full digitalisation, not more than that amount should be given as a maintenance dose if it is intended to avoid any cumulative effect. Careful enquiry regarding digitalis already taken should always be made before initiating a new regime, because it is well known that almost every heart failure patient had already been treated with digitalis. No hard and fast rules can be laid down for the dosage of digitalis. It is entirely a matter for the judgment of

the attending physician, depending on the patients response to treatment.

TOXIC EFFECT.

Apart from the ordinary anorexia, vomiting, diarrhoea, coupled beats, and partial or complete heart block, there is one other manifestation which has been prominent in some of my cases. Patients become restless, very irritable and insist on leaving hospital. Some of them become maniacal and end in a stupor followed by death.

I do not wish to leave digitalis therapy without reading to you one or two oft repeated quotations.

"There is nothing more spectacular in the whole range of clinical medicine than the response of a decompensated heart with auricular fibrillation to digitalis properly administered. The pulse rate is slowed. The strength of the ventricular contraction is increased, flow of urine is established, edema, dyspnoea and cyanosis disappear; in short compensation is re-established and a patient's life is saved." There is another one.—"Digitalis treatment is one of the most important and serious duties of the general practitioner; it demands a great deal of skill, power of observation, keen interest and experience. *A long life is too short* to learn enough about this wonderful drug."

"It is *as important* to know when to stop the drug as it is to know when to give it."

ADMINISTRATION OF OXYGEN.

There is no question of the inestimable value of oxygen properly administered in heart failure both in the acute and chronic forms.

Oxygen is now more frequently given, at the proper time and by the proper method. In the recent past, and even now, in some places, the mention of oxygen was a death blow both to the patient and to the relatives. As soon as the doctor suggests oxygen, it is soon whispered in every part of the house and outside that oxygen has been ordered and arrangements are then quietly made for the funeral.

In fact the oxygen cylinder has always appeared to be the forerunner of the undertaker.

This practice is now changing and oxygen is ordered very early in pneumonia and patients welcome it at that early stage and when in the later stages it is required to push the oxygen, the patient has learnt how to inhale it and obtains the full benefit from it.

VENESECTION.

This ancient therapeutic procedure has been too often neglected. I specially mention this because I believe that sufficient prominence is not given to this invaluable method of relieving cyanosis and other back pressure effects chiefly pulmonary edema. Furthermore, when blood letting is done, sufficient blood is not removed. Although the cyanosis is marked and the veins stand out prominently the

blood does not run out freely. This is due mainly to two reasons: (1) The pressure in the vein is not sufficient to squirt the blood out, and (2) The needle is not big enough. To overcome the above I have sometimes used a large lumbar puncture needle with remarkable success. The stillette is of help in cleaning any clot that may form. The blood runs out better if the needle is pointed towards the hand, a reasonable manipulation, to let the blood out in the direction of its flow. The rubber band of a blood pressure apparatus is much more effective and is better controlled than the ordinary India rubber tube indifferently applied round the arm.

REMOVAL OF EDEMA.

A great deal of the distress of heart failure is the extreme edema that collects in the dependant parts of the body, in the legs, around the genitalia, in the pleural cavity and the abdomen. Patients are thankful when the swelling subsides and the physician is pleased with this success that attends his treatment. Apart from rest, restriction of fluid intake, purgation, paracentesis, there is a further very useful method by diuresis as an additional aid in the removal of the edema.

Salyrgan is an organic salt of mercury and is a 10% solution of a mercurial compound of sodium salicylate, amino acetate in a 5% theophyllin solution.

Patients who were unrecognisable owing to the edema have within a few days lost more than half their weight.

This drug is similarly effective in the edema and ascites of cirrhosis of the liver.

Salyrgan has been a great boon in the last few years as a safe and effective diuretic in intractable congestive failure—(It is an advance of the giving of calomel by mouth as in Guy's or Addison's pill. Mercury was accidentally discovered as a powerful diuretic when given intravenously to a syphilitic patient with oedema). One of the original preparations was *Novasurol*. This was found less effective and more toxic. *Salyrgan* has undoubtedly saved many patients.

MODE OF ADMINISTRATION.

Preliminary—It is necessary to increase slightly the PH concentration of the blood. Ammonium chloride or better the nitrate gr. xx four hourly for 6 doses is given in orange water prior to the giving of *salyrgan*.

ROUTE AND DOSAGE.

Intramuscular 1 to 2 c.c.

Intravenous $\frac{1}{2}$ to 1 c.c.

Intraperitoneal 2 to 4 c.c.

The subcutaneous route is never employed. The intramuscular route is the method of choice. In urgent cases I have given it intravenously after diluting the 1 c.c. dose with 10 c.c. of saline.

Considerable care should be taken not to spill any of the drug into the tissues around the vein or subcutaneously. There is severe pain and sometimes destruction of tissues if any leak occurs.

When there is much ascites I have injected the drug intraperitoneally after paracentesis and diluting the salyrgan with the ascitic fluid. Within the next 24 hours the patient passes large quantities of urine and the edema quickly subsides. The injection should be given early in the morning to avoid disturbance at night. After an interval of a week the injection is repeated. Three to six injections are sufficient to remove all the edema.

CONTRAINDICATION.

Only one—nephritis showing albumen, blood or granular casts in the urine.

REST.

I have left this to the last but it is by no means the least important. Rest is a very elastic term especially in Ceylon. Rest, as it is understood in the Western countries, cannot be strictly enforced in Ceylon. It is the patient and not the doctor who interprets the meaning of the word 'rest.' There is an oriental aversion to using the bed pan. In fact when ordered to use it, I found an orthodox Hindu using it in the bath-room.

The rule of absolute rest in bed need not be strictly enforced. Due allowance should be made for religious prejudices and national customs in those cases of heart failure where such relaxation of the rule can be safely made.

I believe that the getting out of bed and sitting in an easy chair improve the peripheral circulation; and a little exercise, massage and bandaging of the limbs help to dispel the edema.

DIET.

Let them eat what they like. Restrict the fluids in severe edema. A urine chart like a temperature chart stimulates the patient's interest in the progress of his case.

(*Journal of Ceylon Branch of B.M.A., Vol. XXXVI, No. 1.*)

Extracts.

ROENTGEN THERAPY FOR INFLAMMATORY CONDITIONS

A. U. Desjardins, M. D., Section on Therapeutic Radiology: The treatment of acute and chronic inflammations with roentgen rays dates back about thirty-five years. The idea of treating inflammatory lesions with roentgen rays arose from incidental observations made after diagnostic roentgen procedures, and from numerous experiments on animals the knowledge has evolved that many inflammatory conditions are amenable to irradiation. It is a remarkable tribute to the early workers in this field, notably Williams who published his results in 1902, Freund in 1897, Albers-Schonberg in 1897 and 1898, Oautier in 1897, Rudis-Jicinsky in 1898 and Pusey in 1900 that more recent investigations have served only to substantiate their observations. Between 1904 and 1910, the knowledge of the biologic action of roentgen rays was increased substantially and even though today that knowledge is far from complete, it is at least sufficient to give us some idea of the principal changes which follow irradiation and to enable us to understand many of the effects observed clinically.

The explanation of the fact that small doses of roentgen rays, judiciously arranged, have a beneficial and markedly constant effect on inflammatory conditions must rest on the correlation of experimental and clinical observations. It has long been recognized that a prominent feature of inflammation is leukocytic infiltration and that the degree of infiltration is dependent on the virulence of the infecting micro-organisms. The effects of irradiation on acute inflammations usually can be observed within a short time and when they are treated early, these effects consist of diminution in the pain and swelling, coincident with the beginning of resolution; on the other hand, when treatment is delayed, the analgesic effect of the rays likewise is delayed, but suppuration is hastened. These changes occur in about 75 per cent of cases; in the remaining 25 per cent, made up largely of those caused by streptococcal infection, no beneficial effects resulting directly from the irradiation can be observed.

The explanation of this chain of events is difficult until it is recalled that the leukocytes are the most radiosensitive of all cells, with the exception of the mucus secreting epithelial cells of the salivary glands, stomach, intestine and bronchi and of all the leukocytes, lymphocytes are most radiosensitive. When structures, made up largely of lymphocytes, are irradiated, a cycle of events that has been proved experimentally begins almost immediately. A certain proportion of the lymphocytes are destroyed, that portion being dependent on the dose of the rays. Although the remaining cells are not destroyed, their metabolic activity is impaired and it is not

until they recover their ability to multiply that some measure of regeneration takes place. Repeated irradiation at short intervals affects an increasing proportion of cells, and delays or stops regeneration. The changes that occur in the polymorphonuclear leukocytes and eosinophils in the circulating blood are similar to those observed in the lymphocytes, except that the effect is not perceptible for twelve or twenty-four hours, and a smaller proportion of cells are affected. Concomitant with the destruction of cells in an irradiated region an important step is the assumption of the role of phagocytosis by adjacent reticular cells, which play an important part in the phagocytosis of material from the destroyed cells.

After irradiation of lymphoid structures, fibrosis may appear if excessive dose are employed, but proliferation of the connective tissue cells is slow and the fibrosis is frequently masked by the more rapid proliferation of the unaffected lymphocytes. The leukocytes destroyed in the circulating blood liberate their enzymes and other contents and, of course, are not replaced by connective tissue.

One fundamental fact regarding the action of roentgen rays or radium on inflammatory conditions is that the rate at which so many acute inflammatory lesions respond to irradiation corresponds closely to the rate at which normal leukocytes are known to be affected by corresponding doses. It has been proved experimentally beyond a doubt that the destruction of leukocytes is the outstanding effect of irradiation in acute inflammations. The recent experiments of Soto, Brunschwig and Schlutz seem to belie this fact but, when their work is analyzed, it is found that they used rays generated at high voltage (200 kilovolts) with rather heavy filtration, whereas it is well known that rays generated at lower voltages (100 to 150 kilovolts) are more effective. Again, they usually gave a quantitative dose of about 600 roentgens when most workers have found that doses as small as 5 per cent or 10 per cent of skin tolerance are distinctly more effective than doses beyond this range. This may explain why Soto, Brunschwig and Schlutz did not observe the cellular changes previously reported by others.

When acute inflammations are subjected to roentgen rays or radium and leukocytes are destroyed, their enzymes and antibodies are liberated. It seems probable that the protective substances thus liberated are more effective than prior to irradiation when contained in the cells. There is no experimental evidence that irradiation increases the production of antibodies; on the contrary, the work of Hektoen and others indicates that formation of antibodies may be diminished.

Chronic inflammations are characterized by varying degrees of leukocytic infiltration, proliferation of connective tissue, necrosis, caseous degeneration, calcification or hyaline or amyloid change.

Cells which have undergone necrosis or calcification and the products of cellular degeneration cannot be influenced by the rays. Therefore, the only elements susceptible to roentgen rays in a chronic inflammatory lesion are the infiltrating leukocytes and the proliferating connective tissue, the relative proportions of which often vary considerably. When leukocytic infiltration preponderates over connective tissue favourable response to the rays should be greater and more rapid because leukocytes are exceptionally sensitive whereas connective tissue cells are relatively resistant. This is precisely what is seen clinically. When a lesion is of short duration, it is much more amenable to irradiation, probably because the infiltrating leukocytes have not been replaced to a great extent by connective tissue. On the other hand, when a chronic lesion contains a greater proportion of connective tissue, the effect of treatment is slower. This probably explains why, in chronic inflammatory lesions generally, larger doses of roentgen rays must be repeated at intervals for some time.

METHOD

If the considerations which have been set forth are as valid as they appear to be, what influence should they have on the method of irradiation? The conception of maximal dosage as applied to the treatment of tumors must be abandoned, for there is danger of inducing an inflammatory reaction which is independent of the lesion already present and may result in spreading the inflammation. Also, the experiments of Lacassagne and Vinzent have shown that, when inflammations are exposed to excessive doses of rays, sarcoma may develop in that region.

In acute inflammations, experience has shown that a single, small dose, 10 to 50 per cent of a skin erythema dose, is usually sufficient and yields the best result. Occasionally it may be necessary to repeat this after several days. The more acute the inflammation the smaller the dose usually required. An important point, which is sometimes ignored, is that a considerable zone of apparently normal tissue surrounding the lesion should be included in the irradiated field. This is particularly true when the infecting organism is one of great virulence, for leukocytic infiltration is frequently slight, and it is essential to have the rays act on leukocytes circulating in the blood in and about the lesion. For this reason, Kelly in treating gas bacillus infection has found it advantageous to use small doses and repeat them daily or twice daily for several days. As far as the quality of radiation is concerned, there seems to be little doubt that rays generated at 100 to 150 kilovolts and filtered through 4 or 6 mm. of aluminium or its equivalent are more effective than rays generated at 200 kilovolts or more. The greater absorption of rays of medium wavelength by the inflamed tissues is

probably responsible for the response to rays generated at 100 to 150 kilovolts.

In the treatment of chronic inflammations, larger, although still moderate, doses (50 to 80 per cent of the skin erythema dose) must be repeated at intervals to obtain a maximal effect. The intervals between treatments must be governed by the dose applied at each session and the number of treatments depends on the type of inflammation and its response to the treatment. An important consideration in the treatment of chronic inflammations is that treatment must not be discontinued too soon so that an otherwise good result is spoiled. Even after the lesion and its symptoms have disappeared, it is well to treat the patient once or twice more. This is particularly true in the treatment of tuberculous adenitis, peritonitis, arthritis and synovitis, for treatment resumed after apparent arrest of the inflammation frequently is not as effective as the initial course.

EXCRETION OF SULFANILAMIDE IN BREAST MILK: REPORT OF CASE.

F. P. Foster, M. D. Fellow in Medicine, The Mayo Foundation: Colebrook, Kenny and Purdie early demonstrated the efficacy of sulfanilamide compounds in the care of infections occurring in the puerperium. Marshall, Emerson and Cutting clearly demonstrated the widespread distribution of this drug in the tissues and fluids of the living organism and, in addition that it is excreted largely by the kidneys. Recently Stewart and his co-workers corroborated this work. Lee, Andersen and Chen have shown sulfanilamide to be present in the circulation and the amniotic fluid of the rabbit fetus in the uterus when the drug is given to the mother.

To my knowledge, the only previously reported work to date on the excretion of sulfanilamide in the breast milk is that of Hepburn, Paxon, and Rogers. An opportunity for brief study of this phenomenon was afforded us in two cases.

REPORT OF CASES.

Case 1.—A woman, aged thirty years, came to the Clinic five days after the delivery of her baby for treatment of parametritis. Treatment consisting of the oral administration of 60 grains (3.88 gm.) of neoprontosil (prontosil soluble) per day for five days was started. At the conclusion of this period, test of the blood for sulfanilamide revealed a concentration of 2.1 mg. per 100 c.c. The milk contained no sulfanilamide. Therapy was changed to 60 grains (3.88 gm.) of

sulfanilamide daily and at the end of three days the concentration of this drug in the blood was 4.3 mg. per 100 c.c. After three additional days of treatment the concentration of sulfanilamide in the blood was found to be 5.5 mg. per 100 c.c. and in the breast milk 2.8 mg. per 100 c.c. Dr. Osterberg made the determination of sulfanilamide.

Case 2.—A woman thirty-seven years old came to the Clinic seven days postpartum for repair of a vesicovaginal fistula. During her stay an infection of the urinary tract developed which was treated by the oral administration of 60 grains (3.88 gm.) of sulfanilamide daily for three days.

COMMENT.

The effect of the presence of this sulfanilamide in the breast milk in the nursing infant is unknown. The usual therapeutic dose of sulfanilamide for an infant one month old or less is considered to be from 7 to 14 grains (0.45 to 0.91 gm.) daily. Since the average doses in a course of sulfanilamide therapy given to the lactating mother would result in an intake of sulfanilamide by the child fed on her breast milk of not much more than 1 grain (0.06 gm.) daily; little can be expected in the therapeutic line from administration of this drug to the child by this method.

On the other hand, the possibility of toxic manifestations resulting from the ingestion of this milk must be considered carefully. Toxic manifestations of the drug by adults have been known and studied for several years. In the main, these are mild and do not warrant discontinuing the use of the drug. Certain extremely serious toxic manifestations occur, however. Chief among these is the development in a number of cases of acute agranulocytic angina. Two factors appear to be of importance in the production of this blood dyscrasia: (1) the quantity of the drug administered, (2) the period of time over which the drug is given. Since many infections occurring in the puerperium are obstinate and respond slowly to treatment, mothers who are nursing their infants might receive sulfanilamide for a period of several weeks. We believe that danger to the infant may be present through this circumstance.

FILARIASIS SPECIFIC CURE BY ROSBAY TREATMENT

(oral or injections)

of elephantiasis, lymph scrotum, chyluria, orchites, filarial fever etc., even of long duration. The only medicine hitherto successful. It does not contain antimony, arsenic or any vaccine except Tr. Rosebay and a rare element (radio-activity). Absolutely harmless. Thousands radically cured.

Apply for free literature to:—

THE ROSBAY CLINIC,
271, Chittaranjan Avenue (North), CALCUTTA.

Correspondence.

CENTRAL ADVISORY BOARD OF HEALTH.

CIRCULAR NO. 1 OF 1939.

The Cholera Danger in India.

Value of Inoculation.

Necessity for using only Genuine Vaccine.

The increase in the incidence of cholera in a number of provinces and States during 1938 has been a subject of serious concern to nearly all public health departments in India and it is not surprising that the subject came under exhaustive discussion at the Medical Research Conference held in Delhi in December and at the second meeting of the Central Advisory Board of Health in Madras in January. In 1938 the recorded attacks and deaths from cholera in British India totalled approximately 3,23,243 and 1,58,010 respectively, the worst affected provinces having been the United Provinces with 70,000 cases and 34,000 deaths, the Central Provinces with 94,000 cases and 43,000 deaths and Bengal with 86,000 cases and 45,000 deaths. The Punjab reported 8,600 cases and 4,600 deaths during the same period.

The value of inoculation against cholera is now generally recognised and the number of inoculation carried out in India shows a large regular increase over the last few years. Recent research work under the Indian Research Fund Association has thrown considerable new light on the nature of the cholera organism. It has been shown that there are in nature many organism which resemble the cholera organism but do not cause the disease. It is, therefore, of the greatest importance that the vaccine used for protection against cholera should be prepared from the genuine cholera organism. The Central Advisory Board of Health at its meeting in January recommended that this fact should be made widely known throughout India, not alone to health officers, medical officers and private medical practitioners but also to the general public.

The Cholera Advisory Committee of the Indian Research Fund Association considered the question of the sources of supply and the nature of anti-cholera vaccines used in the several provinces in India. The vaccines used in the different provinces are obtained from (a) laboratories under the control of the Central and Provincial Governments or their public health departments, and (b) commercial firms. Examinations which have been carried out on cholera vaccines available in the market in India during the last 18 months have indicated that in certain cases these vaccines have not been

prepared from the strains of the true organism. The view of the Cholera Advisory Committee, which was accepted by the Medical Research Conference, is that no protection against cholera can be expected from the use of such vaccines.

It is by no means certain that those engaged in the manufacture of anti-cholera vaccines are all sufficiently acquainted with recent bacteriological findings. At the same time it would be disastrous if the people of India lost their belief in the value of anti-cholera inoculations. It is, therefore, the duty of all health officers, medical officers and private practitioners to ensure that the cholera vaccine they use possesses a high protective value. With that object they should assure themselves that it is manufactured from a suitable strain of organism in accordance with the recommendations made in 1936 by the Cholera Advisory Committee regarding the technique of manufacture of cholera vaccine and the strains to be used.

For the purpose of ensuring that the vaccine is made from correct strains, it is recommended that those employed in the manufacture of the vaccine in India should be strains tested and issued by certain specified laboratories which have been continuously engaged in the study of the cholera vibrio. The Directors of the Central Research Institute, Kasauli, the Calcutta School of Tropical Medicine and the King Institute, Guindy, have expressed their willingness to issue suitable strains to all laboratories, including those of commercial firms, for this purpose. Copies of the recommendation made by the Cholera Advisory Committee in 1936 can be obtained from the Office of the Public Health Commissioner with the Government of India.

A. J. H. RUSSELL,
COLONEL, I.M.S.,

*Public Health Commissioner with the
Government of India and Secretary,
Central Advisory Board of Health.*

NEW DELHI,
21st March, 1939.

Medical News and Notes.

GLUCOSE-D. ANNOUNCEMENT OF PRICE REDUCTION

Glucose therapy is now made more widely available by the 20 per cent reduction recently announced by Glaxo Laboratories Ltd. This welcome step now makes it possible to prescribe the treatment for the patient previously debarred by limited income.

Medicinal glucose is frequently prescribed for a wide range of conditions in which easily assimilable and energising nourishment in liquid form is required. Modern views on glucose therapy, however, agree that when reinforced with calcium and vitamin D, (as in Glucose-D), the treatment becomes even more valuable. It is claimed that while the glucose itself is given for its energy-promoting function, the calcium and vitamin D are necessary in certain conditions to improve neuro-muscular tone of the myocardium and the whole system generally. "The common cardiac disturbances are intimately related to faulty nutrition of the heart muscle", states Martin in his book "Dextrose Therapy" and he goes on to say further that "the heart, like skeletal muscle, derives much of its energy for contraction from the break down of glycogen. Inadequate supply of dextrose to the heart eventually produces deleterious effects upon cardiac action."

In ketosis, too, the vitamin D plays its part. In this condition, when a low fat diet is often necessary for long periods, the patient is subjected to the risk of fat-soluble vitamin deficiency. The vitamin D in Glucose-D compensates for this deficiency of the calcium-regulating factor. It is thus possible to keep patients on a low fat diet, without producing symptoms of deranged calcium and phosphorus metabolism.

In anorexia, glucose is frequently the only food that the patient can be persuaded to take in large quantities. In this condition, it serves both as a food and as an energy source which makes no tax on the digestive system. Glucose replenishes the glycogen reserves of the liver, eliminates 'starvation' ketosis and spares the patient's own body proteins-for, as Martin points out "dextrose itself exhibits a greater protective action on the proteins than other simple sugars and their derivatives."

In the treatment of cardiac disease, Glucose-D supplies the heart muscle with the most easily combustible fuel. Particularly does this apply when, owing to impaired circulation, the absorption of ordinary food from the bowel is incomplete, the products of digestion being inefficiently carried to the myocardium and other tissues. In the severe myocarditis of diphtheria, too, glucose therapy has been advocated.

Glucose is sometimes used as a prophylactic against overstrain and fatigue in adults and children, particularly when training for athletics or studying for examinations. In still another sphere, its administration in conditions of hepatic insufficiency has been found of some value, both in conditions associated with acute hepatitis (e.g. toxæmia of pregnancy or poisoning by chemicals) and in such chronic hepatic disorders as cirrhosis.

As a pre-operative routine, glucose may be taken several days before the operation, and in specially large doses on the day of operation. Apart from the possibility of disturbed liver function due to the anesthetic at such times, the nervous excitement may result in depletion of the patient's glycogen reserves. Glucose-D is a suitable form of glucose for this purpose.

Practitioners have long known three very important factors that hinder recovery in fevers. First, anorexia makes the patient reject food. Secondly, the patient may be handicapped by the accumulation in the tissues of the intermediate products of fat metabolism. Thirdly, toxic myocarditis is liable to cause death from heart failure before specific treatment has a chance to become effective. For these reasons Glucose-D, supplying a balanced combination of glucose, calcium glycerophosphate and vitamin D, acts as an immediate antidote to ketosis, as a support to the flagging heart and as a source of assimilable nourishment. We are informed that this Glaxo Laboratories' product is, incidentally, the only glucose with calcium glycerophosphate and Ostelin vitamin D.

MALABAR MEDICAL ASSOCIATION

A meeting of the Malabar District Medical Association was held on 12th June 1939 in the Government Headquarters Hospital, with Dr. K. R. Menon, President, in the chair, when Dr. C. K. Menon, spoke on "Pleurisy with Effusion". Dr M. Krishnan was "At Home" to the members.

The meeting passed a resolution requesting the Government to permit the registered medical practitioners to keep a certain quantity of "Cannabis Indica" without licence.

Dr. C. Chintan Nair, who has been transferred to Madras was also given a farewell by the members.

With a vote of thanks proposed by Dr. C. V. Narayana Aiyar, the Secretary, the meeting terminated.

MEDICAL DIRECTORY.*

- Dr. Mrs. S. Achar, M. B. B. S., D. G. O.
No. 1/385, Mint St. G. T. Madras.
- Dr. S. Ramaswamy, M. B. B. S.,
No. 31, Anna Pillai St. G. T. Madras.
- Dr. Miss. A. Rukmaniamma, L. M. P.,
No. 1, Ramakrishnan St., G. T. Madras.
- Dr. Miss. M. P. Smith, L. M. P.,
No. 124, Govindappa Naick St. G. T. Madras.
- Dr. S. Jesudasan, M. B. Ch. B. (Edin.),
No. 98, Broadway, G. T. Madras.
- Dr. C. J. Siva Rao, M. B. B. S.,
No. 131, Broadway, G. T. Madras.
- Dr. B. Venkat Rao, L. M. P.,
No. 145, Broadway, G. T. Madras.
- Dr. T. S. Subramanyam, M. B. B. S.,
F. R. F. P. S., (Glas.) D. T. M. & D. T. H.
(Liverpool,) No. 144, Broadway, G. T. Madras.
- Dr. U. L. Narayan Rao, L. M. P.,
No. 494, Mint St., P. T. Madras.
- Dr. V. Govindarajan, M. B. B. S.,
No. 71, Mulla Sahib St., G. T. Madras.
- Dr. P. N. Ramachandra Setty, M. B. B. S.,
No. 31, Narayan Mudali St., G. T. Madras.
- Dr. Miss P. P. Mythily, L. M. P.
No. 141, Anna Pillai St., G. T. Madras.
- Dr. S. Chakravarthy, M. B. B. S.,
No. 83, Govindappa Naick St., G. T. Madras.
- Dr. P. Alagasingam Naidu, L. M. & S.
No. 72, Acharappan St., G. T. Madras.
- Dr. A. M. Daivasigamani, L. M. P.
No. 117, Broadway, G. T. Madras.
- Dr. P. S. Kuppuswamy, M. B. B. S.,
No. 1136, Broadway, G. T. Madras.
- Dr. A. Shiva Rao, L. M. P.
No. 2, Jones Lane, G. T. Madras.
- Dr. T. G. Bhagavat, L. R. C. P. & S. (Edin.),
L. R. F. P. S. (Glas.), No. 188, Govindappa
Naick St., G. T. Madras.
- Dr. K. Rama Rao, M. B. B. S.,
No. 494, Mint St., P. T. Madras.
- Dr. U. V. Rao, L. M. & S.,
No. 144, China Bazar Road, Madras.

(Continued from May 1939 issue of the Journal).

DIABETES VITALITY & ASTHMA

I am to-day conducting the largest individual, Diabetes Vitality & Asthma practice in the whole of India. I am prepared to work in co-operation with qualified medical men.

Literature Posted Free.

DR. JEAN F. STRANDGARD,
SPECIALIST, BANGALORE.
Late of BERLIN and VIENNA.

THE MOST RECENT ADVANCE IN THE
TREATMENT OF SYPHILIS

THIO-SARMINE

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

Purest Sulpharsenobenzene Compound
Prepared for the first time in India

LOW TOXICITY
CHEAPEST IN PRICE
POWERFUL SPECIFIC

In the Treatment of Syphilis
In all stages of the Disease
WITHIN THE SHORTEST TIME

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

THE
Brahmachari Research Institute
82/3, Cornwallis St., P. O. Shambazar,
CALCUTTA

Reach the
Medical
Profession
EVERY MONTH
By Advertising

IN

Medico-Surgical
Suggestions.

THE INDIAN MEDICAL SERVICE LIST

is published quarterly, in March,
June, September and December
of each year. Contains, names,
postings, salaries of members of
the I. M. S. Health Departments.

Names and addresses and phone
numbers of practising physicians
and surgeons in Calcutta and a
few select medical articles.

Rates for advertisement on
application.

Subscription Rs. 4-0-0 per annum,
payable in advance.

Apply, Manager :—

Indian Medical Service List,
15 Dharamtola Street, CALCUTTA.

When ordering please mention Medico-Surgical Suggestions.

Liver Cure

(REGISTERED.)

AN EFFECTIVE REMEDY

For Infantile Liver & Spleen Complaints

Acclaimed as the best for

Infantile Cirrhosis of liver

Enquire Particulars:

JAMMI VENKATARAMANAYYA,

Liver & Spleen Specialist,

8, Salai Street, Mylapore, Madras.

THE INDIAN & EASTERN CHEMIST

The only Journal catering exclusively for the Drug and Allied Trades in Eastern Markets.

**5, MISSION ROW,
P. O. Box, 2349, Calcutta.**

Subscription 7/6 (Rs. 5) per annum post free. Specimen copy free on application.

Advertisement rates sent on request.

Indian & Eastern Chemist

Published by
LEONARD HILL LIMITED
17, Stratford Place, London W. 1.
ENGLAND

Calcutta Medical Review

A Record of Medicine Surgery,
Public Health and Medical News
Indian & Foreign.

Edited under a strong Editorial Board

Annual Subscription:—

Inland Rs. 5-0-0 Foreign 12 sh.
The most widely circulated monthly
Medical Journal in India, Burma,
Ceylon & Abroad.

**Best Medium for Advertisement of
Medical and Scientific Articles**

Sample copy sent on request free of charge.

For rates etc., apply to:

**The Manager,
CALCUTTA MEDICAL REVIEW,
226-C, Bowbazaar St., Calcutta.
Phone B. B. 3332.**

Calcutta Medical Journal

**Journal of the
Calcutta Medical Club**

**A MONTHLY RECORD OF THE
MEDICAL SCIENCES AS
APPLIED TO THE TROPICS**

Annual Subscription :

In India : **Rs. 9.** (For Junior Practitioners **Rs. 5.**) Foreign **18 shillings,**
\$ 4 00 R. M. 12

**THE BEST MEDIUM FOR
ADVERTISEMENTS**

**Specimen Copy and Contract
Rates on Application.**

Editorial & Publishing Offices at
**91B, Chittaranjan Avenue,
Calcutta, INDIA.**

THE PATNA JOURNAL OF MEDICINE

*Published under the auspices of the
PATNA MEDICAL ASSOCIATION*

*Editor: Mr. M. Husnain,
M.B. (Cal.), D.L.O. (Lond.), D.O.M.S.
(Lond.), F.R.C.S. (Edin.)*

*Associate Editor: B. Narayana,
M. Sc., M.B. (Cal.), Ph. D. (Edin.),
F.R.S.E.*

*With an Editorial Board Consisting
of Eminent Members of the
Profession*

Circulated in all parts of the World.

Subscription rates inclusive of postage

INLAND.	FOREIGN.
Per Copy Re. 1-0-0.	sh. 1/6.
Annual Rs. 3-0-0.	sh. 4/6.

*Best Medium of Advertisement for
Medical, Surgical & Scientific Products,
Instruments and appliances,
etc., etc.,*

For further particulars apply to :
THE MANAGER,

Patna Journal of Medicine
P. O. Bankipour, Patna.

TWO SOVEREIGN AYURVEDIC REMEDIES.

For Combatting Leucorrhoea and Gonorrhoea.

ASHOKARISTA.

Liquid Extract of Ashoka etc.

This wonderful Arista containing the active principles of Ashoka bark and other powerful drugs is the well-known remedy in all cases of female disease, such as painful menstruation, excessive flow of blood, sterility, deficient growth in females, late appearance of the menopause, and such other concomitant symptoms, commonly known as "female ills." It is a very reliable tonic for administration to the ladies after child birth, as it improves appetite and the bowels, brings the generative organs to their normal conditions, induces healthy secretion of milk and brightens up the health. Price 8 oz. bottle, Rs. 1-8. 12 bottles, Rs. 15. Postage and Packing extra.

CHANDANASAVA.

It is a preparation of Chandana or Sandalwood along with various other drugs useful in urinary complaints. In acute or chronic Gonorrhoea, with its attendant symptoms, such as chordee, gleet, stricture, etc., in all its stages, it can safely and effectively be administered and has a powerful curative virtue. It cools the brain, improves the condition of the vital fluid induces refreshing sleep and is a very ready weapon in the hands of medical men to effectively fight diseases of the urethral canal. Price 8 oz. bottle, Rs. 2. 12 bottles, Rs. 18. Postage Packing extra.

To be had of:—

**Phone:—1090.
Calcutta.**

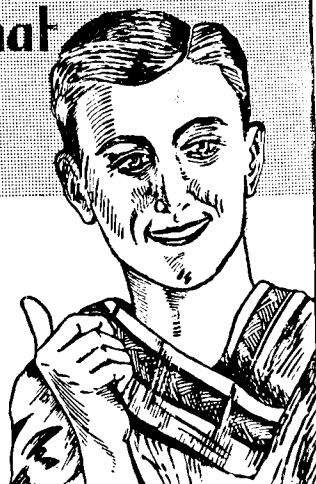
**Bisharad's Ayurvedic Laboratory,
14 Taltola Avenue, CALCUTTA.**

When ordering please mention Medico Surgical Suggestions.

When ordering please mention Medico-Surgical Suggestions.

**Here's the Tonic that
puts life into you**

When you are feeling weak, run-down and find life a burden, it is a sign that your nerves need toning up, and for toning up your entire nervous system and putting new life and new energy into you, there is nothing like JEEVAMRUTHAM. For nearly 38 years JEEVAMRUTHAM has brought hope to those who considered themselves hopeless.



JEEVAMRUTHAM

THE BEST OF ALL NERVE & BRAIN TONICS
AYURVEDASRAMAM (ESTD. 1898) MADRAS

Hope dawns
there for them.
No more worry with a child
suffering from Spleen and Liver
complaints.

BALA BHASKARA
removes Infantile Liver
and Spleen Disorders.

AYURVEDASRAMAM ESTD. 1898 MADRAS

When ordering please mention *Medico-Surgical Suggestions*.

IMPORTANT

The Journal is published on the last day of every month.

First advertising forms go to press **three weeks in advance** of the date of issue.

Copy must be sent in time (*i.e. on the first week of every month*) for setting up advertisements and for correcting proof.

Unless distinctly instructed to the contrary the same advertisements of an advertiser will be continued from month to month till the contract is over.

ADVERTISING DEPARTMENT:

Medico-Surgical Suggestions,

179, Mint Street, Madras, India.

Dr. RAYAS'

House-Hold Remedies:

Pain Balm. This is a genuine remedy for Head-ache, Rheumatism, Neuralgia, Chest-pain, Cough, Sprain etc.

Itch Cure. A reliable remedy for all sorts of Itch, Eczema and other skin affections.

Wanted Agents in Every Town.

Sample on request.

Manufacturers:

THE RAYAS PHARMACY,

179, Mint Street, Sowcarpet,

MADRAS.

When ordering please mention *Medico-Surgical Suggestions*.

"OPACITINE" (Rgd.) is a sure, definite, guaranteed, cent, per cent sovereign remedy against any kind of Corneal opacity (a Nabula, a Macula or even a Leucoma) of any size, shape and duration whatsoever. It is useful in Chronic Trachoma, Belptheritis, Pterygium etc., etc. It has succeeded where yellow ointment, Dionine and other artificial Dyes of the Opacity have given way. Tried by vaidis, Hakims, Doctors and Eminent Eye Specialists of India and abroad and is used by more than 17,000 people for more than 20 years.

● DOCTORS
call it
A "MIRACLE."

Agents Wanted

Apply for full
particulars and
Literature (not
samples) to:—

"OPACITINE" (Rgd.)

● Try once and
be convinced.

Guarantee:—Manufacturers guarantee
to refund the full money in case of non-efficiency.

Price:—Large Phial ... Rs. 10 Sh. 20
Medium Phial ... " 5 " 10
Small Phial ... " 2.8 " 5

Correspondence against 1½ Anna stamps.) Packing &
(Special discount to Medical Profession.) Postage etc.

S. KRISHNA LABORATORIES, (Rgd.)

103, Railway Road, PASRUR, Dist. Sialkote. (Pb.)

JOURNAL OF THE INDIAN MEDICAL ASSOCIATION

EDITED BY

SIR NILRATAN SIRCAR, KT., M.A., M.D., D.C.L., ETC.

WITH THE HELP OF

A STRONG ALL-INDIA EDITORIAL BOARD

The Official Monthly Publication of the Indian Medical Association.

FEATURES

1. Original Articles.
2. Case-Reports.
3. Society Proceedings.
4. Valuable abstracts from leading Medical Journals from all over the world.

Published on the First Day of the Month

Annual Subscription: Rs. 6/- post free

Free to members of the Indian Medical Association

AN EXCELLENT MEDIUM FOR ADVERTISEMENT

*For particulars, write to Secretary,
Samayaya Mansions, Calcutta.*