

The Madras Medical College
Magazine
V-VI
No-3
January, 1928



JL
L, H, M, H, N22
N28.7.3.
142 897

JL
L, 211, N22
N28. 4.3
142897

Telegram:—"ASVIN"

Established 1902

Telephone No. 2697



Dispensing Chemists, Wholesale Druggists and Agents, Suppliers to the State, Mission and Government Hospitals.

Sole Agents:—

THE ABBOTT ALKALOID CO., Chicago, U. S. A.

THE BACTRO-CLINICAL LABORATORY LTD., Calcutta,

THE CHEMICAL WORKS OF GEDEON RICHTER, Budapest.

(Glandular Products)

DASTOOR SPECIFIC CO., Bombay.

THE FRENCH REMEDIES CO., Canada.

Representatives:—

J. & H. LIEBERG, Kassel

H. A. SIERAU & CO., Hamburg

T. J. SMITH & NEPHEW LTD., Hull

STAFFORD ALLEN & SONS., LTD., LONDON

PASEELA

An indispensable remedy for Wounds, Cuts, Burns, Ringworm and Diabetic Carbuncles.

174, BROADWAY MADRAS.

When writing to advertisers, please mention this Magazine.

All Organotherapeutical Preparations

REQUIRED IN MODERN THERAPY!

TABLETS EXTRACTS FOR INJECTION SUBSTANCES

RICHTER'S	Corpus luteum
ADRENALIN.	Orchitic
natural, made from	Ovary
Suprarenals	Parathyroid.
	Thyroid

Most efficacious remedies for the treatment of
SEXUAL NEURASTHENIA (impotence)

New Antisymphilitics!

BISMOSALVAN **NEOBISMOSALVAN**

Painless!

Sure Effect!

Reliable quality!

Advantageous Prices!

Apply for samples and special offer to:

Chemical Works of Gedeon Richter, Ltd., Budapest X., Hungary

Sole Agents for Madras Presidency:—

Messrs. ASVIN & Co., 174. Broadway Madras.

When writing to advertisers, please mention this Magazine.

AMERICAN APOTHECARIES COMPANY

299 ELY AVENUE

LONG ISLAND CITY, NEW YORK

VESICAL AND URETHRAL DISORDERS.

The diuretic and alkalinizing action of Salvite induces a distinct and liberal flushing of the urinary tract by means of an increased flow of kidney secretion of diminished acidity. As the various ingredients of Salvite are largely excreted through the urinary organs, their soothing, emollient and antiseptic action is exerted upon the inflamed or congested mucosa. The selective antiseptic activity of the formalde-hyde derivatives positively tends to prevent the decomposition of urine in the bladder which would otherwise create considerable irritation and vesical distress.

Salvitae is thus of positive service in the treatment of.—

Cystitis and Urethritis, whether or not purely congestive in character or due primarily to gonorrheal or other venereal infection, Pyuria, Prostatic Enlargement, etc.

Gonorrhea is promptly benefited by the administration of Salvitae. It reduces the hyperacidity of the urine, renders it antiseptic and thus allays the local pain and irritation incident to micturition, and, at the same time, tends to inhibit the development of gonococci.

Sole Agents for India:—Muller Maclean & Co.,

Bombay, 118, Gunbow St., Fort.

Calcutta 8, Old Court House Corner.

When writing to advertisers, please mention this Magazine.

Sporting Goods Manufacturers

We specialize in Tennis, Hockey, Football,
Cricket, Badminton, Indoor Games, etc., etc.
Our Goods have a Reputation built on Quality.

Rates Very Moderate

Try us once and you will be convinced
For full particulars of our most reliable and
popular sports goods refer to our catalogue
which is sent free on request.

Just drop a card to

SHARMAN & CO.,

Wallajah Road, Mount Road,
MADRAS.

When writing to advertisers, please mention this Magazine.

SALVITAE

FAULTY METABOLISM

When metabolism,—the conversion of food into vital force is disturbed, there is an excessive accumulation of uric acid and urates in the blood stream and tissues.

Gout, rheumatism, recurrent migraine, hepatic engorgement, constipation, lassitude, pyorrhea alveolaris and kindred manifestations of the retention of waste substances form the chief indications for Salvitae.

SALVITAE

Salvitae increases the alkalinity and uric solvent power of the blood; prevents the over-production of nitrogenized materials; augments the elimination of effete substances; invigorates capillary circulation; stimulates renal activity; promotes biliary secretion; dispels languor and creates a state of general well-being.

Samples and literature to the medical profession on application to Sole Agents.

Manufactured by the **AMERICAN APOTHECARIES CO, NEW YORK.**
Agents for India—

Muller, Maclean & Co.,
Bombay, 118 Gunbow Street, Fort.
Calcutta, 8 Old Court House Corner.

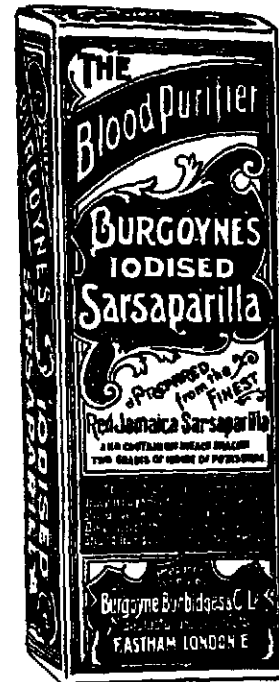
When writing to advertisers, please mention this Magazine.

BURGOYNE'S

IODISED SARASAPARILLA

Pure Blood means good health. A host of ills and diseases arise from an impure condition of the blood, resulting in a feeling of lassitude, disinclination for wit or pleasure, and lack of interest in life generally. Pimples, sores, blotches, ulcers, rashes, ulcerated surfaces, eczema, glandular swellings, abscesses, and scurvy are all manifestations of blood impurity.

Avoid or correct these disorders of the blood by taking Burgoyne's iodised Sarsaparilla. Thousands testify to its remarkable healing properties, cleanses the blood of all impurities and restores a healthy condition to the skin. You want the best, so be sure you ask for Burgoyne's and get it.



BURGOYNE'S Fruit Saline



BURGOYNE FOR PURITY

Overcome errors of diet which choke up the system, lead to constipation, fermentation in the stomach, and an impure state of the blood by the regular use of BURGOYNE'S FRUIT SALINE. Get that feeling of fitness and vigour which is characteristic of the clean and healthy system. Burgoyne's Fruit Saline keeps you fit and well.

Look for the
Trade Mark.



It represents
180 years' all
reputation for
purity and
reliability. India.

**BURGOYNE BURBIDGES & CO., Limited,
EAST HAM, LONDON.**

Agents for the Presidency:—

THE SOUTH INDIAN MERCANTILE CO.,
Post Box No. 505, P. T., Madras.

When writing to advertisers, please mention this Magazine.

THE MADRAS MEDICAL COLLEGE MAGAZINE

Vol. VII

January, 1928

No. 3

CONTENTS

	PAGE
The Delegates of the Far Eastern Association	Frontispiece
1. HODGKIN'S DISEASE	171
By T. Bhaskar Menon, M. B., M. R. C. P., (Lon)	
2. DIAGNOSIS AND TREATMENT OF SPLENIC ENLARGEMENT IN CHILDREN	185
By Captain P. N. Basu, M. B., M. R. C. P., D. P. H., I. M. S.	
3. THOUGHTS ON PEPTIC ULCERS	194
By A. R. Poduval, M. B. C. M., M. R. C. S., L. R. C. P.	
4. HYDROPHOBIA & PHENOL TREATMENT	201
By Drs. G. V. Subba Rao, L. M. & S., & C. Satyanarayana Rao, L. M. P.	
5. DEVELOPMENT OF LEISHMAN-DONOVAN BODIES IN THE SAND-FLY. (Phlebotomus Argentipes).	204
By T. K. Raman, M. D., D. T. M., (Cal.)	
6. CASE REPORTS	
1. A Case of Cerebral Malaria	208
By V. Iswariah B. A., M. B. & B. S.	
2. A case of Intrathoracic Tumour	210
By V. Seshagiri Rao, B. A., M. B. & B. S.	
3. A Case of Ruptured Uterus	213
By L. Seshadrinathan.	
7. CURRENT MEDICAL LITERATURE	
Oil of Turpentine in Lobar Pneumonia	219
Experimental Oriental Sore	219
Blood Regeneration in Severe Anæmia	220
Parasitic Infection of the Urinary Tract	220
Moderate Quinine Dosage in Malaria	221
New Method of Treating Postoperative or Postpartum Retention of Urine	221

	PAGE
Sleeping Sickness	... 222
Electrocuting Bacteria in Milk	... 222
Blindness Due to Intranasal Disease	... 222
Relation of Pregnancy to General Diseases (Cont.)	
II. Tuberculosis—by E. Rist, M. D. Paris	... 223
III. Venereal Diseases in Pregnancy	
By F. J. Browne, M. D., D.Sc., F. R. C. S. (Ed.)	... 228
IV. Cardiac Disease in Pregnancy and Labour	
By Gibbon FitzGibbon, M. D., B. Ch., F. R. C. P. I.	... 238
8. WISE AND OTHER-WISE	
The Doctor's Lament	... 243
" A Calendar of Romance "	... 243
Our Anatomy Page	... 244
Early Rising	... 244
To " Wise Eyes "	... 245
Desperate Mother-hood	... 245
Warriors	... 246
Unjust the Pangs of Birth	... 246
Shape Yourself into a Mountain for the Lord	... 247
9. THE MYOPE	... 247
Good Morning ! Have You Shaved ?	... 249
10. MISCELLANY	
The National Congress	... 251
The Far Eastern Association of Tropical Medicine	... 251
Health Week in Madras	... 253
Madras Water Supply	... 257
11. U. T. C. Notes	... 262
12. EDITORIAL COMMENTS	... 263
13. IN LIGHTER VEIN	... 269
14. MEDICAL EXAMINATION RESULTS	... 274



THE
Delegates of the Far Eastern Congress of Tropical Medicine
at
The Govt. Hospital for Women and Children, Egmore.



Photo by G. T. Reddi.

See pages 257

I. Dr. Madsen II. Dr. D'Herelle. III. Prof Shiga.

THE MADRAS
Medical College Magazine

Vol. VII

JANUARY

No. 3

Hodgkin's Disease

BY T. BHASKAR MENON, M. B., M.R.C.P., (LON)

(Department of Pathology, Medical College, Madras.)

Historical. Described first in 1832 by Thomas Hodgkin a demonstrator in morbid anatomy at Guy's Hospital it was left to his junior Wilks to designate as Hodgkin's Disease a "peculiar enlargement of the lymphatic glands". Out of the seven cases described by Hodgkin only two have stood the test of modern histological methods as being typical of the condition. The pathological picture was first described by Virchow, but it was only after the papers of Andrews and Dorothy Reed that the disease was put on a distinct pathological entity from a motley of cases. Thus Ziegler described under this term a variety of conditions including myelomatosis, mycosis fungoides, and simple lymphadenitis. The disease was called lymphosarcoma by Virchow, malignant lymphoma by Billroth, pseudo-leukaemia by Cohnheim and adenie by Trousseau. Following the descriptions by Virchow, Ziegler as late as 1884 described hard and soft forms and separated leukaemia as leukaemic-lymphadenoma or leukaemic lymphoma. Trousseau's lectures on adenie gave rise to the name of lymphadenoma.

Nomenclature. The terms lymphadenoma definitely suggests a neoplasm bringing it into line with other adenomas while the alternative term of lympho-granuloma definitely suggests an infective granuloma. Turnbull suggests the term Hodgkin's lympho-granuloma, and Ewing Hodgkin's granuloma. Rolleston suggests that "the eponymous title of Hodgkin's disease has the advantage of avoiding any hypothesis as to its nature."

The aetiology and nature of Hodgkin's disease.

Among aetiological factors the preponderance of the disease in males by a proportion of 2 to 1 is striking. A special susceptibility for young adults is also another feature.

With regard to the nature of Hodgkin's disease, many views are held.

It has been put forward that Hodgkin's disease is a neoplasm and that the intrathoracic and abdominal glands are of the nature of primary growths, while the cervical and axillary glands are secondarily involved. The occurrence of malignant change in the glands is emphasized by Ewing who calls the condition Hodgkin's sarcoma. The growth has sometimes a tendency to spread beyond the capsule of the gland and infiltrate muscle and bone where normally such lymphoid cells are absent, a change analogous to the mode of spread of lymphosarcoma. Ewing cites the occurrence of metastatic nodules in the lung and dura mater. Weber has described a case in which there was definite sarcomatous change. He suggests an analogy to Kaposi's disease in which a true sarcoma may arise in an inflammatory condition. Mueller points out the analogy to lymphosarcoma in that there is tumour formation with little necrosis, that adjacent structures are invaded and

destroyed and that the disease metastasizes in distant organs.

Sternburg advanced the theory that Hodgkin's disease was a modified form of tuberculosis. He drew attention to the occurrence of definite tuberculosis in typical cases of Hodgkin's disease. The endothelial hyperplasia without definite tubercular giant cells has long been recognized as a feature of atypical tuberculosis, and Christian and Warthin have reported a similar picture in early cases of Hodgkin's disease. The discovery of the granular form of the tubercle bacilli by Much and Frankel and their frequent presence in Hodgkin's disease was again adduced as evidence in favour of a tubercular nature of the process. Ewing considers that tuberculosis follows in the wake of Hodgkin's disease, and that the evidence of a tubercular process is overwhelming. However, inoculation experiments have failed to give convincing results and it is argued that the frequent occurrence of tuberculosis in cases of Hodgkin's disease indicates merely an increased susceptibility to tubercle—a condition which is met with in many chronic infections such as diabetes and portal cirrhosis. It is undoubted however, that tuberculosis does occur in many cases of Hodgkin's disease. Ziegler states that 25% of cases die of general tuberculosis. Fox argues that if we regard that there is a true lymphadenoma not caused by the tubercle bacilli, there may be another type which is atypical tubercle. Andrews however definitely dissociates tuberculosis as giving a quite different histological picture.

The view has been put forward that the disease is due to infection with a protozoal organism possibly a spirochaete. The occurrence of relapsing pyrexia, the eosinophilia that sometimes occurs in the blood and in

the glands, the improvement with arsenic, all these are advanced as evidence in favour of its being an infection. The periodicity of the fever is compared to that of malaria and relapsing fever. Others again hold that it is a secondary infection, and stress is laid on the occurrence of Hodgkin's disease after acute infections.

While denying the identity of the disease with tuberculosis, many pathologists hold the view that the condition is of the nature of an infective granuloma and that the changes in the glands are the result of chronic inflammation. Bunting and Yates have discovered a pleomorphic diphtheroid organism in their series of cases and claim to have succeeded in transmitting the disease to monkeys. The infiltration of muscles and bones and spread beyond the capsule of the gland that is sometimes met with is regarded as inflammatory and not sarcomatous. The similarity to chronic tuberculosis, syphilis, and actinomycosis is emphasized. Reference may be made here, to the yellowish white areas some of small size, others quite large that are sometimes met with in the glands in cases of Hodgkin's disease. Longcope regards them as "areas of necrosis" and Ewing refers to them as "necrotic foci". The significance of these necrotic foci seems not to have been appreciated. It may be that they are areas of caseation analogous to the areas of caseation met with in syphilis and tuberculosis. Assuming this the similarity to other infective granulomata is indeed striking, for we have replacement of the gland structure by tissue in which endothelial cells occur, in which giant cells occur, in which there is a destruction of the normal lymphoid tissue later on followed by caseation and still later by areas of sclerosis with a few scattered areas of lymphoid cells in between. The disease infiltrates neighbouring structures and spreads into the

lung and generalizes in the late stages like tubercle re-producing these lympho-granulo-matous structures in distant organs.

Morphology.

With regard to the site of commencement of the growth, Ewing regards the earliest glands involved as the mediastinal or retroperitoneal groups, and holds that the cervical and axillary glands that are first noticed clinically are only the outer ramifications of a chain of glands of which the intrathoracic or abdominal groups constitute the main growths. Post-mortem evidence is also in support of this view, since it is commonly found that the intrathoracic glands are often much larger and form huge masses encircling the trachea or the aorta while the cervical and axillary nodes are made up of clusters of smaller glands. This view may not appeal itself to the clinician since he may notice the condition only when the cervical and axillary glands are involved especially as for a considerable time pressure symptoms may be absent.

The lobulated masses have the same appearance wherever they occur and can be seen to be made up of separate glands varying in size with large glands inside and clusters of smaller glands around. In shape the glands are oval or round, smooth and not matted together like tubercular glands but discrete, each with a smooth glistening capsule, and held together by loose connective tissue. Exceptionally one may find periadenitis and coherence of the glands. Those at the root of the neck are the first that are generally noticed. Thence the chain of glands in the anterior and posterior triangles are involved. The axillary and inguinal groups may also show early change. The glands on section

have a peculiar glistening gelatinous appearance with here and there white strands of tissue spreading in and giving them an appearance of lobulation. In a late stage one finds opaque firm yellowish areas of necrotic tissue scattered about as discrete nodules in the gland. The glands in the early stages are soft in consistence as first pointed out by Virchow, but later on it is usual to find the glands very hard owing to an increase of fibrous tissue.

The scarring may advance to such a state that only islands of gland tissue are left in between the fibrous bands.

Histological Appearances.

Virchow was the first to point out the appearance of certain peculiar cells in the glands affected—the lymphadenoma cells which are multinuclear endothelial cells. The diagnostic microscopic features were described by Reed and Andrews. Briefly the typical features of a gland in Hodgkin's disease depend on the alteration in the structure of the gland so that the lymphoid follicles and germ centres are replaced by a uniform reticular frame-work of endothelial cells in which are present large endothelial cells with oval nuclei, large endothelial multinucleate cells—the so called lymphadenoma cells—besides lymphoid cells and eosinophile cells.

The proliferation of the reticular frame-work and the atrophy of the lymphoid tissue are described to occur in the early stages of the disease, while, the very earliest change noticed is a slight proliferation of the lymphadenoid tissue. The first change described by Longcope is a hyperplasia of the lymphoid cells with a proliferation of the germ centres of the lymph follicles. Karyokinetic figures are often found in the endothelial cells of the lymph nodes at a very early stage of the

disease. The reticulum itself becomes thicker and in the dilated lymph sinuses there are large and small lymphocytes besides a few plasma cells, mast cells and eosinophiles. The normal structure of the gland is generally preserved at this stage. It is only in the next stage that the characteristic changes occur. The capsule of the gland is in most cases thickened, and bands of fibrous tissue traverse the gland grouping off the lymphoid tissue.

It has been advanced that the process is nothing but a primary reticulo-endotheliosis but the absence of the characteristic changes in the Kupfer cells of the liver is against this view.

The endothelial cells in Hodgkin's disease are of special interest. There are the normal endothelial cells that are usually present in the germ centres of the lymph follicles and in the walls of the venous sinuses. Besides this there are giant endothelial cells with single, large, nuclei which are dividing or about to divide. Then again there are the multinucleate endothelial cells that are characteristic of the disease. To these the name of giant cells is sometimes applied. They are however quite unlike foreign body giant cells or the giant cells of tubercle. The typical lymphadenoma cell is a large endothelial cell with large oval nuclei arranged in the centre of the cell or more rarely at one end. The nuclei are so large that they almost fill the cell. There may be three or four or even more nuclei, and the cell itself may not be very much enlarged. There is no arrangement in the periphery of the cell like the giant cells in tubercle nor are there any protoplasmic processes. The nuclei of these endothelial giant cells are quite unlike the nuclei of the tubercular giant cells; whereas the latter are small and deeply staining, the nucleus of the lymphadenoma cells are large, oval, or irregular and with a thread of

chromatin outlining the nucleus. There are well defined nucleoli and the nucleus itself has a pale almost vesicular appearance. They are astonishingly large compared with the size of the cells.

With regard to the arrangement of the cells there is no arrangement into follicles with endothelial cells surrounded by lymphocytes that it is suggestive of tubercle. Many pathologists have suggested the similarity of structure of early lymphadenoma with a typical tubercular lymphadenitis in which giant cells are not prominent. It is very often the case that the tubercle bacillus gives rise to a picture in the gland of endothelial hyperplasia without typical giant cells systems. But even here the follicular arrangement is in evidence and there are characteristic groups of endothelial cells with their surrounding clusters of lymphoid cells. Such an appearance is not met with in lymphadenoma. Areas of necrosis may be sometimes met with surrounded by eosinophile cells an eosinophilic response to the presence of necrosis which is highly suggestive.

The early descriptions of lymphadenoma into hard and soft forms depend histologically in the relative proportion of fibrous tissue. Thus as the disease progresses the reticular frame-works of the gland increases in thickness and bands of fibrous tissue traverse the gland in all directions so that the gland as a whole becomes hard. Sometimes the gland may present a picture of chronic sclerosis in places with typical lymphadenomatous areas, in others, hyaline degeneration may occur in addition to well-marked fibrosis.

Regarding the eosinophilia of the gland to which so much importance is attached by Reed it is interesting to note that such eosinophilia may occur in diphtheritic adenitis and other infectious adenitis. In malignant

infiltration of lymphoid glands eosinophile cells are common. A few eosinophile cells may normally be encountered in lymphatic glands, and Andrews emphasises that these cells are diminished in tubercular adenitis. Rarely however they may be met with in numbers in tubercular glands. Many of the eosinophile cells are of the mononuclear type unlike the cells met with in the blood, though lobed and polynuclear forms are met with. But this again is characteristic of tissue eosinophilia. Though the eosinophils are regarded as of great diagnostic importance, cases do occur in which they may be absent.

A few plasma cells are often met with besides a few basophile leucocytes.

The occurrence of amyloid change in organs affected with Hodgkin's disease is of interest, since it is suggestive of some toxic factor that is produced in the affected areas and also emphasises the analogy to the infective granulomata.

Pathological basis of the clinical types.

The intrathoracic type giving rise to the clinical symptoms of mediastinal tumour depends on the implication of the chain of glands round the trachea and bronchi. It is noteworthy that pressure symptoms may be absent with well-defined intrathoracic growth. The resemblance to the thymus is indeed striking. The growth may itself arise in the lymphadenoid tissue of the thymus and form a large infiltrating tumour pressing on the bronchi. The process may infiltrate into the lung and give rise to nodular growths with the typical histological picture. The tracheo-bronchial glands at the root of the lung may be involved. Pleurisy is a well-recognised feature either a spread along the lymphatics or from the tracheo-bronchial glands into the pleura causing a diffuse thickening, or

acute effusion into the pleura may occur. In growths starting in the thymus infiltration of the pericardium, pericarditis with effusion and infiltration of the myocardium have been recorded. The distinction from mediastinal lymphosarcoma and oat-celled carcinoma arising from the bronchus may be difficult since in many cases the disease arising in the thorax has a tendency to infiltrate and spread into neighbouring structures, a feature which lead Ewing to call the condition Hodgkin's Sarcoma.

The chronic generalised type with enlargement of the superficial lymph nodes in the neck, axilla, and groin may show on careful examination intrathoracic and abdominal nodes as well as possibly enlargement of the spleen. A pathological diagnosis from other types of lymphadenitis is difficult in the early stages.

Abdominal types.

The splenic type. That lymphadenomatous deposits occur in the spleen in Hodgkin's disease is well recognized. The spleen shows irregular areas of infiltration in some cases, in others a uniform enlargement studded with numerous whitish gray nodules of lymphadenomatous tissue an appearance which has been called "hard-bake spleen." The capsule usually shows perisplenitis and may rarely show nodular elevation from the presence of the growth underneath. The colour of the pulp is red and in striking contrast to the grayish-white deposits which in the earliest stages start along the trabaculae and malphigian bodies. Rarely infarcts may occur as in the leukaemic spleen. Apart from this type which may be described as secondary a pure splenomegalic type confined to the spleen itself and without enlargement of the glands has been described. Ewing describes such cases as associated with typical relapsing pyrexia.

Hepatic involvement. The liver may be enlarged but not nearly to the same extent as the spleen. This enlargement is due to an infiltration with small lymphadenomatous nodules scattered about in the organ especially in the periportal zone. There is usually an associated fatty change. Jaundice may be the result of the pressure of enlarged glands at the portal fissure.

Enlargement of the retro-peritoneal glands may occur early and may be accompanied clinically by the peculiar relapsing pyrexia of the Pel-Ebstein type to which attention was first drawn by Murchison.

Pressure on the inferior vena cava has been noticed to occur. The enlargement of the mesenteric glands may be marked and may be associated with effusion not unlike that of tubercular peritonitis. Retroperitoneal enlargement may be very slight in association with continuous pyrexia and the condition may be clinically mistaken for enteric.

A gastro-intestinal type with lymphadenomatous infiltration of the stomach and intestines has been described by Coupland. But the difficulty of distinguishing from sarcomatosis is very great. The growth in the stomach may be of the hyperplastic type and may resemble carcinoma.

Lymphadenomatous deposits have been observed in the kidney.

Dermal types.

Lympho-granuloma cutis. The occurrence of a true lymphadenomatous infiltration of the skin has been recognized, but is very rare. The lesions are of the nature of multiple flat or rounded elevations or of ulcerative infiltrations, and microscopically have the structure of Hodgkin's granuloma. Great difficulty arises in

distinguishing them from the sarcoids and lympho-sarcomatosis cutis.

Apart from these specific infiltrations which may be compared to true tuberculoma cutis, a variety of cutaneous lesions occur which are not themselves specific but are only cutaneous phenomena comparable to the so-called cutaneous tuberculides. Thus urticarial and eczematous eruptions may occur. Pigmentation may occur apart from the use of arsenic, and is sometimes attributed to a disturbance of the chromaffin system. The occurrence of herpes is emphasized by Rolleston and may occur apart from the use of arsenic. Prurigo is a feature and may be responsible for pruritis which is itself very common.

Among other rare features of the disease may be mentioned synovitis of which two cases are reported by Rolleston.

Bone-marrow lesions are quite common in lymphadenoma, being present in about 50% of cases. Involvement of the spinal column may occur from spread from the retroperitoneal glands and may cause compression paraplegia. Besides this the long bones may be affected.

Lymphadenomatous infiltration of muscles and ductless glands like thyroid and adrenals are very rare.

The Blood.

There is usually a definite secondary anaemia with a moderate reduction of the red blood cells as well as of the haemo-globin. The white blood corpuscles show no constant and characteristic change (*Longcope*). There is usually a moderate and absolute leucocytosis as emphasised by Fabian. In this series of cases, twenty per cent showed no change, in the others the count varied from 10,000 to 20,000. In a small proportion of cases there was

leucopenia. Fabian concludes that while there may be characteristic features in the blood they are not constant enough to be of diagnostic value. The eosinophilia in the blood to which so much importance was attached at one time is now regarded as of doubtful value since it is not common, being found only in 20% of the cases. The eosinophile count has been regarded as an index of the activity of the disease since they are attracted to the gland by the destruction of the lymphocytes. Longcope holds that the relative eosinophilia is not marked when there are necrosis in the gland. The relative increase in the mononuclear leucocytes is a feature which has been emphasised by Stewart; but Bunting holds that it is the transitional leucocytes that are increased. Bunting notes the increase in blood platelets in the earlier stages of the disease and their decrease towards the terminal stage. He has found increase in the large platelet forms and also megalokaryocytes in the blood.

Butlin's short clinical description will not be out of place:—"I have in mind a patient with an enlarged gland, or group of glands or groups of glands, glands which perhaps are soft and not firmly matted together but not separable from each other. And after a time these glands may become adherent to the surrounding parts so that if one came to take them out it would be very difficult and indeed impossible without removing a good deal of the surrounding textures. Then I know that in course of time the spleen and the liver and the other parts may become enlarged although they do not invariably do so. I know that the glands in other parts of the body may be affected in a similar way—When I have that disease in mind and talk of it, I call it the soft form using the old nomenclature of lymphadenoma. And I have in mind another form of lymphadenoma in which the glands are

exceedingly hard, feeling like very firm fibrous tissue, bound, not merely to each other but to the surrounding parts so that no surgeon would dream of attempting the removal of them. It never occurs to me that I am dealing with hypertrophy or tuberculosis of the lymphatic glands, neither do I think it is an inflammatory reaction. I know I am dealing with quite a different disease ;”

- Thomas Hodgkin cit. Rolleston.
 Wilks. Guys-Hospital. Reports. 1856. 3. sec. 2. 103.
 Virchow cit. E. Ziegler.
 Andrews F. W. Trans. Path. Soci. Lon. Vol. LIII 1902, 305.
 Reed D. John Hopkins Hosp. Repts. 1902.
 Ziegler. H. Die. Hodgk. Krank, Jena. 1911.
 Billroth. cit. E. Ziegler.
 Cohnheim. Virchow's Archives 33: 451.
 Trousseau. cit. E. Ziegler.
 Ziegler. E. Pathologic anat. & Pathol. P. 118 & 119.
 Turnbull. Cit. Rolleston. Schorstien. Mem. Lect. 1925.
 Rolleston. Sir, H. Schorstien Mem. Lect. 1925.
 Ewing. Neoplastic diseases. 373.
 Weber. F. P. Strasburg Med. July 5, 1926 page. 256.
 Mueller. Journal med. Res. 1921 XLII No. 4.
 Sternburg. Zieglers Bietrage. 37 cit. Ewing.
 Christian. Trans. Asso. Amer. Phys. 1907, 397.
 Warthin. A. S. Osler's system Vol. IV 751.
 Much & Frankel. munic. med. woch. 1910. LVIII No. 13. cit. Longcope.
 Fox. Lancet. July 2, 1921.
 Bunting & Yates Jourl. American, med. asso. 1923. LXI 1803.
 Bunting. J. H. Hospital bullet. 1911.
 Longcope. W. P. Osler & Macrea's system Vol. IV 758.
 Coupland Path. Soci. Lon. 1878.
 Murchison. Trans. Path. Soci. 1870 XXI 372.
 Fabian. centralb. F. Allg. Path. 1911. XXII cit. Bunting.
 Butlin. H. Trans. Path. Soci. Lond. Vol. LIII, 1902, 305.

Diagnosis and Treatment of Splenic Enlargement in Children*

BY CAPTAIN P. N. BASU, M.B., M.R.C.P., D.P.H., I.M.S.

(Professor of Pathology, Medical College, Madras.)

Enlargement of the spleen is a physical sign, like jaundice, and is due to many causes, the majority of which are infective in origin. The spleen and the lymphadenoid tissue are prone to active response, and the spleen in particular is more distensible in child than in adult. There are certain definite causes of enlargement of the spleen at certain ages in childhood. Thus, till the age of four months, enlargement of the spleen is due to two main causes, viz., tuberculosis and syphilis. Myelocytic leukaemia is occasionally met with at this age. Besides, certain conditions of septicaemia also cause enlargement at this age. In the period between four months and 3 or 4 years, enlargement of the spleen is very uncommon. At about 5 or 6 years of age there is another series of enlargement, and a group which is very common in a child who comes in fairly ill with a certain degree of anaemia, with a very definite enlargement of the spleen, and usually also an enlarged liver. Such cases are always described as Banti's disease. What this splenic enlargement is due to, is unknown but probably it is due to some infection. From that time onwards, enlargement of the spleen is very uncommon and if it does happen, the diagnosis rests between tuberculosis, syphilis, and lymphadenoma, and undoubtedly the latter

* Lecture delivered under the auspices of M. M. C. A., with Lt. Col. Malcomson as president.

the commonest cause of considerable enlargement between 6 and 12 years of age.

The causes of enlargement of the spleen may be grouped under different headings:—

(i) Those that may be familial, e.g., chronic splenomegalic hæmolytic jaundice, Gaucher's disease, and congenital syphilis.

(ii) Those associated with changes in blood picture, e.g., anaemia, hæmolysis, erythræmia, leukæmia.

(iii) Those definitely infective, whether acute, as in enteric fever, or chronic, as in congenital syphilis and tuberculosis.

(iv) Those of tropical origin, e. g., malaria, kala-azar.

(v) Mechanical, e. g., growths, cysts, infarcts etc.

(vi) Those associated with hepatic enlargement or cirrhosis.

I. FAMILIAL SPLENOMEGALY.

These may be due to (a) chronic splenomegalic hæmolytic jaundice. (b) Gaucher's disease, and (c) congenital syphilis.

Chronic splenomegalic hæmolytic jaundice.

The diagnosis of this disease depends on the examination of blood, for fragility of the red cells; and the treatment is splenectomy. The symptoms of hæmolytic jaundice disappear after splenectomy, by the red blood cells hardly ever become normal as regards fragility. The cholestrol content of the blood rises after splenectomy and it is thought that fragility and hæmolysis depend on the low cholestrol content, but an equally low content is found in some anæmias without changes in fragility, and hence the medicinal administration of cholestrol does not help very much in this disease. X-ray exposures to the spleen have also been recommended.

Gaucher's disease.

This condition was first described as neoplasm in 1882, but is now considered as a special change in the reticulo-endothelial system, and from its racial (Jewish) familial, sexual, and congenital characters has been regarded as a constitutional anomaly, a mutation in the human species. It is familial, but this has not always been established. Though the condition involves the spleen, lymphatic glands, liver and bone marrow probably simultaneously, the spleen is always enormously enlarged in comparison with other organs. The superficial lymphatic glands are very seldom enlarged. It is a disease of the reticulo-endothelial system and as this is concerned with the formation of bilirubin out of hæmoglobin, the question arises whether jaundice can occur in Gaucher's disease. Although sometimes a peculiar yellowish wedge shaped thickening of the conjunctiva and even a peculiar brownish discolouration in areas of skin exposed to light is seen, true jaundice never occurs. Splenectomy in these cases can give relief, but never brings about a real cure.

Splenic enlargement in congenital syphilis.

It is really an index of the severity and activity of the infection. In infants born with syphilitic manifestations spleen is almost always enlarged; in cases in which these manifestations appear later, the spleen may enlarge before they become obvious, but usually this sequence is reversed. In older children splenic enlargement associated with anaemia always suggests syphilitic infection and the Wasserman or the therapeutic test should be carried out. Anti-syphilitic treatment in these cases is sometimes disappointing and there may not be any improvement until

splenectomy is done. The interesting question arises why anti-syphilitic treatment fails to exert a curative action! Probably it may be due to the fact that syphilitic infection has been complicated by a secondary infection of the spleen, like that presumed to be responsible for the chronic splenic anaemia of adults.

II. CASES ASSOCIATED WITH CHANGES IN BLOOD-PICTURE.

Acute Leukaemia.

In early life acute leukaemia is probably more often of the myeloid or myeloblastic, than of the lymphoid type, and this can be easily recognised by blood examination. The prognosis is bad, and treatment with benzol, radium, X-rays, and arsenic fails even to retard the inevitable end. Splenectomy, which was recommended by Mayo, does not appear to be suited to the acute cases in early life.

Pernicious Anaemia.

Pernicious anaemia is very rare in early life, but aplastic anaemia occurs and the diagnosis can only be made by blood examination.

Thrombocytopenic Purpura Haemorrhagica.

This may be (a) primary and constitutional or (b) secondary to infection, e.g., *Streptococcus haemolyticus*, or poisoning by certain drugs such as benzol, or due to some morbid conditions such as nephritis, hepatic cirrhosis and leukaemia. It is characterized by a diminution in the number of blood-platelets, from the normal 250,000 to 40,000,—5,000 or lower, a normal coagulation time, and a prolonged bleeding time often exceeding two hours, and in the active stage by some enlargement of the spleen. The increase in the size of the spleen is not usually great,

and is never comparable to that seen in acholuric jaundice or in splenic anaemia.

Acute thrombocytopenic purpura haemorrhagica can be distinguished from acute lymphoid leukaemia and aplastic anaemia by the blood count; from the haemorrhagic forms of diphtheria and the exanthemata by careful examination; from scurvy by the history, the spongy gums, and the reaction to antiscorbutic remedies. In fact in the diagnosis of this disease two negative points are of some importance. The first is that there are not any definite changes in the red blood cells or in the white cells, which may accompany many primary blood diseases. Examination of the blood shows changes of a secondary anaemia, and the degree of anaemia is directly associated with the amount of blood lost. The second negative point is that, apart from the anaemia and its results, the patient shows no signs of disease; indeed one might say: no bleeding—no symptoms—no ill-health. The chronic form can be differentiated from haemophilia by the absence of superficial haemorrhages, the normal platelet count, and the normal bleeding time in the hereditary disease.

The chief form of treatment in the past, was transfusion which had to be repeated. Splenectomy can now be employed as an emergency measure in acute cases when other means fail to arrest the bleeding, and in the chronic form splenectomy is now regarded as the best remedy.

Infantile Splenic Anaemia.

Infantile splenic anaemia, also known as Von Jaksch's anaemia or pseudo-leukæmia, infantum, or splenomegaly with anaemia and myelæmia should be definitely separated from the juvenile form of chronic splenic anaemia, and for this reason it should be called as Von Jaksch's

anæmia. It appears like chlorosis and is confined to the first three years of life, maximum incidence falling in the middle of this period. It is characterized by great splenic enlargement, secondary anæmia with leucocytosis (30,000), some relative lymphocytic increase, the presence of nucleated reds, a constant myelæmia (up to six per cent), and tendency to spontaneous recovery. It is often associated with rickets, and by some authorities it is regarded as familial. Prognosis of this disease is good, recovery rate varying from 65 to 70 per cent. Owing to the absence of any definite knowledge of its real cause, treatment should be based on hygienic measures. Splenectomy has been done but this is unnecessary.

Chronic Splenic Anæmia.

Chronic splenic anæmia as seen in adults may occur in children, although Poynton, Thursfield and others in their survey of the severe blood diseases in childhood, think that Banti's disease is a specific disorder in adults, and in childhood such a diagnosis is wrong. Other authorities suggest that if the symptom-complex does occur it is due to syphilis, tuberculosis or some other infection. Of course, in childhood all the various symptoms, viz., complex-splenomegaly, anaemia with leucopenia, cirrhosis of the liver, jaundice, haemorrhages, and gastric symptoms of Banti's disease do not occur, but there are cases where there is splenomegaly present, with an anæmia having no typical blood-picture, except a leucopenia, with a negative Wasserman reaction, normal fragility, and absence of glandular enlargement. It has been suggested that Von Jaksch's anæmia, is the infantile form of the chronic splenic anæmia of adults, and that the blood picture depends more on the active response of the blood forming organs; but the difference

in prognosis—Von Jaksch's anæmia often undergoing spontaneous cure, while chronic splenic anæmia of adults is progressive—makes this an improbable assumption. In Banti's disease and portal cirrhosis with splenomegaly, removal of the spleen is beneficial, but the general opinion is that splenectomy is most successful only in cases before the liver has become cirrhotic. The indications of splenectomy are:—in all cases of splenomegaly which show a negative Wasserman reaction, no enlargement of glands, and no characteristic leucocytic picture, but in which there is some degree of anæmia associated with (a) leucopenia, or (b) increased fragility of the red cells with an indirect Van den Bergh reaction, or (c) haematemesis.

Erythraemia.

The spleen is nearly always enlarged in this condition but this disease is rare in childhood. Splenectomy is inadvisable. Benzol by the mouth and X-ray exposures of the long bones may be tried, at the same time removing the intestinal infection and other toxæmia.

III. CASES OF INFECTIVE ORIGIN.

Infective Splenomegaly.

This as part of an acute general infection of the haemopoietic system is rare. Infarcts and enlargement of the spleen in malignant endocarditis, and the spleen of enteric fever can be recognised by the special features of the casual disease. In Still's disease, or the juvenile form of rheumatoid arthritis, spleen is also enlarged.

Tuberculosis of the Spleen.

Tuberculosis may give rise to very considerable enlargement, both in acute miliary tuberculosis and in

the chronic form. In chronic form the organ may contain comparatively large caseous masses, resembling lymphadenoma. There may be adhesions to the diaphragm, so that the organ though increased in size, cannot be felt. Owing to the perisplenitis there may be pain and tenderness, and tuberculosis is the only condition where the organ is distinctly tender.

Lymphadenoma.

This is not uncommon in older children and in fact it is one of the commonest enlargements of the spleen between 6 and 12 years of age. The diagnosis of this disease becomes complicated if it is associated with aplastic anæmia or leucopenia or leucocytosis. Arsenic can be given in small doses and X-ray exposures also yield a good result.

Hyperplastic Lymphatic Splenomegaly.

The condition which may sometimes pass unrecognised is characterized by a normal blood count, general enlargement of the lymphatic glands, and great splenomegaly. The microscopic appearance consists in enormous enlargement of the malpighian bodies which are almost entirely composed of endothelial or reticular cells, and of the follicles of the lymphatic glands, which show a similar structure. The condition is not influenced by arsenic, but is rapidly cured by exposures to the X-ray.

IV. TROPICAL SPLENOMEGALY.

Kala-Azar.

The infantile form of kala-azar may be seen in children in places where the disease is endemic and the diagnosis depends on the detection of the Leishman-

Donovan Bodies by splenic puncture. The liver and spleen are enlarged, but as compared with other conditions are soft to the palpating hand. Treatment is by the intravenous injection of tartar emetic and sodium antimonyl tartarate solutions.

Malaria.

This also causes enlargement of the spleen, but the spleen is soft. Diagnosis can be easily made by the detection of malarial parasite in the blood and the disappearance of splenic enlargement after administration of quinine.

V. MECHANICAL CAUSES.

Enlargement of the spleen due to primary new growths hydatid and simple cysts, angiomas, and abscess are very rare. Spleen may sometimes be enlarged secondary due to cirrhosis of the liver or as a result of some cardiac condition. Treatment will depend according to the cause of enlargement.

Thoughts on Peptic Ulcers

A. R. PODUVAL, M. B. C. M., M. R. C. S., L. R. C. P.

(Late Captain I. M. S., Civil Surgeon, Ernadulam.)

Gastro-enterostomy in a large number of cases relieves all the symptoms of peptic ulcer (duodenal) especially if the patients exercise average care in the matter of diet for some months after the operation. They put on weight and look remarkably healthy after a successful surgical treatment. Although there are a few surgeons who feel that there is something unphysiological in this method of treatment, and would prefer some less dramatic method of curing the condition such, however, is not yet forthcoming; and many surgeons, have to perform the operation although they feel that that is probably not the best method in uncomplicated cases. No serious surgical emergencies arising from peptic ulcers form a separate class by themselves.

In Cochin we have a large number of cases with a chronic gastric trouble; and the same obtains in Travancore and British Malabar. The adjoining Tamil countries also show a long list of similar cases; but Kerala, I think, leads in this respect. And this brings me to the consideration of certain aetiological factors which may be interesting, and may provoke useful controversy which may give us some insight into the cause of the condition.

Some Observed Facts of Aetiology.

In India at any rate, the rice eating races seem to be more prone to this disease. Those who eat wholemeal chapatties of wheat or barley, in spite of the coarseness of the

food do not seem to suffer so commonly as we find it here. In Mesopotamia, the rice eating regiments had a fair number of men among them with chronic gastric trouble while the wheat bread consumers were comparatively free. The latter do not take so much of chillies and condiments as the rice eaters do; and take large quantities of fat in the form of ghee with their food. There is too much of cooking in Malabar; and the rice consumed is of the polished variety, whether indigenous or foreign. Chillies have probably the power of destroying vitamins; at any rate, the average rice consumer in Malabar does not obtain in his food a reasonably sufficient quantity of vitamins, except such as may not be easily destroyed by prolonged heating.

2. *Focal Infection.*—For a long time it was thought that Europeans who do not wash their mouths after their meals have very septic oral cavities but we now find that they do not suffer more from pyorrhoea than Indians do. As regards this point animals do not clean their mouths after food and do not appear to suffer from pyorrhoea. In spite of our toilet of the mouth after food, a large number of our people have septic mouths and teeth, and the people of Malabar who pride in the matter of personal hygiene may be shocked to learn that they too suffer very much from pyorrhoea,—even the well-to-do classes. A large number of these gastric cases have decided oral sepsis, but I have seen similar symptoms in others whose mouths seem in excellent condition. Of course there may be other foci of sepsis, but these are often very difficult to discover.

3. *Eating.* Most of these rice eaters bolt their food without proper mastication. The food is highly seasoned, and the limit of satisfaction is a sensation of distension and not the pacification of hunger.

4. *Alcohol* does not seem to play any role in the causation of the complaint. Abstainers as well as habitual drinkers seem equally prone to the affection.

5. There is no family history in the majority of cases, although I know two families in each of which two brothers suffered from peptic ulcer.

6. A large number of our patients are infected with the hook-worm, and some at least of these patients have been known to present symptoms of acidity, severe abdominal pain, vomiting, and tenderness in the epigastrium during the painful spells—symptoms, which if not quite classical, are very suggestive. The difficulty in our cases is the train of symptoms in genuine ulcer cases which are far from classical, for I believe that in Malabar, the symptoms of peptic ulcer are not quite the picture as we read them in the best brochures on the subject. I am told that some variations from the classical type are very common in the peptic ulcer cases of Bengal. We make it a routine to examine the stools of all such patients microscopically, and treat them accordingly. Many cases clear up by anthelmintic treatment alone, in which at first the symptoms strongly suggested chronic ulcer of the stomach.

7. Many patients who have had temporary relief only from the pain with or without medication, have told me that the symptoms started again on account of irregularity of meals, worry, or anxiety. Some of these patients were supposed to be suffering from hyperchlorhydria, and not peptic ulcer, till operation disclosed a genuine ulcer in the duodenum.

8. *Alcohol* generally aggravated the pain. Many toppers have thus turned sober men on account of a peptic ulcer.

Some remarks on treatment.—I need not say much

about operative treatment. Among poor people, in intractable pain and suffering, longstanding complaint, and in the face of complications, operation is the best treatment. We always begin with the toilet of the mouth, which we do ourselves, as we have no dentist in the hospital. Stools are examined as a routine and the necessary anthelmintics administered if necessary. Too much washing out of the stomach exhausts the patient. Purging the patient immediately before the operation adds to the discomfort soon after the operation. These patients when put to bed for a time under milk diet and alkaline treatment, grow thin very quickly, and are found to have a slow pulse, sometimes as low as 50, and a low blood pressure. Once operation is decided on, the quicker the patient is brought into the condition for it, the better for him. We invariably remove the appendix through the same incision, more out of respect for Sir. B. Moynihan, than otherwise several times I have pulled out quite a limp appendix that seemed to say "What have I done?" Now I do not bury the stump in the caecum, but tie the base securely, cut and thoroughly cauterise it, pull the omentum over and close up the incision.

In cases that do not give a long history, which present no appreciable complications, among patients better conditioned for rest and dietary regimen, I am always for a thorough medical treatment before advising operation. There are many patients who could afford the course of treatment, except perhaps the rest, the value of which these folk could never be made to understand, and without which the treatment seems absolutely valueless. I have tried the experiment and proved it to be so several times, most of the time will have to be spent in bed in the horizontal position. Here the Ayurvedin has

the advantage over us; for he can frighten a patient into obedience with medical verses easier than we can. The toilet of the mouth is insisted on, vermifuges administered when necessary and the patient put on a modified Sippy's diet. I substitute calcium carbonate for the soda, and give the powders at longer intervals in half a glass of water. The diet of course is milk, and in three or four days, add to it two whole eggs beaten up, three times a day. Sometimes Tr. Belladonna, ten drops, are given in an ounce of water both morning and evening. I have found a pill containing Ext. Belladonna or Hyoscamus with Cannabis indica often very efficacious for the pain. In a week to ten days the pain generally ceases, and the patients begin to complain of hunger and ask for more food.

Now comes the difficulty. Going back to the old rice and curry upsets the whole progress of the case; and so I ask them to try a special form of rice diet. This consists of unpolished rice, generally brownish red in colour, cooked in an earthen vessel, with mashed potatoes, a little saffron, salt, no condiments or chillies; the whole is boiled down to the consistency of thick porridge and taken with plenty of butter or ghee. This meal is taken about 11 in the morning once only, and the rest is as before. Starting with a small quantity, the amount of food is increased according to tolerance. If however, this produces discomfort or pain, the purely milk diet is continued for another week, and the patient asked again to try the new diet. Many of them do wonderfully well on it and after little time seem to settle on this regimen without asking for anything more; and I know some people who thrive so well on this that they do not wish to change this diet at all.

Whole wheat prepared in a similar fashion seems to

agree with some patients better. A few of my patients take cakes or chappattees made of black gram and whole wheat or unpolished rice once or twice a day without any trouble. But give them their old rice, at this time, and the whole trouble restarts in a couple of days.

This makes me very much suspect whether the ordinary polished rice has anything to do with the condition. Or is peptic ulcer a 'lack of vitamine disease' or does the stomach possess a "textural sensitiveness" apart from our idea of what texture is? Is it a disease of civilisation due to the consumption of soft artificial foods, and do the savage tribes suffer from it at all? Of course, many factors may be working together in its production, but here is some field for thought.

In cases treated entirely medically doubt may be raised as to the existence of a peptic ulcer. There is surely a possibility that what we call the 4 O' clock pain, or the night pain which regularly doubles a patient up may in a small percentage of cases be a hyperchlorhydria, which is probably but an earlier phase in the life history of peptic ulcer. A proper history of the case is so far as I know the best guide to the diagnosis of the condition, though the laboratory and the X-ray may sometimes help.

In this connection, it may be interesting to know what the Ayurvedin does for similar cases. He places the patient under a special system called 'Snehapana' which consists in taking medicated ghee alone in the morning in increasing doses and very light fluid food once in the evening. The treatment is instituted for 7 to 10 days, and rest is enjoined for the whole time. In many cases, all symptoms disappear but with the return to the old habits, all the symptoms come back in six to eight month's time. Some few have remained free for many years.

If my statements and suggestions lead to a controversy, on the subject I shall be gratified. If readers of the Magazine will take up the question, and make further investigations on the subject, we may the sooner arrive at a solution of the problem.

Hydrophobia & Phenol Treatment.

BY DRS. G. V. SUBBA RAO, L.M. & S.
& C. SATYANARAYANA RAO, L.M.P.

On 4-12-1927 we were sent for urgently at midnight to see a case of dysphagia and restlessness in a man aged 40. On inspection we found the patient in a condition of stupor. His feet and hands were cold and clammy. Perspiration covered the face and chest. The patient was conscious and, having made a will, had resigned himself to death which, he thought, was close at hand.

The history was that he had been bitten by a dog of unknown character, about 4 months ago and that until 4 days back he was in good health. No prophylactic antirabic treatment had been employed. The patient when bathing in cold water, suddenly felt severe shooting pain in his right hand and right chest radiating to the neck, all commencing in the right index finger, the tip of which had been bitten by the dog 4 months ago. Soon after he felt feverish and became restless and unable to swallow anything. Although he had intense thirst he dreaded the sight of water and had hallucinations. He was frequently making swallowing movements. The index finger when inspected showed no evidence of the bite. It was in a comparatively shrunken state as if subcutaneous fat had disappeared completely.

He begged that something might be done to allay his thirst and spoke in a hushed voice, which was almost a whisper. His pulse was 110 per minute. Respiration—30 per min. Temperature—100.8°

Mouth was moist and no salivation was present, but there was great restlessness.

5L
L, 41, 20211, N22
N 28-7-3
142897

The diagnosis of Hydrophobia was made and, in preference to the customary sedative treatment which aims at allaying muscular spasms we adopted the following treatment:—

After giving him a feed of 10 oz. of diluted milk with 2 oz. of glucose per rectum, we gave him a subcutaneous injection of 5 c.c., 1% phenol solution. There was marked relief in half an hour. The pulse rate fell and the patient felt better. In 2 hours' time the injection of phenol was repeated and it was noticed that distension of the abdomen was now marked, and although the fits and the restlessness were still present they were less intense than before. Next morning another injection of 7.5 c.c. was given. It gave further improvement and it was repeated in the afternoon by an injection of 10 c.c. and 0.5 c.c. each of pituitrin and adrenalin was given at intervals to control the distension; thus, during the day the patient received a dose of 47 c.c. of phenol, solution of 1%. He was progressing satisfactorily when the relatives insisted on trying another local practitioner of the indigenous school who after scarifying the scalp rubbed in an unknown preparation which was also put into the patient's eyes. Soon after, the patient became uncontrollably restless and maniacal and died suddenly, probably of heart failure. Before leaving the house, we noticed that the wife of the diseased suddenly developed vomiting and had a wild and maniacal look about her. She was talking incoherently and apparently thought that she also had contracted hydrophobia from her husband. On assuring her that the disease could not be so contracted and removing her from the vicinity of the dead man, her symptoms disappeared.

The points worthy of note in this case are:—

1. The shrivelled condition of the index finger where the man had been bitten 4 months ago. We had also

noticed a similar condition in the finger of a patient who contracted tetanus as the result of a wound in that finger, but after the lapse of a very long period of incubation.

2. The sudden onset of pain in the finger which initiated the fatal disease. There were no premonitory symptoms at all as are sometimes noted. The particularly rapid course of the disease, once it had declared itself is another feature. In our case the disease lasted for 5 days. The cause of the pain in our case is a mystery to us.

3. The marked relief of the spasms on administration of phenol.

4. The distension of the abdomen which followed soon after the administration of phenol, was probably due to a paralysis of the gut against which pituitrin and adrenalin had no effect.

5. It was noticed that the quantity of urine excreted by the patient was diminished. This was probably the effect of the phenol on the kidneys which had already suffered from the toxin of hydrophobia. In this connection a case reported in Sajou's Encyclopaedia of medicine appears to have been given 22 grains of the drug and been cured. This, however, was an early case and treatment was begun early. In all cases of hydrophobia, phenol hyperdermical in 1% solution might be given an extended trial, for, otherwise the disease, at present, is a hopeless one and any method of relieving such a condition ought to be welcome to the profession as well as to the public.

[The communication has been too long. All unnecessary details have been omitted and we have put the whole paper in a condensed form—Editor].

Development of Leishman-Donovan Bodies in the Sand-fly. (*Phletotonus Argentipes*).

BY T. K. RAMAN, M. D., D. T. M; (CAL.)

(Asst. Professor of Medicine, Medical Collage, Madras)

On looking back to the records of the work done while working as a research student of the University of Madras, I find a few of the observations made in the experimental transmission of Kala-azar with the sand-fly (*P. Argentipes*) are worth recording at present.

The experiments were conducted with wild and laboratory bred sandflies, the species of sandflies being identified as such by Major Sinton.

Case No.	Date of feeding	Peripheral blood	Day of Dissection	Remarks.
38	28-9-25	Positive	2nd day	Negative.
			3rd day	Do.
			3rd day	Do.
	29-9-25		3rd day	Do.
			3rd day	Do.
43	2-10-25	Positive	3rd day	Do.
			4th day	Actively mobile flagellates in the mid gut.
			4th day	One actively mobile flagellate in the mid gut
	3-10-25		4th day	Negative.
			4th day	Do.

Development of Leishman-Donovan Bodies 205

Case No.	Date of feeding	Peripheral blood	Day of Dissection	Remarks.
45	9-10-25	Positive	4th day	Do.
			4th day	Do.
			4th day	Do.
			3rd day	Do.
			4th day	Do.
				altered blood in the gut.
43	10-10-25	Positive	4th day	Do.
45	9-10-25		5th day	Do.
				Traces of blood still present in the mid gut.
43	10-10-25	Positive	3rd day	Negative.
	11-10-25		4th day	Do.
	12-10-25		3rd day	Do.
	3rd day		Do.	
	4th day		Do.	
43	13-10-25	Positive	4th day	Do.
			4th day	Do.
			4th day	Do.
46	14-10-25	Positive	3rd day	Do.
			4th day	Do.
			4th day	Do.
47	31-10-25	Positive	3rd day	Do.
			4th day	Do.
			5th day	Do.
54	19-3-26	Positive	4th day	Do.
				Gregami infection (Spores)
55	29-3-26	Positive	5th day	Negative.
			4th day	Do.
56	30-3-26	Positive	4th day	Do.
			3rd day	Do.

Case No.	Date of feeding	Peripheral blood	Day of Dissection	Remarks.
	31-3-26	I-Dead	4th day	Do.
	1-4-26	Positive	4th day	Do.
	2-4-26		3rd day	Do.
			4th day	Do.
90	20-10-26	Positive	4th day	Do.
			3rd day	Do.
			do.	Do.
91	21-10-26	do.	do.	Do.
			4th day	Do.
			do.	Do.
			do.	Do.
90	21-10-26	Positive	4th day	Negative.
			5th day	Do.
91	23-10-26	Positive	3rd day	Negative.
			4th day	Negative.
92	2-11-26	Positive	3rd day	Do.
			do.	Do.
			3rd day	Negative (Gregami infection-spores.)
			3rd day	Negative.
	3-11-26	Positive	4th day	Do.
			3rd day	Negative.
			3rd day	Do.
				(Gregami infection Gametocytes)
			3rd day	Negative
				(Gregami infections Gametocytes).
	4-11-26	do.	5th day	Negative.

Out of the sixty sand-flies dissected only two were caught wild, all the others were bred in the laboratory.

Only two out of the sixty (i.e. 3.3%) showed flagellate infection. The buccal cavity and pharynx were carefully searched so that the possibility of being missed in the course of the dissection could be eliminated. The smears were taken of the gut and stained with Leishman stain. No evidence of infection could be seen in these smears also.

When the positive flagellate infection of Madras, Calcutta and Assam are compared one finds that it closely corresponds with the increasing incidence of Kala-azar in the respective areas.

Reference.

- Chirlophi, Shot H. E. and Barrand P. J. 1926.
Indian Medical Research Messer's No. 4.
 Knowl's R. Refer I. F. Smith Ros. 1924.
Madras Medical Gazette.
 Ram T. R. 1926, *Madras Medical College Magazine*

Case Reports

1 A Case of Cerebral Malaria.

BY V. ISWARIAH B.A., M.B.B.S.

(Assistant Surgeon, Military Hospital, Lovedale)

Ramu aged about 30—a Korga (hill tribe) well-built, was admitted for irregular fever and inability to walk or to talk for one week. The patient was treated for Influenza elsewhere as he had a slight running in the nose and as there was a mild epidemic of Influenza about the place. Temperature when brought under observation was about 102° F, irregularly continuous, pulse full and rapid, respiration almost normal and lungs clear. Tetanic convulsions were noticed, head with rapid lateral movements, saliva dripping, eyes fixed vacantly and spinal muscles rigid. Kernigs sign was also elicited. The patient tended to be hysterical weeping most pitifully at times and at others furious biting his lips. The diagnosis was fixed as tetanus—he being a gardener. Antitetanic serum was ordered and in the meanwhile blood was examined. M. T. rings were found and they were not scanty. Two injections of quinine bi-sulph gr. 15 each were given intramuscularly on consecutive days and quinine was also administered by mouth. The temperature came down in a couple of days and the general condition improved as gauged by the patient's capacity to take his food, to be able to sleep well etc. But the nervous symptoms continued. Patient was able to answer questions like "put out your tongue" "show where it pains" etc. but still unable to use his extremities, or to speak etc. The lateral movements of the head continued as well as the lethargic look. The general

condition otherwise was remarkably good. No anaemia, no cachexia of any sort, no wasting at least not in proportion to the duration of the illness, i.e. 10 days.

He was left a month after the commencement of the treatment with just very little improvement in the symptoms like aphasia, muscular weakness etc. Symptomatic treatment like massage, careful and gentle teaching to talk and walk as to an infant was recommended.

The pathology of the cerebral forms of malaria easily explain the symptoms. Emboli are supposed to be formed in the cerebral vessels—either of the parasite itself or the megalocytes or the black pigments like haemozoin or even the brown ones the haemosiderin. In aphasia the capillaries of Brocas convolutions are involved in paralysis of the motor areas etc. P. M. observations have confirmed this.

The differential diagnosis is interesting. 1. To me the first to strike was tetanus due to the typical convulsions, rigidity of spinal muscles and was confirmed by his profession being a gardener. 2. Cerebro-spinal meningitis which was supported by signs like muscular spasm, Kernigs sign etc. But leucocytosis was absent. 3. Encephalitis lethargica, for there was the tendency to somnolence, waxen image-like appearance, mild rigidity of the muscles etc., but not the cataliptic rigidity i.e. is the tendency to maintain the position when a limb is placed in it. 4. Relapsing fever—but the temp. was low and continuous for over a week and there was not any marked collapse or cachexia.

These are more or less the subacute forms of cerebral malaria for the more acute ones run a rapid and fatal course and have to be distinguished from conditions like heat stroke, sunstroke, apoplexy etc. One or two points

are of interest. (1) The parasites in the peripheral circulation were not scanty unlike typical forms of cerebral malaria where they are scarce as it is said. (2) The symptoms were mostly confined to the nervous system though there were variations and combinations among the symptoms like comotose, paralytic, hysterical, amblyopic etc.

(3) The cachexia, anaemia and the other general post febrile conditions were remarkably low—he never lost much flesh, no anaemia, appetite splendid, general condition good. (4) The nervous disturbances tended to be permanent—aphasia paresis, some psychic disturbances etc.

I am obliged to conclude that malaria, ostensibly the easiest to diagnose not infrequently is most *Protean* in character and microscope seems the more certain aid to diagnosis than bed side clinical observations.

(By kind permission of Col. J. Kirkwood I.M.S.)

2 Intrathoracic Tumor.

BY V. SESHAGIRI RAO, B.A., M.B. & B.S.

House Physician to the first Physician.

Mr. S.—47 years: Admitted on 6-10-27 for pain in the left side of the chest and left side of the abdomen—*Duration* 8 years: *Family history*: Father and mother both strong and healthy.

Previous history: While in Mesopotamia during 1919, one day he had a sudden attack of pain in the splenic region. He did not take much notice of it, but after a day or two the pain became worse and he had to be taken to a hospital. The pain as far as he remembers

seemed to be one of a shooting character travelling down from the middle of the back. After 10 day's treatment he was relieved of the pain, but during his convalescence one day he was again laid up with a similar attack with vomiting. He noticed some blood in the vomit. There at Mesopotamia he was diagnosed as suffering from gastric ulcer and sent out to India. On coming to Bombay he changed his mind and being desirous of having a consultation with the gastric experts at home, he took his next boat to England. On his voyage he had the occasion of meeting several eminent doctors who diagnosed in a variety of conditions (of course no two doctors agreed). Tumour abdomen: tumour stomach: acute gastric ulcer: neuralgic and so on. In London he was diagnosed as a case of gastric ulcer. On laprotomy no ulcer was found, nor tumour: So (as is always the case in such an operation) his appendix which was thickened was taken out and the operation completed in the usual style. After a fortnight or so he was sent out of the hospital as cured. A month or two after this he went to Southampton to see his brother. During his stay there, one day his brother, with usual brotherly affection seems to have given him a pat on the back which hurt him very much and there for the first time he realised that there was something wrong with his back and from that time onwards he is having dull pain in the back, shooting down the left side to the area over the spleen.

Physical signs and condition on admission:—A fairly nourished individual: not anaemic: Teeth dirty: P. A. present, tongue fairly clean.

Al. System. Liver and spleen not palpable: (When trying to palpate the spleen, complains of tenderness in that region.)

Circulatory System.—Nothing abnormal.

Respiratory System: Chest of a normal shape: movements equal and normal on both sides: Nothing abnormal, on the anterior aspect of the chest. On the posterior aspect in the inter-scapular space, more on the left side of the spine a definite area (of about 2" in diameter), about the level of 5th and 6th dorsal vertebrae, can be marked out, which is dull and tender on percussion. V. F. and V. R. decreased in the same area. Breath sounds over the area not clearly heard. No bulging, no redness, no fluctuation in that area.

Spine normal in its curvatures. No rigidity present, patient can do all movements of the spine (bending, rotatory, side to side) without feeling any discomfort. A tap on the head, or a bang on the foot while lying down, does not cause any pain anywhere in the spine.

[Investigation—no differences in radial pulse on both sides and also between radial and femoral.

Blood pressure. Systolic 94: Diastolic 64: (same on both arms)

Absolute count. R.B.C. 4,370,000 *Wassermann* negative
W. B. C. 5,000.

Relative count. Polymorphs 73%
Lymphocytes 17%
Eosinophils 6%
Mononuclears 4%

Urine. Sp. gr. 1010: Alkaline albumen (only a trace) no sugar, no acetone: Tripple phosphates, no casts:

Sputum: No Tubercle bacilli.]

Xray of the spine, (Anterio-posterior, and lateral views) were taken. Looking at the anterio-posterior view (plate) one might easily mistake the tumour (at the level of the 5th dorsal vertebrae for an aneurysm of the arch of the aorta but on looking at the lateral view, it is clearly seen that the tumour is, in no way connected with the

X-ray photograph of the Intrathoracic Tumour



Kindly lent by Capt. Bernard, Genl. Radiologist.

The Tumour is marked by arrows.

(See case report 2.)

aorta. A fairly uniform and clear outlined tumour (looks more a cyst) growing (either from the rib, or the vertebra) towards the mediastinum. Sterioscopic views were taken which show that the tumour was from the 5th dorsal vertebrae (the side of the body and transverse process (left.)

As to the nature of the tumour, whether cyst, bony or what, nothing could be said. On suggesting the knife as the cure for his malady the patient wanted time to think over it and so left the hospital in the same state as he came in.

My thanks to Lt. Col. Leslie for kind permission to publish this case.

A Case of Ruptured Uterus

BY L. SESHADRINATHAN.

(Final year.)

Thayaramma, Hindu, aged 25, fourth para, was admitted into the Government Hospital for Women and Children on 5-11-27 at 11 A. M. The following are the notes made by the Medical Officer on duty on admitting the case.

*History of Previous Labour:—*Natural.

Has been in Labour since 8 P.M. yesterday (4-11-27).

General Condition of Patient: Fair.

If examined outside: Yes; By a barber midwife.

Pulse 128. *Temperature* 98° *Tongue* Clean.

Rate and Position of Foetal Heart:—

On Palpation: Height of Uterus: Full term.

Condition of Uterus: Acting.

Position of Foetus: Right occipito-posterior.

*Relative Position of
foetal head to pelvis:* Fixed.

On Vaginal Examination: Membranes ruptured; Os fully dilated; a small caput formed; right occipito-posterior presentation(?)

The woman was conscious on admission. Facies not distressed, no anxious look, respirations normal, and there was no indication of acute suffering. But as no progress was made towards delivery even though the woman had been in labour since the previous night, axis-traction forceps were applied, and a macerated foetus, (female, weight $3\frac{1}{2}$ lbs.) was delivered at 11-35 A.M.

On the application of the blades of the forceps to the foetal head large dark clots of blood were passed per vaginum. The passage of dark clots of blood under such circumstances can occur under the following conditions: 1. *Concealed Accidental Haemorrhage* (of the totally concealed or mixed variety), and 2. *A Uterine Rupture*.

Even though the general condition of the patient was good, and there was no definite indication of a ruptured uterus, the hand was introduced into the uterus after the delivery of the child to make sure of the condition, and a big tear of the uterus in the lower uterine segment on the right lateral anterior aspect was made out. The fingers of the examining hand could be seen playing against the anterior abdominal wall. The rent in the uterus in the lower uterine segment was plugged with sterile gauze. The vagina was tightly plugged also, and Pituitrin and Ergotin 1 c.c. each were administered hypodermically. As the woman had already been examined outside by a barber-midwife, and as a hand was put in through the rent in the uterus into the peritoneal cavity, the risks of sepsis and peritonitis were great. As a prophylactic, therefore, 30 c.c. of antistreptococcal

serum was administered; and to combat the collapse sub-mammary saline was also given.

The placenta was expelled naturally, and was entire though the membranes were ragged.

Patient was then put on chicken essence, glucose and brandy, ãã 3 ii every 2 hours.

Patient's condition at 4 P.M.: Temp. $100^{\circ}.2$. Pulse 100. Respirations 32.

From 9 P.M. the same day (5-11-27) the patient was put on Soda sulphas 3i every 2 hours, and Pituitrin $\frac{1}{2}$ c.c. administered at 10 P.M. At night "the pulse was somewhat fast and easily compressible" and 1 pint of rectal saline was given.

On 6-11-27 the patient's condition is pretty fair. Temp. $102^{\circ}.6$. Pulse: 140. Volume fair. There is slight abdominal distension. Bowels not moved.

The plug of gauze was removed and another put in lightly with instructions to remove it in 24 hours. Patient was then put on Soda sulph. 3i every 2 hours and propped up in Fowler's position. Patient ordered to get stimulants every second hour, Pituitrin B.D., and anti-streptococcal serum 20 c.c.

On 7-11-27. Temp 103° . Pulse: 124. Respirations 28. "Patient has very little distension. Had 3 motions yesterday". Plug of gauze removed. Saline douche given. The plug was soaked in very offensive purulent discharge, and a gangrenous slough was present in the vaginal vault. Tincture Benzoin Co. applied to the vagina, and the patient was ordered to have fourth hourly saline douches, 20 c.c. of anti-streptococcal serum, and Puerperal vaccine (B. Coli & Streptococci ãã 20 millions), and also Mist. Hexamine by mouth as patient had difficulty of micturition.

On 8-11-27. Temp. 101° . Pulse 120. Respirations 34.

Patient slept fairly well last night. Patient's condition is fair. There is no distension of the abdomen. Patient put on Hexamine mixture; saline douches continued; stimulants every second hour and Pituitrin at bed time. Soda sulph. discontinued as patient has had many motions yesterday.

At 12 noon Temp. 103°.2. Pulse 128.

On 9-11-27. Temp 103°. Pulse 128. soft and easily compressible. Patient's condition unsatisfactory. Slept fairly well last night. No distension of the abdomen. Urine blood-stained and contained abundant mucus. Bladder washed. Lochial discharge black and offensive. Hot saline douches continued. 20 c. c. anti-streptococcal serum given.

6-40 p.m. Patient was very restless, and vomited "greenish stuff" several times. Condition unsatisfactory.

8 p.m. Temp. 104°. Pulse 131. Respirations 40.

8-50 p.m. ½ c. c. Digalen & ½ c. c. Pituitrin and Chloral & Bromide draught given.

On 10-11-27. The patient was ice-capped the whole of last night. Feeds were taken well and also retained. Patient is restless; lochia black and very offensive. Condition of patient is very unsatisfactory.

4 a.m. Temp. 103°. Pulse 148. Respirations 44.

8 a.m. Temp. 101°. Pulse 144. Respirations 48. Pulse is very rapid and feeble. Rectal saline started.

11-30 a.m. Patient is highly toxæmic. Pulse almost imperceptible. Respirations very shallow. 30 c.c. Eusol in 300 c.c. of saline given intravenously.

12 noon. Patient expired.

The peculiar features of this case are that—(1) the constitutional signs of the woman on admission gave us no indication at all of the rupture and it was the dark

clots that were passed on the application of the forceps to the foetal head that led us to suspect one of the two conditions that could have given rise to haemorrhage sometime previously, viz., concealed accidental haemorrhage or ruptured uterus. Besides, it is indeed very surprising that with such an amount of intra-uterine manipulation etc., the woman did not die of shock much earlier, though she eventually succumbed on the sixth day after all this. (2). With a rent that could easily admit a hand there were no signs of general peritonitis. (3). The bowels began to act from the third day onwards, and (4). The intense toxæmia due to the local lesion was responsible for her death.

The treatment of ruptured uterus in the Government Hospital for Women and Children, Madras is CONSERVATIVE as the statistics of the hospital show that the mortality of cases treated with laparotomy is nearly 100 per cent, while in the conservative or expectant treatment adopted (as in this case), the mortality figure is less.

The rent in the uterus is plugged with the following objects: 1. To prevent the abdominal viscera coming through the rent into the uterus and vagina, 2. to prevent further haemorrhage by pressure, and 3. to act as a drainage. The plug of gauze is not in the uterine cavity, but only in the rent, the lower uterine segment and the vagina, and is removed after 24 hours and plugged again if found necessary.

The aim of treatment in all cases of uterine rupture is to deliver the foetus, to combat shock, collapse, peritonitis, sepsis, secondary haemorrhage and other symptoms as they arise.

The macerated foetus that was extracted with forceps weighed only 3½ lbs, and was a small one; hence the obs-

truction to delivery was not due to the excessive size of the foetus; and though the presentation was occipito-posterior, the cause of rupture is obscure. The rupture in this case took place certainly before she was admitted into the hospital, and was caused perhaps by unwarranted manipulations of the barber woman like excessive fundal pressure or kneading the abdomen with a grinding stone.

Current Medical Literature

Oil of Turpentine in Lobar Pneumonia

Christie-Anderson uses a 10 per cent, pure, oleaginous solution of rectified turpentine, from 1 to 3 c.c. in adults, and 0.5. c.c. in children, by intramuscular injection. In no case has there been any irritation or abscess formation at the site of injection and the patients improved under this treatment.

Experimental Oriental Sore

A human experiment is reported on by Panja (*Indian Med. Gaz., Calcutta*) which shows that it is possible to produce oriental sore in man by intradermal injection of the flagellate culture of *Leishmania tropica*. This is the first time that this experiment has been carried out by any one. The culture used was made from a typical case of oriental sore, and was found to contain numerous living flagellate form of *Leishmania tropica*. After the typical lesion was produced, a smear was made with the serum and stained with Leishman's stain. A large number of *Leishmania tropica* were found. The patient was treated with carbon dioxide snow, applied twice a week, and the sore was cured in about a fortnight's time.

Blood Regeneration in Severe Anaemia

Whipple and Robscheit-Robbins assert that beef marrow powder or cooked beef spleen are not especially potent food factors to promote hæmoglobin regeneration in severe anæmia. Bone marrow powder, from 30 to 40 gm. daily, will cause an increase of from 20 to 25 gm. of hæmoglobin per two-week period over the control level. Brain tissue is a favourable diet factor for hemoglobin regeneration in severe anæmia. A diet intake of from 200 to 300 gm. cooked brains a day will cause an average increase in hæmoglobin production of from 20 to 25 gm. per two-week period above the control level. Pancreas is a favourable diet factor, and on an intake of from 200 to 300 gm. there results an average increase in hæmoglobin of 35 gm. per two-week period over control periods. These reactions do not compare with the enormous increases in hæmoglobin production during heavy feeding with liver or kidney.

Dr. Karl Koessler, who has been working at Sprague Institute at the University of Chicago, and at the Cook County Hospital, in giving his vitamin dietary theory of the inbalance of blood regeneration and blood destruction, known in pernicious anæmia, is of the opinion that food high in the content of vitamin A—found largely in these six varieties of "edible viscera"—heart, lungs, liver, sweetbreads, brain, and kidney—will do much in prolonging the life of a patient suffering from pernicious anæmia.

In the hospital he treated over a period of 20 months, 30 pernicious anæmia patients, using as a basis his theory of treatment, his theory of cause, as demonstrated to him by the rats and feeding the patients the following diet:

The six "edible viscera" vegetables such as tomatoes, spinach, asparagus, cauliflower, sweet potatoes and carrots, and citrus fruits.

Dr. Koessler declared that only one of the thirty patients had died and that in all the other cases the regeneration of the blood cells had been immediate, constant, finally approximating an equilibrium between destruction and regeneration.—*Pract. Med. and Surg.*

Parasitic Infection of the Urinary Tract

In the *Edinburgh Medical Journal*, Mekie reports a case of infection of the urinary tract by an acarus, *Tyroglyphus longior* (Gervaise), and presents an analysis of previously reported cases. The symptoms in the case cited were, at first, slight discomfort on micturition, occasional nocturnal enuresis, and an intermittent urethral discharge. Later, the patient complained of pain in the back and right loin for some days, when she was suddenly seized with severe abdominal pain, situated chiefly in the ileocaecal region and which sometimes seemed to pass down in the right thigh. The pain caused nausea and faintness. The other chief clinical features were rise in temperature, increase of pulse rate, marked tenderness and rigidity chiefly situated about McBurney's point. A diagnosis of acute appendicitis having been decided upon, the abdomen was opened, but the appendix was found to be healthy. The right kidney, however, was the site of an inflammatory reaction and the diagnosis of pyelitis was made. The acari and their ova were subsequently found in the urine.—*Urolog. and Cutaneous Rev.*

Moderate Quinine Dosage in Malaria

Hodson pleads for a moderate dosage of quinine in the treatment of malaria; 10 grains (0.65 gm.) after breakfast and 10 grains after dinner is

said to be sufficient. This dose is based on the rate of excretion, which is about 10 grains to the pint of urine. This dosage is given to a patient with an acute attack and is continued for four days, at the end of which time the patient is afebrile, no organisms are to be found in the peripheral blood, and to all appearances the cause of the illness has been absolutely controlled. At this stage, the administration of quinine is stopped for two reasons: (1) because the result of its administration has been so satisfactory, and (2) because any further immediate dosage gives rise to quinism in one of its many forms. By stopping the administration of quinine as soon as its effect has been established, time is allowed for the excretion of all the drug before its use is recommenced; there can be no possibility of organisms becoming quinine resistant and more than that, a period is allowed during which the resistance of the individual is stimulated. Three days' freedom from quinine is the first allowance, which is then followed by a further three days of quinine administration, followed in turn by four days off. This system of giving and withholding quinine is carried on for from two and a half to three months and is varied according to its effects, which are judged at weekly or later on, at fortnightly examinations of the patient.—*J. A. M. A.*

New Method of Treating Postoperative or Postpartum Retention of Urine.

Kvater suggests a method which he has used for the last two years in cases of retention of urine, after operation or childbirth. The desire for micturition is absent, although the amount of the urine in the bladder is large. This condition is due to atony of the detrusor urinae muscle associated with spasm of the sphincter vesicae. The treatment is based on the theory that increase of intravesical pressure may cause the bladder to contract. The method is as follows:—when the retention of the urine has persisted for twelve hours, the bladder is catheterized and a disinfecting liquid is introduced. The quantity of the liquid must exceed by from 150 to 200 c.c. that of the urine removed. The liquid is usually spontaneously expelled, and normal micturition then takes place. If the first injection remains without effect, from 60 to 100 c. c. more of the liquid is introduced. Rupture of the bladder did not occur in any case. The method succeeded in cases in which other measures failed.—*J. A. M. A.*

Sleeping Sickness

A cure for sleeping sickness, which to two months ago had never been successfully treated anywhere in the United States, has been divulged by Frederic J. Farnell of Providence, Rhode Island. With this method Dr. Farnell in the past three years has achieved complete recoveries in seven cases. Thirty-six cases have improved; and in only two cases has death occurred.

Dr. Farnell's discovery is the result of a series of experiments he began in 1916 in the introduction of iodine directly into the blood stream, in order to cure fungus diseases of the brain and spine. He found that the body itself furnishes sufficient water so that a super-saturated solution of iodine can be injected without producing a poison. The knowledge that iodine in a hypertonic solution will draw water from the tissues led to the hypothesis that it might be used to relieve water-logged brains, which are the cause of sleeping sickness.—*Med. Ins. Prac. Med. & Surg.*—

Electroculing Bacteria in Milk

Dr. Samuel C. Presscott of the Massachusetts Institute of Technology, announces in the *American Journal of Public Health* that after at least twenty years spent in attempts to utilize electricity in the treatment of milk it has been found that the bacteria in milk may be killed by electric currents and its keeping qualities and food value improved thereby.

The outcome of the years of experimental work is a process by which milk, subjected to the action of an electric current in an apparatus devised for the purpose, may be heated quickly, uniformly and completely to temperatures that can be accurately controlled. Treatments of only a fraction of a minute are effective in destroying pathogenic bacteria. It has been demonstrated, he says, that milk can be freed from living tubercle bacilli, typhoid bacilli and colon bacilli by quick electric action without noticeable change in the appearance or taste of the milk.—*Med. Ins. and Pract. Med. and Surg.*

Blindness Due to Intranasal Disease

Gottlieb, in *The Laryngoscope*, declares that nasal accessory sinus disease is responsible for defective vision and blindness more often than is supposed. Because of the anatomical relationship existing—the commissure often directly over the sphenoid and the optic nerve as it goes forward

II.—Tuberculosis

being in intimate contact with the ethmoid for about half its length—infection in these two sinuses is often the etiological factor in cases of retrobulbar optic neuritis.

The optic canals vary in shape and size in the same and in different individuals—the average normal diameter being 5.35 mm. and in twenty-five cases of this trouble it was 4.68 mm. The cases with a canal of 4 mm. or less require an immediate ventilation, those of 4.5 mm. allow more time for study and those of 5 mm. or over usually recover from an acute attack.

The microscopical findings are a functionless overgrowth of supporting tissues. That is also found in cases with no optic nerve involvement; and it is possible that this predisposes and that an infection excites an oedema which compresses the nerve in its unyielding canal. Even in cases with frank pus exuding, the findings were fibrosis and cell infiltration, and microscopical study does not furnish a reliable source of information.

X-rays are of no value in these cases and the nasal mucosa and turbinates may appear to be normal. In the cases with negative findings after all other means have failed these sinuses should be opened and as time is precious, one is justified in doing so without further investigation.—*Medical Standard.*

The Relation of Pregnancy to General Diseases*

II.—Tuberculosis

By E. RIST, M. D. PARIS.

(Continued from page 151 of the previous issue)

How are these casual relations between pregnancy and tuberculosis to be explained? How does it come about that pregnancy not only aggravates an already existing tuberculous lesion, but is also a determining factor in the onset of tuberculosis in women who, previous to their pregnancy, had been in perfect health? We know very little concerning that aspect of the question, as we know very little in general concerning the causes which, more or less suddenly, turn a healthy adult, having a normal tuberculin skin reaction, into a tuberculous patient. But I think we cannot

* Report from B. M. J. August 13-1927.

but give due consideration to an important fact which has been ascertained by many a student of the subject—namely, that there is a comparatively high proportion of pregnant women who lose their capacity of giving a positive skin reaction to tuberculin, and recover it only some time after confinement. This condition of anergy is not universal in pregnancy, as it is in measles, for instance. According to Nobecourt and Paraf, it is found in 15 to 20 per cent. of pregnant women during the last three months of pregnancy. Other workers give a somewhat higher percentage. If, as we have good reason to believe, the temporary loss of the allergic state acquired by civilized man during his childhood through a mild primary infection means that his specific resistance to tuberculosis has given way, we are led to think that pregnancy is one among the causes which diminish the specific allergic resistance to tuberculosis. Why it should be so is far from being clear.

Nevertheless I would like to mention, in that respect, the very extensive and prolonged studies which have been made concerning that difficult problem by one of my co-workers, Dr. E. Coulaud of Paris. He has succeeded in showing that pregnancy and confinement are not the only phases in a woman's life which are able to determine a temporary allergic condition. Abortion has the same effect. The advent of puberty may act in a similar way, and in some women every pre-menstrual period is accompanied by a more or less noteworthy failing of the skin reaction. The menopause may also produce a transient anergic condition, and so does operative castration. It is certainly interesting to note that the variations in the reaction of the skin to tuberculin to a certain extent run parallel with some characteristic features of female tuberculosis. The periodical, and on the whole unfavourable, influence of menstruation upon the symptoms of consumption is a well known fact. Less well known, perhaps, is the fact that, among the cases of tuberculosis occurring late in life, a considerable proportion begin at the time of the menopause. Coulaud has also collected quite a number of cases where the onset of tuberculosis occurred shortly after a double ovariectomy.

According to his views, which he has supported with a great number of carefully conducted animal experiments, the link between all these facts should be looked for in the hyperactivity of the thyroid gland, which normally accompanies almost every phase of the female sexual life. Having had an opportunity for studying the morbidity distribution of tuberculosis

in a region in the north of France in which goitre is prevalent, he found that people affected with goitre and having an abnormally low thyroid activity were only exceptionally affected with tuberculosis, and then only in a mild form. There should be, therefore, some relation between the activity of the thyroid gland and the susceptibility to tuberculous disease. This problem of the interrelation between functional disturbances of the thyroid and the course of tuberculosis has been approached in many ways by several clinicians. It is a very intricate one, and I do not propose to discuss it here. My aim was only to mention how Coulaud's studies show it to be connected with the problem of tuberculosis and pregnancy.

Let us now turn to a more practical aspect of the question. The coincidence of pregnancy with tuberculosis being so ominous and having such fatal consequences, what can we do in order to lessen its dangers? Abortion has been advocated by several obstetricians and physicians as being the only way to save the life of the mother. Some have even gone as far as recommending total hysterectomy, arguing that, by so doing, the possibility of such a coincidence recurring in the future is prevented. Both practices have met with considerable opposition. For my own part, I rather side with the opponents, for many reasons. In the first instance, I am convinced that, should abortion be encouraged in these circumstances, it would lead to many regrettable excesses. Not to mention the cases where unjustifiable abortion would be wilfully practised by unscrupulous people under the pretence of tuberculosis being present, I feel certain that many a pregnancy would be honestly but unduly interrupted because of that loose condition of the diagnostic criteria of tuberculosis to which I referred above. Personally I have been asked on some occasions to give an opinion regarding the advisability of inducing abortion in women who were regarded as tuberculous and in whom I could find absolutely no reasonable evidence of tuberculosis. On the other hand, I do not think it has been sufficiently proved at the present time that abortion is really efficient in arresting the course of tuberculosis of the lungs determined or aggravated by pregnancy. Some very satisfactory results have been published, but they are few in number. For my part, I have seen spontaneous abortion influence tuberculosis just as unfavourably as confinement. The advocates of abortion all agree that it should be practised only during the first three months of pregnancy, because after that period it always leads to an aggravation of the lung symptoms. This, of course, limits the

intervention to a small proportion of cases, but, even within these limits, I think we should be exceedingly cautious in recommending it.

Artificial pneumothorax has been—at first timidly and seldom, but lately with much greater frequency—applied to pregnant tuberculous women. That it interferes in no way with the favourable course of pregnancy or labour has been very conclusively proved. It has, therefore, the considerable advantage over abortion that it saves the child's life in a large proportion of cases. It ought to be tried whenever it is possible—that is, when the lesions are one sided and there are no extensive pleural adhesions.

From June, 1919, up to January 1st, 1926, the influence of artificial pneumothorax upon tuberculosis previous to or coincident with pregnancy or beginning shortly after confinement has been studied in 58 cases in my hospital department.

In a first group we find 15 women who came to us after confinement, having a lung tuberculosis which had been either aggravated or determined by pregnancy. The collapse treatment was begun not less than two months after confinement, with the following results :

Clinically well	... 5
Treatment unsuccessful	... 2
Deceased	... 8

In a second group we have 25 women who had their artificial pneumothorax established during the course of pregnancy. The results were as follows :

Clinically well	... 6
Situation unchanged	... 3
Worse	... 6
Deceased	... 10

In these two groups the results are far from being brilliant, although I doubt very much whether abortion could have shown a better record. The proportion of successful cases is only 27·5 per cent., whereas it is 52 per cent, among the 476 women treated with artificial pneumothorax for chronic common unilateral tuberculosis of the lung, outside of any connexion whatsoever with pregnancy. This certainly illustrates the peculiarly malignant character of tuberculosis associated with pregnancy. The probability of recovery through lung collapse is twice as great for non-pregnant as compared with pregnant women. It shows most clearly that pregnancy is a decidedly aggravating factor in tuberculosis of the lungs.

If, on the contrary, we turn to our third group—namely, 18 women who were already treated with artificial pneumothorax when they became pregnant—we get a most encouraging proportion of successes :

Clinically well	... 14
Deceased	... 4

The older the collapse, the better the result. This, I think, is one of the most drastic evidences which could be given to support the view that artificial pneumothorax is really an efficient treatment of consumption, and that it is able to restore patients, who formerly had to be given up as hopeless cases, to all the privileges of health. As I said before, there is no better test of healing in a tuberculous woman than the capacity of bearing children without having any recurrence of the lung disease. If a woman who has been successfully treated by artificial pneumothorax for tuberculosis of the lung has become clinically well, if she has been, say two years without expectorating bacilli, if her temperature is permanently normal, there is no reason why she should not be allowed to become pregnant ; but I always insist that the collapse should be maintained during the first trial, and for at least six months after confinement. I also insist that the mother should not nurse her baby. I have now on record, beside my hospital cases, several young married women in my private practice who have been wise enough, being treated by artificial pneumothorax, to defer pregnancy until I thought that collapse had lasted long enough to make them safe, and who have in due time borne healthy children. On no single occasion have I had to regret it. I should also mention four cases of girls whom I had treated successfully by artificial pneumothorax for severe one-sided lung tuberculosis, and who, married and bore children with my approval after their collapse had been abandoned for two or three years. They have all remained perfectly well. Here we have what may be called the sunny side of the interrelations between tuberculosis and pregnancy. The dark side, as you have seen, is dark enough.

III—Venereal Diseases in Pregnancy.

BY F. J. BROWNE, M.D., D. SC., F.R.C.S. ED.

Those in charge of the arrangements of this Section are to be congratulated on including this as one of the subjects for discussion. There are few subjects in obstetrics that cause more anxiety to the man in general practice, and none in regard to which he obtains less assistance from reading the current textbooks, either on midwifery or venereal diseases.

Syphilis in Pregnancy.

I shall deal with syphilis under four headings: (1) Frequency, (2) Diagnosis, (3) Treatment, (4) the Outlook.

Frequency.

In the ante-natal clinic of the Edinburgh Royal Maternity Hospital, of which I was in charge for some years, Miss Gladys H. Dodds found a positive Wassermann reaction in 130 of 2,000 (6·5 per cent.) consecutive cases examined. In 3·5 per cent. of these the reaction was triple positive. In 0·3 per cent, it was moderately strongly positive; in 1·4 per cent, it was weakly positive, and in 0·8 per cent, the reaction was doubtfully positive. In 0·3 per cent, the serum was anti-complementary; and, finally, in 0·7 per cent, the reaction was negative, but the patients were considered from other evidence to be syphilitic.

These figures show that in an ordinary ante-natal clinic the frequency of syphilis is at most about 7 per cent.

Diagnosis.

In diagnosis attention should be directed to the following points.

1. *The Clinical History.*—In about 70 per cent of syphilitic primigravidae a history of clinical evidence of syphilis will be obtained. In syphilitic multiparae such information is only obtainable in about 30 per cent. There is a good deal of evidence to show that the reason for this absence of history of syphilis in multiparae is not that signs of syphilis have never been present, but that they have been forgotten or are denied. I have discussed this fully elsewhere, but have since then met with a striking

III.—Venereal Diseases in Pregnancy

229

example in illustration. A 1-para was sent from the venereal diseases clinic of the Edinburgh Royal Infirmary with a letter which stated that her previous pregnancy two years before had ended in a miscarriage, and that just before the miscarriage she had come under observation, suffering from the usual signs of secondary syphilis—namely, rash, sore throat, mucous patches, and condylomata, with a triple positive Wassermann reaction. On questioning her most carefully regarding her past history I found that she denied that any such signs had ever been present.

2. *Clinical Signs of Past Syphilis.*—These may be found on careful examination in the form of scars of healed gummata, especially about the calves and knees, leucoderma, etc.

3. *Obstetric History.*—A history of repeated stillbirths, abortions, or neo-natal deaths, without obvious causes to account for them, such as nephritis or birth injury, should arouse suspicion.

4. *The Wassermann Reaction.*—A strongly positive Wassermann reaction is, in my opinion, certain evidence of syphilis. I do not believe that the toxæmias of pregnancy can give rise to it, at least I have never seen an example of that. On the other hand, a patient may have a negative reaction and yet be syphilitic and give birth to syphilitic children. It is important that the practitioner should recognize this. It is only fair to state in this connexion that I have never met with a case in which a mother with a negative Wassermann reaction gave birth to a foetus the organs of which contained spirochaetes.

5. *Examination of the Product of Conception.*—This is perhaps the most valuable method of diagnosis at our disposal, and it is strange that it should be almost entirely overlooked by those who write textbooks. In one of the most recent and excellent textbooks on venereal diseases, for example, it is not even referred to. Evidence may be found in (a) the placenta, (b) the cord, (c) the foetus.

The Placenta.—The classical characters of the syphilitic placenta are well known; its pale, greasy, bulky appearance is described in every midwifery textbook. What is less well known is that these typical appearances are only found in the placenta of the macerated foetus, and that if the foetus is born alive, though syphilitic, the placenta may seem perfectly healthy both to naked-eye and microscopic examination. Why is this? Because intrauterine death of the foetus in syphilis is directly due to

obliteration of the foetal capillaries in the villi. This obliteration is brought about by subacute inflammation, the end-result of which is fibrosis causing enlargement of the individual villi. If the fibrosis is extensive the foetus dies and is born macerated; if the fibrosis is less marked the foetus is born alive, and the placenta shows little or no change from normal.

The normal placenta at term weighs less than one-fourth of the foetal body weight. If a placenta at term, or in the ninth month, weighs one-fourth or more of the body weight it is almost certainly syphilitic.

A placenta, however, with a normal weight ratio does not necessarily exclude syphilis. That is because a healthy placenta at term may weigh as little as one-tenth or even one-fifteenth of the foetal body weight. Even if such a small placenta were affected by syphilis the consequent enlargement might not be sufficient to raise its weight ratio above the normal limit.

Although the microscopic examination of the syphilitic placenta usually reveals nothing absolutely diagnostic, yet the appearances are generally highly suggestive—namely, the enlarged cellular avascular villi with the correspondingly diminished intervillous spaces.

The Cord.—Most valuable evidence may be obtained from the cord. The piece of cord for examination must be taken as close to the foetal end as possible. The usual change is round-cell infiltration around, and in the walls of the umbilical vein. The spirochæte may be demonstrated in the tunica intima by appropriate staining methods. This diagnosis of syphilis from the cord is particularly valuable, as it is available when the foetus is born alive and apparently healthy. It must, however, be emphasized that even when syphilis is present the cord may be quite normal.

The Foetus.—If the foetus is macerated this is in itself suspicious, as one-third of all macerated foetuses are syphilitic.

In the examination of the macerated foetus four points will be of assistance: (a) the liver, (b) the spleen, (c) the epiphyses, (d) the presence of the spirochæte in the organs.

The Liver.—The normal foetal liver weighs about one-twentieth of the body weight. If it weighs one-twelfth or over it is almost certainly syphilitic. At the same time it should be remembered that, as in the case of the placenta, and for the same reason, it may be less than one-twelfth—for example, one-twentieth or one-twenty-fifth, and yet be syphilitic.

The Spleen.—A normal foetal spleen may weigh 1/150th of the body

weight. If it weighs more than this it is almost certainly syphilitic. Again, as in the case of the liver and placenta, a normal weight ratio does not exclude syphilis. Such exceptions, however, are rarer than in the case of the liver and placenta. An enlarged spleen is a most valuable sign of foetal syphilis.

Chondro-Epiphysitis.—The jagged, irregular chondro epiphyseal junction is well known and requires no further description. In doubtful cases it may be demonstrated microscopically.

Presence of Spirochaetes.—These are, as a rule, best demonstrated in the liver, spleen, suprarenal gland, and kidney, either by dark-ground examination or by the Levaditi method of silver staining for permanent specimens. Their presence is, of course, absolute evidence of syphilis.

The Fresh Dead Foetus, or the Dead Infant.—If the foetus is expelled dead but in a fresh condition, or if the child dies, its organs are available for microscopic examination. The changes are best found in the liver, lungs, thyroid gland, and pancreas, and are, generally speaking, of the nature of subacute inflammation and fibrosis. I shall not refer to these, as they have been fully described elsewhere.

Treatment.

In treatment four main principles should be borne in mind.

(a) It should commence as early in pregnancy as possible, or, better still, a full curative course of treatment should be completed before pregnancy is allowed.

(b) The patient should be treated by arsenical compounds in every pregnancy—no matter whether she seems cured or not.

(c) Treatment may be continued with perfect safety up till the time of confinement.

(d) Arsenic and mercury or bismuth should not be combined in treatment, on account of their tendency to damage the kidneys. In this respect bismuth and mercury are more dangerous than arsenic; if there is no albuminuria, however, they may be given alternately. If there is albuminuria it may be necessary to stop all treatment, except by potassium iodide, so long as the albuminuria lasts. In some rare cases the albuminuria may be due to syphilis, and then arsenical treatment, carefully watched, may be tried.

Method of Treatment.—The best results are obtained by the use of novarsenobenzol intravenously, starting with a small dose of 0.3 or 0.45 gram, and increasing carefully to 0.6 or 0.75 gram. The injections should be given once weekly, and continued until six or eight doses are given. A careful watch should be kept for albuminuria. After this there should be a month's interval, during which mercury, in the form of 10 minims of grey oil (corresponding to 1 grain of metallic mercury), is administered intramuscularly into the buttock once weekly, the site of injection being massaged so as to aid absorption. Intramuscular bismuth—preferably one of the insoluble compounds such as bicrool—may be given as an alternative twice weekly. In the case of both bismuth and mercury treatment the most careful attention should be paid to the state of the teeth. These courses of arsenic and mercury or bismuth should be given alternately until the end of pregnancy. After delivery treatment should be continued; a course of treatment of eighteen months' duration, as outlined above, is the minimum, and it is well to continue treatment for a year after all tests are negative. In the case of husbands with old and probably cured syphilis it is well to advise a prophylactic course as a safety measure for some weeks preceding marriage. Finally, it must be emphasized that there is no proof of the cure of syphilis except reinfection, and that antisyphilitic treatment should be repeated in every pregnancy, no matter whether apparently cured or not.

The outlook.

What is the outlook for obtaining a healthy child by such measures?

The most complete figures with which I am acquainted are those of Boas and Gammeltoft, who have followed up some of the children for as long as fifteen years.

The best results are therefore obtained from salvarsan both before and during pregnancy, but even with that no guarantee can be given that the child will not be a congenital syphilitic.

Gonorrhoea in Pregnancy.

My experience of gonorrhoea in pregnancy is that it does not often give rise to acute symptoms such as cystitis; if it does the diagnosis is fairly obvious, and treatment in the acute stages is almost standardized—namely, rest in bed, prevention of spread of infection by vulval protection, hot an-

tiseptic sitz baths, carbohydrate diet and plenty of fluid, and, as soon as the patient can bear it, treatment by local applications in the lithotomy position. Arthritis is, in my experience, the most common complication, and its treatment often demands much circumspection.

I shall deal here with the more common subacute or chronic infection, its methods of diagnosis and treatment.

Some anatomical peculiarities of the female genital tract explain why primary infection is limited to certain areas. The vulva and vagina are covered by a squamous epithelium, which in the adult female is very resistant to the entrance of the gonococcus. But there are about the vulva certain vulnerable areas which are not so protected and through which the gonococcus can therefore enter and set up infection. These are (1) the duct and gland of Bartholin, (2) the urethra and periurethral glands, especially Skene's glands. Therefore, while we do not find a primary vulvitis in the adult, we often get a Bartholinitis and a urethritis. The cervix is a third vulnerable area in the lower genital tract. Its canal is lined by columnar epithelium, between the cells of which the gonococcus can easily penetrate into the deeper cervical tissues. From the canal open the racemose glands of the cervix, and into them also the gonococcus can easily enter and lie safely entrenched beyond the reach of local applications. The cervical infection sets up cervicitis—the well known cervical "erosion" or catarrh with discharge of muco-purulent secretion; this, pouring over the vagina and vulva, may set up a secondary vaginitis or vulvitis, and both vagina and vulva become inflamed and swollen.

How to Examine a Case of Suspected Gonorrhoea.

Examination can only be properly carried out with the patient in the lithotomy position, and in a good light. In private practice this position can easily be obtained by a pair of lithotomy straps. The gland of Bartholin is first examined by picking up the labium majus at the junction of its posterior and middle thirds between the finger and thumb. Normally the gland is not palpable. If any enlargement is felt it is almost invariably due to gonorrhoea. It may, if only slight enlargement and induration are present, be caused by very old-standing infection.

Next the orifice of the duct should be examined; this is a pin-point opening at the junction of the hymen with the labium minus, near the

posterior end of the latter. An area of rosy redness spreading on to the adjacent mucosa is suspicious, but it is not so strong evidence as enlargement of the gland. It may be possible to squeeze a little pus from the duct; if so, it should be spread on a glass slide and allowed to dry in air, being afterwards sent to a bacteriologist for examination.

The urethra should next be examined, care being taken that the patient has not passed urine for three hours. The urethra should be milked from the neck of the bladder downwards to the external meatus, and if pus is obtained a smear, and possibly a culture, should be taken. The absence of Bartholinitis and urethritis, however, by no means excludes gonorrhoea.

The cervix should then be examined, preferably using a bivalve speculum, which gives the best exposure. In acute infection it usually appears purple and congested, and bleeds on touching. In more chronic cases there may be actual desquamation of epithelium, the well known erosion. Often it is bathed in muco-purulent secretion. A swab must be taken from the cervical canal, care being taken not to trespass above the internal os. Smear or culture is again made. The cervix, however, may look perfectly normal, and yet gonococci may be obtained from the canal. A swab merely from the vagina is generally of no value whatever in excluding gonorrhoea.

What is the value of a negative smear? A negative smear is of little value in diagnosis and it should be repeated on at least three successive occasions. The gonococcus is most likely to be found just after a period, but this test is not available in pregnancy. We may, however, give a provocative injection of 200 million gonococcal vaccine and examine the discharge twenty-four, forty-eight, and seventy-two hours later. If in doubt regarding the diagnosis it is always better to treat the case as if it were gonorrhoeal.

Treatment.

The multiplicity of remedies in gonorrhoea is evidence that none is very efficient. Almost the weakest antiseptic will kill the gonococcus if it can be brought into contact with it, but the organisms lie entrenched in the periurethral or cervical glands beyond the reach of most local applications.

The patient should be in the same position as for diagnosis and the external genitals cleansed with a solution of lysol or mercury perchloride. With a bivalve speculum the cervix is exposed, and from it and the vagina all mucus is wiped, either with a dry sterile swab or with sodium bicarh

bonate solution. The latter removes mucus better and leaves a clean surface. The portio and vagina should now be swabbed with a silver or other preparation, such as 10 per cent. protargol or neoprotosil, or 1 per cent. picric acid in spirit. After trying many of these remedies I think as good results are obtained by swabbing with saline solution. In pregnancy the parts must be handled very carefully, and special care be taken in making application to the cervical canal, lest premature labour be induced. One may, however, very gently swab the canal, using a Playfair's probe dressed with cotton-wool dipped in the selected solution, and rotating the probe carefully. It is rare to find urethritis persisting at this stage, but if it is, it may be necessary to inject, with a glass syringe carrying an acorn nozzle, a silver or other preparation such as 1 per cent. picric acid or 1 in 1,000 acriflavine, or 1 per cent. silver protein; or, as an alternative, medicated urethral bougies may be used containing 10 per cent. neoprotosil or any similar preparation. Sometimes there is a chronic infection of Skene's ducts, and it is necessary to inject them by means of a blunt-pointed hypodermic needle, or they may be destroyed with a cautery. Finally, the cervix and vagina are dusted with an astringent dusting powder such as dermatol, which helps to keep the surface dry. Twice a week is generally sufficient for local treatment, and in most cases there is no need for rest in bed.

Detoxicated vaccines are of considerable assistance in clearing up the discharge, starting with a dose of 5,000 million, repeating once weekly, and gradually increasing to 50,000 million, which may be continued till the end of pregnancy. I have no experience of ionization or diathermy in treatment, neither do I think they would be applicable in pregnancy.

With the treatment outlined above it is almost always possible to get the discharge cleared up in a few weeks, and before delivery occurs. Very few of the cases cause trouble in the puerperium.

Douching is, in my opinion, dangerous, and less effective than the method above described, and should have no place in the treatment of gonorrhoea in pregnancy.

Finally, it must be emphasized that the only absolute test of cure of gonorrhoea is the absence of the power to reinfect the male, and that treatment must be continued after pregnancy is over until at least all clinical evidence of disease is eradicated.

ARRANGEMENTS FOR TREATMENT.

The following principles may be laid down as the minimum necessary for the proper diagnosis and treatment of venereal disease in pregnancy.

1. A routine Wassermann test should be carried out on every patient at the first visit to the ante-natal clinic, treatment being started immediately a positive diagnosis of syphilis is made.
2. The treatment centre should be in the maternity hospital, special days being set apart for that purpose. Pregnant women with venereal disease are generally innocent victims, and resent attendance at an ordinary venereal disease department amongst patients of doubtful character.
3. The treatment should be carried out by a woman expert, who may or may not be a member of the maternity hospital staff. It is probably preferable that she should be the person responsible for the treatment of women in the ordinary venereal disease clinic. She would then have charge of the mothers also after delivery and until discharged cured.
4. Ante-natal beds should be provided in the maternity hospital for women suffering from venereal disease. These should not be labelled "V.D." beds, but simply "ante-natal." In the Edinburgh ante-natal department of 25 ante-natal beds 13 were devoted to venereal cases. The beds were always referred to (amongst the staff) as "D.K. beds" and the department as the "D.K. department." To the patients it was simply the "ante-natal department," although the venereal cases were in separate wards with a separate nursing staff. Such beds are necessary for—
 - (a) Cases of acute gonorrhoea and those ill with complications such as arthritis.
 - (b) Cases living too far away to attend as out-patients.
 - (c) Cases who, because of the advanced stage of pregnancy, cannot attend as out-patients with sufficient regularity.
 - (d) Patients suffering from venereal disease *plus* some of the ordinary non-venereal complications of pregnancy—for example, albuminuria—requiring indoor treatment.
5. All cases suffering from severe vaginal discharge should be treated in the clinic, whether the gonococcus has been found or not. If only cases of proved gonorrhoea are treated the majority will be missed, and if the department is not labelled "V.D." no stigma attaches to treatment there.

III.—Venereal Diseases in Pregnancy

6. Attached to every maternity hospital there should be a pathologist who is expert in the examination of the products of conception for evidence of syphilis. Unless this is done invaluable evidence—often the only evidence—will be missed.

7. At the end of each month or oftener, a list of congenital syphilitic infants or of suspected cases requiring observation should be sent to the child welfare medical officer. He will, of course, keep in touch with the children, examine them at intervals, and have treatment carried out if necessary.

8. The maternity hospital venereal disease clinic should be in close contact with the general venereal disease clinic of the hospital or town in which it is situated. After delivery it will generally be found best that treatment should be continued in the general clinic. This continuity of contact will generally be easy if the treatment in each is carried out by the same medical officer.

9. Any complete scheme demands the appointment of a nurse who will follow up patients failing to attend regularly for treatment. It is usually unnecessary to tell patients that they are suffering from syphilis or gonorrhoea, but if they fail to attend regularly or refuse to undergo treatment it is often best to do so, and a quiet talk with the patient, and perhaps also with her husband, usually has a salutary effect.

10. Co-operation with the venereal disease centre will ensure getting in touch with the husband and treating him as well as the mother.

The scheme I have outlined is practically that which has been in operation in Edinburgh since 1920.

In conclusion, I feel it my duty once again to advocate the compulsory notification of pregnancy at an early period, say the third or fourth month. Only in that way will all cases of syphilis in pregnancy be discovered at such an early period that effective treatment may be carried out. If all syphilitic pregnancies ended in abortion or the birth of macerated foetuses such early notification would not matter. Diagnosis could be made at delivery and treatment carried out before and during the next pregnancy. But such a happy termination does not always take place. A baby may be born alive and continue to live with congenital syphilis, and grow up to be a burden to itself and the community. As Professor Karl Pearson says, "We prosecute parents for cruelty to their children, but what is greater

cruelty than bringing children into the world of whom we can predict on the average that a certain number will suffer from incurable disease, and that others, without being afflicted, will transmit that disease to the next generation?"

IV.—Cardiac Disease in pregnancy and Labour.

BY GIBBON FITZGIBBON, M.D., B.CH., F.R.C.P.I.,
(Consulting Gynaecologist, Rotunda Hospital, Dublin.)

During my mastership of the Rotunda Hospital I find I have recorded 22 cases of cardiac disease complicating pregnancy and labour out of a total of 13,000 confinements. This gives an incidence of 0.16 per cent. These are all cases of loss of compensation and delivery. In the last two years, as a result of ante-natal supervision, the number of cases has increased, giving a percentage of 0.33.

Mortality.

Of my 22 patients 5 died, a mortality of 22.7 per cent., but omitting a case of acute vegetative endocarditis, the mortality is 19 per cent. in chronic valvular lesions. Three deaths were of patients who were admitted with loss of compensation; labour set in before the cardiac state showed any improvement. One of these patients was a primigravida, aged 30, thirty-seven weeks pregnant, who delivered herself rapidly of a macerated foetus and died in a few hours. The other two patients were multiparæ: a 3-para, aged 36, twenty-eight weeks pregnant, delivered herself, but the cardiac state never settled, and she died thirty-two days after delivery; and a 4-para, aged 30 twenty-four weeks pregnant, with auricular fibrillation which never altered; she delivered herself of a macerated foetus and died three days later. The fourth death was that of a 3-para, aged 33, admitted at thirty-four weeks; she improved under treatment for three weeks, when vomiting developed. The cardiac state relapsed when digitalis was stopped; she was delivered by section during decompensation, and although improving for a few days, died nine days after delivery. The fifth death was that of a primigravida, aged 19, thirty-four weeks pregnant, who died a few hours after spontaneous delivery, and was found to have an

IV.—Cardiac Disease in Pregnancy and Labour

acute endocarditis with vegetations on the mitral and aortic valves. Thus all the deaths were of patients who were delivered while the heart was in a state of acute decompensation.

Omitting the case of acute endocarditis, there were 10 patients in their first pregnancies complicated by cardiac disease. Five of these patients went to term, and decompensation appeared to be precipitated by the onset of labour: they all delivered themselves, two being completed by forceps in the second stage; all recovered, and all the infants were born alive. The ages of these patients were 19, 21, 24, 24, and 29—the last being a multipara that I class as a primigravida, as the cardiac lesion had been acquired since her previous confinement six years before.

Five primigravidae developed failure of compensation during pregnancy—one case at the thirty-second week, one at the thirty-seventh week, and three at the thirty-fourth week. The three cases at the thirty-fourth week responded to cardiac treatment, were retained in hospital, and delivered themselves of living infants by spontaneous labour, one aided by forceps, at the thirty-sixth, thirty-seventh, and thirty-eighth weeks of pregnancy. The patient at thirty-seven weeks had loss of compensation for several days without treatment, and fell into labour after two days' treatment without any improvement in the cardiac state; she delivered herself of a macerated foetus after a hardly noticeable labour of two and a half hours and died ten hours later. The patient at thirty-two weeks had failure, but received no treatment until after labour started; she delivered herself in two hours of a small living infant, convalescence was very slow, over several months, but finally compensation was established.

Of the 11 multiparæ only 3 went to term, and the loss of compensation appeared to be the result of the onset of labour. Two of these patients, aged 23 and 24, were in their second pregnancies, and one, aged 35, was in her third pregnancy; they all delivered themselves of living infants, and subsequent convalescence was satisfactory.

Eight multiparæ developed loss of compensation during pregnancy. Of these, 3 received no treatment before the onset of labour: they all delivered themselves: a 3-para, aged 36, twenty-eight weeks pregnant, died without improving thirty-two days after delivery. The other two recovered both were aged 40, one a 9-para at the twenty-sixth week, with aortic stenosis causing fainting rather than decompensation, the other a 17-para at

the twenty-fifth week, but in only her third pregnancy to carry beyond the sixteenth week, with double mitral murmur and enormous hypertrophy of the heart.

A 4-para, aged 30, twenty-four weeks pregnant, had failure for some days, but received no treatment until in a state of auricular fibrillation; she showed no response to treatment for two days, then delivered herself and died three days later without any improvement.

Four multiparae responded to treatment. A 2-para, aged 35, twenty-four weeks pregnant, improved, fell into labour at thirty weeks, and delivered herself; compensation had been fairly well re-established but again failed during labour and for a few days, then convalescence was rapid. A 5-para (1 abortion), aged 31, had failure at thirty-four weeks, responded well to treatment and went home, but returned at thirty-seven weeks severely decompensated and in labour; she delivered herself in two hours, but was in a critical state for the next two days, after which she improved steadily. A 3-para, aged 33, improved, but at thirty-seven weeks digitalis had to be stopped and failure recurred; she was delivered by section, improved for a few days, but relapsed and died nine days after delivery. A 3-para, aged 30, at thirty-two weeks improved; the membranes ruptured at thirty-five weeks, and as there was placenta praevia she was delivered by section; compensation was maintained.

Prognosis.

The cases recorded above may be divided into three groups:

1. When decompensation only occurs as a result of labour the prognosis is definitely good.
2. When decompensation occurs during pregnancy and is treated early the prognosis is good.
3. When decompensation occurs during pregnancy and is neglected until labour sets in the prognosis is bad.

In the second group the prognosis is damaged by multiparity. The prognosis is better for cases under 25 than for those over 30 years of age.

Results to the Foetus.—Of the 10 primigravida, nine infants were born alive and all but one, born at the thirty-second week, survived. Of the 11 multiparae, ten infants were born alive, but only five survived, the others being too premature. The prognosis for the infant is good provided

decompensation is not neglected during pregnancy, while survival depends upon the maturity at time of birth.

Conclusions.

Decompensation does not tend to develop until the second half of pregnancy, but is liable to set in progressively earlier in that half of pregnancy as the number of pregnancies and the age of the patient increase.

The majority (over 75 per cent.) of primigravidae with compensated cardiac lesions will carry to term, and although one-third of these develop failure as a result of the onset of labour, they deliver themselves of living infants and recover. In considering primigravidae it must be remembered that all the multiparae had delivered themselves uneventfully in their first labours.

When compensation fails in a primigravida during pregnancy it can usually be re-established, and when labour subsequently occurs it is well borne.

Only about 50 per cent. of multiparae will go to term, and of these a slightly greater number will develop failure during labour than in the case of primigravidae.

When compensation fails during pregnancy in a multipara it is more difficult to re-establish than in primigravidae. There is a very marked tendency to relapse when labour subsequently occurs, and there is a much greater probability of labour starting before compensation is re-established.

When compensation has failed during pregnancy in any case and been re-established the pregnancy will practically never carry on beyond the thirty-sixth or thirty-seventh week.

Cardiac lesions tend to produce abortion and diminish the incidence of pregnancy. A woman who has decompensated during labour, and more particularly during pregnancy, is likely to abort in the first few months of a subsequent pregnancy, or to remain actually sterile.

This fact is not shown in my cases, but of the women I have treated I only know of two who have become pregnant, and these both aborted early.

Conclusions as to Treatment.

Primigravidae and multiparae who have never been decompensated during pregnancy may be allowed to continue through pregnancy and

labour, with special care during the last eight and sixteen weeks respectively. If decompensation occurs during pregnancy, treatment should be directed only to re-establishing the cardiac function, and the patient should be kept at rest until after delivery. Primigravidae may be allowed to go through labour, but multiparae will probably be best delivered by section at the thirty-sixth week and should be sterilized.

If decompensation occurs in a multipara before the thirtieth week the cardiac state should be re-established and then the pregnancy terminated, as the probability of the pregnancy reaching a period when the foetus will be likely to survive is practically *nil*. If labour sets in during the acute period of decompensation it is easy and rapid, and natural delivery will give as good a prospect as operative; the second stage should be shortened by forceps. A woman who has suffered from loss of compensation during labour should be kept at rest from the twenty-fourth week of a subsequent pregnancy, and this pregnancy should be terminated by section with sterilization at the thirty-sixth week.

A woman who has decompensated during pregnancy should never be allowed to continue another pregnancy, and such pregnancy would be best terminated by section and sterilization.

Induction of labour has no place in the treatment during decompensation, and at other times would be better replaced by section and sterilization as a means of terminating a pregnancy.

I have said nothing about the type of cardiac lesion: I think there is little to choose among them. Among my primigravida cases 3 suffered from mitral stenosis, 2 from mitral regurgitation, 3 from double mitral regurgitation, 1 from aortic stenosis, and 1 from acute endocarditis. Among the multiparae there were 3 cases of mitral stenosis, 2 of mitral regurgitation, 4 of double mitral regurgitation, 2 of aortic stenosis, and in one case the condition was unknown. My mortality was: in mitral stenosis 1, in double mitral 2, 1 unknown, in acute endocarditis 1; in all delivery occurred during decompensation.

Wise and Other-wise

Selections by K. N. M.

The Doctor's Lament

Last night when others were at rest
I rode about, and did my best
To save some patients called by fate,
From travelling through the Golden Gate.
This morning when the news I spied,
I thought they might as well have died:
"Two Hundred Injured in a Wreck,"
"Man Falls, Sustains a Broken Neck,"
"Two Drown While Rocking a Canoe,"
"Grade Crossing Murders Twenty-two,"
"Five Killed by Falling Aeroplane,"
"Three Shot by Moron, Now Insane,"
"Gas Blast Takes Lives of Twenty-three,"
"Two Die 'Neath Falling Apple Tree."
All night I toiled to save one life,
And millions die in useless strife.
What can it help to make one well,
While thousands hearken to death's knell?
What boots my little recompense?
Why can't the world have common sense?

—Hygiea.

"A Calender of Romance"

Our hero was the common sort, when all is said and done,
He worked his head off daily and was out to get the *MON*.
The reason for his diligence was common-place, 'tis true,
He tried to swell his salary so it would suffice for *TUE*.
And maybe that's the reason why one day he lost his head,
And falling on his knees, he cried, "Oh maiden, wilt thou *WED*?"
He may have thought this sudden, but it seemed not so to her,
She slipped a quick acceptance and said forcible, "yet, *THUR*."
But when they went to keeping house, he feared that he would die
For, o! that modern maiden could neither bake nor *FRI*.

She could not run a bungalow, or even run a flat,
 So on many sad occasions in a restaurant they SAT.
 But he forgave her willingly, as man has always done,
 When she presented him one day a bouncing baby SUN.
 —The Joy Messenger.

Our Anatomy Page

Where can he buy a cap for his knee,
 Or a key for a lock of his hair;
 Or can his eyes be an academy;
 Because there are pupils there.
 What gems are found in the crown of his head,
 Does the calf of his leg become hungry at times;
 And devour the corn on his toes.
 Can the "Crook" of his elbow be sent to the jail,
 Where is the shade from the palm of his hand,
 I am hanged if I understand.

Early Rising

"God bless the man who first invented sleep!"
 So Sancho Panza said, and so say I:
 And bless him, also, that he didn't keep
 His great discovery to himself; nor try
 To make it—as the lucky fellow might—
 A close monopoly by patent-right.
 Yes; bless the man who first invented sleep
 (I really can't avoid the iteration);
 But blast the man, with curses loud and deep,
 What e'er the rascal's name, or age, or station,
 Who first invented, and went round advising,
 That artificial cut-off—Early Rising!
 'Tis beautiful to leave the world awhile
 For the soft visions of the gentle night;
 And free, at last, from mortal care or guile,
 To live as only in the angels' sight,
 In sleep's sweet realm so cosily shut in,
 Where, at the worst, we only *dream* of sin!
 So let us sleep, and give the Maker praise.
 I like the lad who, when his father thought
 To clip his morning nap by hackneyed phrase

Of vagrant worm, by early songster caught,
 Cried, "Served him right!—it's not at all surprising;
 The worm was punished, sir, for early rising!"
 John Godfrey Saxe—*Med. Pickwick*

To "Wise Eyes"

With eyes like twin jade pools you gaze at me.
 What thoughts, I wonder, 'neath that gaze can be;
 I fear, Wise Eyes, though innocent your stare,
 You dream of future victims to ensare.
 You curve your slim, young neck with arching grace,
 With charming yawn and seeming ennui
 You curl your lithesome body, soft and warm,
 And fall asleep a-napping on my knee,
 But as you lie all cuddled up so snug
 In fitful doze contentedly benign,
 I know full well that underneath that mien
 There beats a heart of cunning—sly design
 Still, though you are a selfish little which,
 Blame never should be given you for that;
 For you by nature's whims were born that way,
 My pretty, graceful green-eyed tiger cat.

Desperate Mother-hood.

B. C. Review

Too Late.

Sadie said:
 Jim looked so well,
 I thought that all was well.
 Nobody told me how.
 His folks was crazy now.
 Since I have a son.
 The mischief's done
 I didn't know until too late
 That love would turn to hate.
 Why didn't you tell me
 It wouldn't have to be.

An old woman said.

"That last of my children is dead
 And buried to day," an old woman said.
 "There was eleven in all
 Counting from Mabel to Paul."
 The neighbours said, "she is brave."
 When each is laid in a grave.
 "Children comfort the old,
 Is what I was told,
 But now I have found
 Having'em to lay in the ground,
 Is not the Almighty's way,
 But devil's play"

Margaret Loring Thomas.

Warriors.

I heard a woman's scream in the night—a shrill, sharp-cry of pain.
At intervals it came with an over-increasing note of agony.
One last piercing shriek, then silence;—a new soul was delivered into the world.

And I knew that in every corner of this great, relentless world, the cries of other women were marking the birth of souls.

And I thought of the armies of women through the ages past, and the ages to come; of the tears they shed; of the means of prevail.

And then I saw the earth spread out before me into one great battlefield, and the warriors were women.

There was no martial music to quicken the pulse; no blare of trumpets to herald a victory—their silent steps followed the rhythm of their heart beats.

A few there were out of the great army who marched joyously with head held high.

There were the free.

Others groped their way blindly through the dark, clinking their chains unknowing.

But the saddest were those who had caught a gleam of light, who had dimly sensed their birthright, the glory of free mother-hood.

These were the real warriors, fighting under the standard of birth and justice—ever and ever beaten back by the forces of ignorance.

To these, blended with the moan of travail was the moan of despair.

They were bearing the iron cross branded in their souls.

Mr. E. L. Street.

Unjust the Pangs of Birth.

God is male, and, partial to His sex,
Unjust. How otherwise can you explain,
The clumsy trick of birth and its gaunt wrecks—
For man the joy, for woman all the pain?
If this as penalty for Eve be meant,
Do women never earn their bread in sweat?
For him the heaven of two warm bodies blent;
A hell for her, alone and torn and set
There is no way to share your anguish, wife;
But I can fight my sex's tyranny,
Help all be masters, not the serfs of life...
Choose mother-hood or ban it, you are free!

Ralph Cheyney.

Shape Yourself into a Mountain for the Lord.

BY ROSALIE GOODYEAR.

Shape yourself into a mountain for the Lord:
Be a bastion powered with purposes—
Base yourself firmly upon the earth,
Let the roots of you grow deep, deeper,
Dig into the sources, the forces of creation,
Make yourself of rock and loving soil,
Let strains of precious metal run through you.
Let shrubs and flowers, growing things cling close.
And grasses tender, mosses sweet nestle in between:
Nourish the trunks of beautiful trees,
Nurture springs of crystal water.
Start the rivers toward the sea:
Divide yourself in little paths,
For weary ones to wander where they will,
The strong to toil in patience up and on;
Deny no one, man, woman, child
The privilege of climbing over you:
Gather in yourself great fires,
Listen to their rumblings profound,
Cap your summit with the snows of knowledge;
Stretch yourself to newer heights each day,
Defy the elements, be an example against the sky,
Lift, O lift, your voice in songs of volcanic joy,
Shape yourself into a mountain for the Lord.
—*Current Thought.*

The Myope

One evening fine I met a chap
To whom I smartly touched my cap,
He walked past stiffly like the Pope,
I knew not he was a myope.

Let me explain. Like Mr. B. Shaw, I like to explain things to my readers. I mean, I like to make clear to them the meaning of my verses; also of my essays, plays, etc. (in case I write any). That being so, and the art of poetry being somewhat like a contortionist's technique, I shall just unravel the foregoing four-wheeler. One evening, more dusky than fine, I met a newly contracted friend of mine. Altho I "Hullo! Fine evening" 'd him, by a simple nod (syblomatic of all that you know) he just biffed past me.

He actually did.

Of course my rage knew no borders. "You!" but the editor refuses to print it all, you see. Well I just gave him it, but as you all know how to give it when occasion so ordains it.

He just gasped like a fish taking in its 5 seconds supply of air and water and began to beg pardon and all that sort of thing.

Chuck it! I started. Why the—did you cut me just now?

To which Quizzer he answereth. "O, I forgot my glasses, you see"—and bless me it he did 'nt blush like a brand-new bride at church!

I made it up with a loud laugh and a hearty smack on his back. He wriggled a bit under the onset, and being sort of chatty began to narrate to me His troubles with his Eyes.

Elaborate researches in the field of ophthalmology, he began, have failed to discover the *causa causans* (root-cause, I suppose?) of Myopia. Oculists have pondered over the problem long and deep but to it have found no solution. Hence the Aetiology of my complaint goes undiscovered.

I suppose I have told you I am a prey to that annoying malady commonly termed short-sight. Not much though. —5, Yes, only that.

Apart from the symptomatic treatment of this affliction, nothing, or almost nothing has been in vogue amongst eye-men.

I have tried everything from simple massage through drops, inunctions, irrigations etc—to mushrooms, and have found my eyes in statu co. or a wee bit worse.

And now they tell me, myopia, like modern civilisation and many other things I can think of, is progressive. What does Tennyson say? or is it Tagore?

Art is long and time is fleeting,

And though our Eyes are bright and glistening,

Still like a Rocket from its height retreating,

The myope gropes to where there is only listening.

Horrible! is it not? To know you must grope your way across these streets and corners,..... along with the physician on his rounds,.....or along that confounded corridor leading from the ladies room to the anatomy theatre with all its risks and ditches, its painted walls. (maliciously painted—no artistically, inclined contractor would daub walls with a clinging "Danger" hue).

But every cloud has its silver lining—Imagine a grey old man—that is an

old man with grey beard, (or grey hair if he chooses or chances to be clean shaven), imagine, I say, a grey old man, at the end of a cane, and at the other end an angel of a little girl (O! Just a wee lil' angel), not yet out of the lisps, both toddling along, trying to snatch the cane one from the other. Even the hardened red capped officer of the Peace (or the law—both are not quite synonymous) will be melted, I mean his mind, if he has borrowed any, and he will raise the said red cap, and pop, will drop out of it a few beedies, a couple of coppers, and a list of bus numbers he must not prosecute.

But, you fidget, you yawn, you frown and you are inclined to swear.—O! a minute only and then you can attend to that urgent business of yours.

So, reduced to wearing glasses, I am wearing them—not always, as you see, though the Occular-chap wrote "for constant use" in his slip. I am quite willing to be constant to my glasses—why, only the other day I walked under my shower bath with barely a towel on me, but with clear eyesight. That was a slip of course—a sort of over doing it—but the beastly things break—they drop down and crack, and being brittle, break. They jolly well break. Sometimes into two, at others into fifteen, at still other times into smithereens. And then a few days of grim ego-centrism, and then I am a cherry chap again, and the optician the richer by his unfair charges.

By the way have you seen what an ass I look with my specs off? an owl do you say? Yes, I think I resemble the owl more—I prefer to be an owl of course—Rather. Comparatively speaking, you know.

Need I trouble you—(yes, yes I wont) with the troubles of correct prescription, if even they are correct, the days of atropinised eyes with coloured haloes round lights and all that you can read are Wall Posters, the nervous first days of glass-ship, the eyeaches, and heartaches of a mediocre frame and a mediocre prescription; the great grief of the first loss, the flaws in the new comer, and so on and on in an unending series of little mishaps and miseries.

But before we part, my friend I think I will be in the I. M. S—I will get it easy, you know—and professor of something—medicine surgery or ophthalmology even,—and then principal and finally S. G. (Oh! where is that chap? O Gone I see! I really must get those glasses of mine)—but for my Eyes.

Good Morning! Have you Shaved?

I quite envy our girls.

It's not their stipends rich

It's not their beauteous curls,

Or knowledge how to stitch

Or the nice room they have got

Or their books they have not bought

Or their chins—their smooth beardless chins

For mine is hairy—and so are my shins.

Of all the ails that man is heir to
 (And now in modern days the fair too),
 There is one that leads the rest :—
 To satisfy society's taste
 Poor man ! he shaves in haste
 For, only then he "looks his best."

In fact, when I was but a tiny boy
 I longed for whiskers with which to toy
 But now they mar my physiognomy
 I wish they grew in my mouth or ev'n in my tummy.

I wake up on a misty morn
 I know all polished folk will scorn
 My grizzly gray unshaven face
 I meekly bow my head to fate
 And soap my chin to lend it grace.
 Although I know it's awful late.

Ere I have done soaping the right
 The left has quickly dried up quite
 I brush again in angry haste
 —And my ! how rotten soap suds taste—

And then with trembling hand I hold
 —O man it's misery untold
 The rusty razor midling sharp
 To my face—The steely harp
 Twangs clear as from the face the hairs depart
 But also ! there's no music in my heart.

I frown with pain and bite my lips
 As oft my skin the razor rips
 Until at last I emerge out
 (Though bleeding slightly near the snout.)
 Victorious without a doubt.

(Author of In-augural Struttings)

Miscellany

The National Congress

The whole of December was a month of over-activity to all our students. The city was busy with the National Congress and we hardly sat to read our books. The service rendered by the Medical Volunteers was splendid and it was very much appreciated by one and all.

The Far Eastern Association of Tropical Medicine

Seventeen of the foreign delegates of the above association arrived in Madras in December. A large number of our students were present at the Central Station, long before the Calcutta Mail arrived, with garlands and bouquets to honour the great men. Those who arrived were, Drs. Shiga, D'Herelle, Madsen, Gautier, Hesier, Rosedale, Chedt, D'corta, Hermant, Ishimitsu, Kiriboyashi, Morishta, Prompnas D'Rook, Jakana, and Degeller. Dr. Shiga impressed us most, and we felt that we saw the living personality of the discoverer of Bacillus Shiga. He is a short man of about 4 feet, with a trimmed moustache. He could just talk English to make himself clear, but slow and most of our questions were answered by him either by the shake of his head or by the words 'Yez' or 'Nau' Next. D'Herelle whom we heard of as the author of the "Macrophage" attracted our attention. He is tall, and has the cut of the French beard and moustache. Students surrounded each of the distinguished visitors and had hardly given them time to breathe after the long journey.

Though the delegates had a crowded programme to go through, they were good enough to accede to our request in coming to our College. Some of us who were 'interned' in the Govt. Hospital for Women and Children had the good fortune to come into close quarters with them. They spent a jolly good time with us in taking snaps of the hospital and students—particularly our lady students—and they offered themselves to be snapped by one of our amateurs. We are glad to publish one photo among the many we have—as our Frontispiece in this Magazine. We have heard Professor Shiga saying in his short talks with us "that he is extremely

lucky to visit this hospital," and we really felt proud that we belong to such a premier institution.

They came to our College—where a large gathering was anxiously waiting—at about 3 o'clock. Our Principal Lt. Col. Hingston and his staff received them and led them to the dais. On behalf of the College Association the following address was read by my colleague.

"To

THE DELEGATES

OF THE FAR EASTERN ASSOCIATION

OF TROPICAL MEDICINE.

Sirs,

We, the Students of the Madras Medical College, beg to offer you a hearty welcome on the occasion of your visit to this capital city of the Southern Presidency. We deem it a rare privilege, indeed, to welcome so many distinguished representatives of the medical profession, who have contributed not a little to the furtherance of medical science in the Far East.

The holding of the seventh session of the Far Eastern Association of Tropical Medicine marks a landmark in the progress of medicine in this country and we are sanguine enough to hope that your visit and your invigorating personalities will be a stimulus for the medical research and in adding to the sum total of knowledge available to the medical world.

We hope, that your visit to India has afforded you an opportunity to realise the conditions prevailing in this continent, to understand something of its ancient civilization and its cherished ideals and we pray that you will carry with you pleasant reminiscences of this land of variegated hue.

Once more, we beg to offer you a most cordial welcome and to thank you for the courtesy you have extended unto us by meeting us this afternoon in the midst of your many calls.

We remain,

Sirs,

Your admiring pupils,

The Students of the Madras Medical College."

Then Prof. Shiga and Prof. D'Herelle made short speeches and Dr. Madsen replied to our address. Our College Association really had a unique honour in inviting such great men. Many autographs taken by the students were signed by them.

Health Week in Madras

This had engaged our attention for some days. Some of us had the great pleasure and privilege to assist the organisers in running the show. The following is an account published in the *Madras Mail*, is worth reporting in our journal—as the Patron and Vice-President of our Association and several of our Medical men were no less responsible for the success of the Health Week.

"The fifth National Health and Baby Week was opened on the S.I.A.A. grounds which looked like a city of tents. The Week was inaugurated by Lady Goschen. There was present a record gathering of the citizens of Madras, and they gave a rousing welcome to H. E. the Governor and Lady Goschen as they drove in semistate to the grounds.

They were received by the Surgeon-General and the President and Commissioner of the Corporation of Madras, the Governor's Band which was in attendance striking up the National Anthem. Major-General Hutchinson then introduced to them several leading citizens and members of the Health and Baby Week Committee.

Major-General Hutchinson requested Lady Goschen to declare the show open. In doing so, he said:

"Year by year the call of the children becomes more clamant, and resonates particularly during Baby Week. In response to this call Your Excellency has always given a sympathetic lead and I am glad to be able to inform you of several facts in connexion with the organisation of the week this year, which indicate a growth in responsive feeling. The Corporation of Madras have given a generous donation of Rs. 500 towards the expenses of the week and have in addition erected a splendid health exhibition at a cost of Rs. 2,500; a tangible demonstration of their continued interest in children. The Madras Branch of the Indian Red Cross Society have once more shown their concern for the welfare of children by a donation of Rs. 1,000, and by the organisation of an exhibit in conjunction with the Madras Maternity and Child Welfare Association. Your Excellency, to all

donors, to the ladies and gentlemen who have worked so hard in arranging the different sections of the exhibition, to the press for giving us free advertisements, to the S. I. A. A, and to our indefatigable Honorary Secretaries, Rao Bahadur Dr. Lakshmanaswamy Moodelliar and Dr. Subramanyam, the Committee of the Health and Baby Week extended on behalf of the children of Madras a very hearty vote of thanks. Viscountess Goschen, I am permitted to announce that the Government of Madras have approved the principle of utilising the existing Maternity hospitals in Madras as centres for teaching and research into the welfare of the pregnant women, the causes of infant and child mortality and the physiology and pathology of the growth and development of the child. It is my personal hope that one of our senior Secretaries will take a prominent part in this important development. May I ask you, Lady Goschen, graciously to declare the Week open.

Lady Goschen

In acceding to the request, Lady Goschen said that it had given her very great pleasure to come there once again and see for herself the wonderful progress that had been made. She thanked the several donors and also the Corporation of Madras for all they had done in connexion with the Health and Baby Week. In conclusion, she wished the Week all success and said that it gave her great pleasure to declare it open. (Applause.)

The President of the Corporation (Dewan Bahadur G. Narayanaswamy Chettiar) proposed a hearty vote of thanks to His Excellency and Lady Goschen.

Among those present were Mrs. Hutchinson, Mrs. Devadoss, Mrs. Veerasinghe Chinnappa, Rao Bahadur Dr. A. Lakshmanaswamy Moodelliar, and Mrs. Lakshmanaswamy Moodelliar, Captain Hesterlowe and Mrs. Hesterlowe, Colonel Russell, Dr. Lazarus, Dewan Bahadurs G. Narayanaswamy Chettiar, Venkatnarayana, Dr. C. Natesa Moodelliar, Dr. Govinda Pillay, and others.

The Exhibits

There is a large number of tents pitched in which various institutions, Government and private have arranged several exhibits of a very interesting nature. The *Ophthalmic Hospital* has put up some specimens, models

and pictures indicating the importance of looking after the diseases of the eye and the enormous extent of blindness in this country. The *Government Hospital for Women and Children* are demonstrating their numerous activities in five tents. The infant mortality statistics which are graphically described are very interesting. It is noteworthy that the infant mortality rate in any district in this Presidency is higher than that of any of the European countries whose statistics are also recorded. The figures for the different divisions in the city of Madras show that nowhere was it less than 200 per thousand. The lowest rate was recorded at Chepauk while the highest was at the Esplanade division. Maps giving figures for the several districts and Municipalities are also shown.

The anti-natal clinics section attracted a great deal of attention. Coloured posters showing the different activities of anti-natal clinics are graphically described.

The *X-Ray Institute of the General Hospital* have arranged their exhibits in two tents in one of which some very interesting skiagrams are placed while in the other X-Ray apparatus is displayed. The Girl Guides are occupying the adjoining tent, which forms an attractive feature of the exhibition. Under the able guidance of Mrs. Conran Smith and Miss Fern, a number of Indian Girl Guides were seen actually engaged in cooking in an untidy as well as in a clean kitchen and in demonstrating the several other activities associated with the Girl Guides movement.

The Maternity and Child Welfare Association and the Red Cross Society are responsible for an exceedingly attractive stall and Baby Welcome. The *Hygiene Department of the M. M. College* has arranged a large number of specimens and slides in two of its tents. The *King Institute of Preventive Medicine* under the direct supervision of Major King is demonstrating the many useful activities of the Institute. The Veterinary College is responsible for an attractive show pointing out the danger of diseases communicable through animals to man.

The public health exhibitions proper was held in beautifully decorated stalls by the side of the Moore Pavilion. On the one side the *Department of Public Health* have arranged their propaganda materials and on the other the Sanitary Engineer to Government has put up a number of models showing water works, drainage and model latrines. A tube-well has also been dug in the ground. In the former section

several charts and maps indicating how cholera and other diseases spread from pilgrim centres to several other places in this Presidency as well as the death rate were exhibited. They were prepared as a result of intense work on the part of Colonel Russell, Director of Public Health. The *Tuberculosis Hospital* under the supervision of Rao Bahadur Dr. Kesava Pai has exhibited a number of attractive posters giving the life history of tubercular patients and the methods of warding off the disease successfully. The Corporation of Madras have arranged a very large exhibition showing graphically the activities of the health department, child welfare department, education department and stores department. In the first department different diseases are being treated like malaria, tuberculosis, cholera etc.

A large number of models have also been put on the fore giving at a glance an idea of several necessities of public sanitation and hygiene. The Child Welfare Superintendent (Mrs. Deanesan) has put up in a number of booths exhibits bringing out the activities in baby welfare centres milk depots, child welfare centres, etc. The Lady Superintendent of the Education Department and the Educational Officer have arranged an interesting exhibition indicating their activities in the Corporation model schools. Several models made by pupils have been exhibited.

Outside the public exhibition pandal numerous stalls have been arranged by commercial firms, the most attractive of which the Nestlé's Co's booth where how a cow should be milked is being demonstrated. The Glaxo Co., have also put up an artistically decorated tent while the Horlicks Malted Milk Co., have arranged their products in an adjacent tent. It is understood that these firms have volunteered to supply free of charge food stuffs that may be required during the Baby Week for any children.

H. E. the Governor and Lady Goschen were garlanded at several places. It is reported that the distinguished visitors expressed satisfaction with all they had seen and remarked that the efforts made by Dr. A. Lakshmanaswamy Moodelliar, Dr. Subramaniam and Dr. Govinda Pillai in organising the exhibition were splendid.

We understand that the appointment indicated by the Surgeon-General in his speech goes to Rao Bahadur Dr. A. Lakshmanaswamy Moodelliar, the popular Assistant Superintendent of the Maternity Hospital."

We also join the chorus of congratulations showered upon our Vice-President Dr. Lakshmanaswamy Moodelliar on his splendid services rendered to the Health Week.

Madras Water Supply

At present this has been engaging the attention of many people in Madras. The following is an abstract of a paper on the "Failure of slow sand filtration in Madras City", its causes, and the measures recommended to obtain a satisfactory water by J. W. Madeley,* M.A., M. Am, Soc. C.E. etc. is of some interest to us.

Slow Sand Filters.

The Madras Water Supply is obtained from the Red Hills Lake, which is liable to gross pollution, from the villages and large areas of cultivated land on the 1,000 sq. miles of catchment. The water, as taken from the Lake, must therefore be considered potentially dangerous and the City has to rely entirely upon purification works for a safe water.

Slow Sand Filters have been installed to purify the water, but unfortunately experience has proved that they cannot be trusted to produce a safe water. The filters remove a large amount of suspended organic matter, and a clear water is produced, but bacteriological purification, though it may be good for a time, is liable to break down. The cause of the failure is to be found in the vegetable organic matter in suspension in the water delivered to the filters. Some of it is solid and can be separated out by settlement. A portion of it may be seen as flakes or flocs floating in the water. When removed from the water these flocs disappear leaving a brown smear composed of matter so fine as to be colloidal in character. This causes trouble, because however great the care taken to produce a good filtering skin some of the fine material finds its way into the filtering sand, and the frequency and amount of washing is greatly increased, but worst of all is the production of $S H_2$ which rises and breaks the filtering skin, while its presence in the filtering water renders chlorination impossible on account of the large doses of chlorine required for sterilisation, and the disagreeable taste produced.

The conclusion reached after many experiments was that Slow Sand

*He is a member of the Madras Govt. Water Filtration Committee and is in charge of the experiments at the Madras Water Works.

Filtration by itself could not be trusted to render the Madras water safe and it became necessary to determine the best way of purifying the water while utilising the existing work to the fullest possible extent.

Semi-Rapid Filtration

Time and temperature are factors in the formation of SH_2 . The slower the rate of filtration and the higher the temperature, the greater the production of SH_2 .

The temperature is a factor which cannot be controlled. The rate of filtration can be varied, and it therefore appeared that, provided a sufficiently clear water could be obtained, a higher rate of filtration might produce a water which was capable of being sterilised by chlorine.

Accordingly, two experimental filters were constructed. One was used as control and was worked at a rate of 4 ins. vertical per hour; and the other as a Semi-Rapid Filter at 8 ins. vertical per hour. The conclusions reached were that with the Semi-Rapid Filter:—

- (1) Filtration rendered the water sufficiently clear for potable purposes, though not so clear as did the Slow Filter.
- (2) Considerable bacteriological purification took place, but not sufficient to render the water safe.
- (3) That the reduction in organic matter is usually sufficient to allow of chlorination without the production of disagreeable taste.
- (4) SH_2 was never detected, though it was present in the filtrate from the Slow Filter.

Other experiments showed that 6 ins. was the limiting rate of filtration at which SH_2 was formed with the Madras water, and that at higher rates it was not produced.

These conclusions are of the greatest importance, as they show that, by increasing the rate of filtration, it is possible to obtain a clear water which can be sterilised and thus made safe.

Unfortunately, mechanical difficulties rendered this method impracticable. The fine matter in suspension in the water, finds its way down into the filtering materials, and consequently Semi-Rapid Filtration is impracticable without pre-treatment, on account of the large amount of washing required, and the impossibility of carrying out this washing at reasonable cost and with sufficient speed.

This conclusion points at once to the advantage of Rapid Filtration where the quantities of filtering materials are very much reduced, and arrangements can be made to wash them in place.

Double Filtration

It was thought that a combination of Rapid Filtration and Semi-Rapid Filtration might produce a potable water which could be rendered safe by chlorination, and an experiment was therefore made, using as a Rapid Filter one of the author's sand washers, with flow reversed.

The Water was passed first through the Rapid Filter at a rate of 160 vertical ins. per hour, and then through the semi-Rapid Filter at a rate of 8 vertical ins. per hour. The results were not satisfactory because a large proportion of the fine organic matter passed through the Rapid Filter and into the filtering materials of the Semi-Rapid Filter on which no satisfactory skin was formed. The conclusion reached was that Double Filtration would not be satisfactory unless alum was used, and previous experiments had indicated that if alum was utilised with the Rapid Filter, then no second filtration would be required and the Semi-Rapid Filter might be eliminated.

Methods of Pre-treatment

Experiments were also carried out on different methods of treatment with a view to produce a water suitable for Slow Sand Filtration. These included

- (1) Alum treatment, with and without storage.
- (2) Excess Lime treatment.
- (3) Aeration.

Of these methods the addition of alum followed by storage proved the most likely to give satisfactory results as a pre-treatment to Slow Sand Filtration.

Method of Purification Recommended

The experiments had clearly indicated that Rapid Filtration was the correct method of dealing with the Madras water. The high cost of installing this method, owing to the necessity of additional pumping plant and tanks, and the high running expenses due to the cost of alum and pumping were the principal reasons why it was not recommended at an early stage. Finally, a system of Rapid Filtration was evolved and recommended, by

which two of the existing Filters, Nos. 15 and 17, were to be converted into Alum Mixing Tanks, and one Filter, No. 16, into 14 Rapid Filters, and the remaining 14 Filters were to be emptied of filtering materials and used as Sedimentation Tanks previous to Filtration.

The water should be passed through properly graded sand, at a rate of 100 vertical ins. per hour, alum being added after every cleaning only for so long as might be necessary to form a film which would render the sand an effective filtering agent. A chlorinating plant to be installed and to be used where required.

Special Features

The method proposed differs from the mechanical filtration process, as usually practised, in the following respects:—

- (a) Low Head.—The head available would be limited to 6 feet to avoid additional pumping.
- (b) Comparatively Slow Rate of Filtration.—To prolong the runs and increase the quantities filtered between successive washings.
- (c) The Filters will be Open.
- (d) The Use of Settling Tanks.—Though not always considered necessary, Settling Tanks are considered essential in the case of the Madras water, on account of the large amount of organic matter in suspension, and the large proportion which can be removed by simple sedimentation; the existing filters should serve the purpose admirably. The facility for chemical treatment provided by the tanks would be of the greatest value during abnormal conditions.
- (e) Economy in the Use of alum.—The upkeep cost depends largely on the quantity of alum used. To reduce this to a minimum it is intended to use plain sedimentation as far as possible, and to add alum in the Alum Mixing Tanks, so as to form a film on the filters; when a filter is well filmed the addition of alum would be discontinued until the film should require renewal or it should become necessary to clean the filters. By this method it is hoped that the alum dose may be as low as $\frac{1}{2}$ grain per gallon of water filtered. The low head and low rate of filtration are factors favourable to this method of "intermittent filming," as it may be called, for they cause less burden on the film than do the higher heads and greater rates of filtra-

tion usual in mechanical filtration. Success has been obtained on these lines in other places in India.

Conclusion

The writer stated that the experience with the Madras water leads to the conclusion that every community taking water from a potentially dangerous source, should have a second line of defence—such as a chlorinating plant—in addition to filters.

This is, the trend of modern water purification practice, and is well exemplified by the latest works of the Metropolitan Water Board.

K. NARAYANAMURTHI.

U. T. C. Notes

The short term is a very busy time for a medical student and to add to this there is a recent order of the Head quarters that all company parades should be in uniform during morning hours. Hence we could not have as many parades as we desire. It is very difficult to get together all the men in the company when most of them are attending classes in the college or clinical work in the several hospitals in the city. If any provision is made in the college to supply them with some lockers where they can keep their uniforms and use them whenever necessary, the difficulty can be solved to some extent.

* * *

The company is really handicapped for want of funds. In a voluntary corps like this, expenses necessary to maintain the efficiency of the company cannot be met by the students. If the U. T. C. does not pay, the college will have to, as the company's good work is to the credit of the college. We request the principal to get some money sanctioned for the purpose.

* * *

Every year it has been the custom to celebrate the U. T. C. Day and this year it may fall during the second week of February. It is proposed to act Sheridan's Pizzaro on that day.

* * *

Our Company Officer Lt. M. G. Kini, M. C. who has been with us for the last 3 years is leaving us for England on study leave. Those of us who have the privilege of knowing him intimately realise what an amount of interest he has taken in the affairs of the U. T. C. He understands the student's spirit and never acted detrimentally to his interests. His great energy for work, his strict discipline are some of his characteristics which made him an efficient officer. He helped us a great deal in getting up socials and entertainments and made liberal contributions towards the same. We really feel his going away as a real loss to the company, but we presume his severance from the company would only be temporary. We all wish him *bon voyage* and a successful future.

S. HANUMANTHA RAO, R. S. M.

Editorial Comments

Another Christmas has come and gone and a New Year has begun. We have all tried to forget our old griefs, disappointments and prejudices and have made solemn resolutions to repeat none of the old mistakes. We wish our readers and sympathisers health and happiness in the New Year.

* * *

The 1st M. B. ; B. S. Examination under the new regulations was held in December last and out of a total of 149 candidates who sat for the examination, 50 were successful. These results are creditable to all concerned and while congratulating the successful, we extend our sympathy to those who have been unlucky. We wish them all success on the next occasion. Since hereafter the failed candidates have no loophole of escape like the old L. M. & S., they have now to make up their minds to work harder and try their luck at the next examination, a few months hence. Meanwhile the failed ones are permitted to take the classes for the 2nd M. B. examination and it is realised, that while thus employed they would have less time than before for the study of the subjects in which they have failed. There are many who think that the so-called "Provisional system" should be barred up to the end of the second M. B. examination, and other Universities in the Presidency are already considering schemes for its abolition. We cannot help confessing our sympathy with the movement, for in the interests of our students who are to be the future leaders of medical thought in the country, concentration of effort on the subject in hand, more especially in the early

years of medical education, is essential for the training of a truly scientific mind.

* * *

Soon after the publication of our last issue we had the privilege of attending in the Medical College hall a meeting of the local branch of the British Medical Association, at which Lieut. Col. Bradfield, I.M.S.; delivered an important address on "Medical Education" in general with special reference to local conditions. His address was timely, eloquent and edifying and dealt with the living medical problems of the day. As we have already mentioned in these columns more than once, the greatest problem of the moment in Madras is the question of unification of standards, coupled with which is the abolition of the L. M. P. class. There are two aspects to this question; the professional and the lay aspect. The profession would demand, in the interests of science, that the education should be of a sufficiently high standard and would not regret scrapping the L. M. P. as it is at present. The lay public, which feels the want of sufficient medical men and is accustomed to patronise largely the practitioners of Ayurvedic and other indigenous systems would demand a sort of "mass production" of medical men whose market value would not be high.

We are in a transition period, which is bound to be characterized by many a compromise between the actual and the ideal. Hence the compromise we suggest is—"Drop the L. M. P. Divert these funds for better provision of the existing medical colleges and for better organising of and better instruction in Ayurvedic colleges." The former require their scientific and research departments to be considerably strengthened. The latter would be infinitely more useful to the public, if they are

taught, as part of their equipment, the refinements of western medicine specially with regard to diagnosis and surgery. Remembering that the Ayurvedic doctors are about eight times as numerous as allopaths of all types, we consider that this is the cheapest and quickest method of bringing help to the suffering public.

* * *

We had the privilege of welcoming in our midst a number of delegates to the Far Eastern Congress of Tropical Medicine which assembled in Calcutta in December last. They came from far off Denmark, France and Japan, besides other countries. Some of these had been attracted by accounts of the beautiful temples and ancient monuments of Southern India and no doubt were greatly impressed by the magnificent hospitals of the City which have been the pride of Madrasedes for over a generation. A Representative Local Committee of Reception had been organised and a dinner was arranged in their honour at the magnificent Banqueting Hall at Government House which had been graciously placed at their disposal by his Excellency the Governor. Over a 100 people sat and partook of a sumptuous dinner which had been provided for the occasion. Geniality and a spirit of camaraderie were manifest all round. We felt that medicine is truly international and transcends geographical and racial boundaries. Dinner over, speeches were indulged in and in general terms, the Indian speakers while welcoming the guests deplored the unsatisfactory conditions, sanitary and scientific, of medicine in India; while the visitors expressed their pleasure at the visit and great sympathy with us in our backward condition; we wondered when people would cease sympathising with us, for, certainly, it is not an enviable position to be an

object of universal pity. And we wondered when our land would attract visitors intent not only on seeing our glorious past, the beautiful temples of old, but also our equally glorious present in the sciences and arts of modern life. There is no doubt these periodical exchanges of visits do a great deal of good to the countries concerned; but we could not help feeling that these visitors from foreign countries would have greatly appreciated being shown, when visiting hospitals, cases of scientific interest.

* * *

We have to record an interesting conference of the independent medical practitioners of the city which took place on the 31st of December in the Congress Nagar under the presidency of Dr. B. S. Malliah. Among the various resolutions passed at this conference, the one of greatest importance is the proposal to substitute paid by unpaid or honorary officers in the Government Medical Department. A scheme like this cannot but appeal strongly to the imagination of those who have to supply the funds for the present salaried staff i.e. of taxpayers, but the latter, who also employ very large numbers of paid officers for looking after the various other departments of their Government, have to be thoroughly satisfied that honorary service will be rendered efficiently and in every part of the presidency when required. Our profession is truly a philanthropic one, for you seldom hear of a practising barrister offering to work as an honorary High Court Judge, or of a private architect offering his services as an honorary Executive Engineer during his leisure hours. It is also proposed that salaried Government Medical Officers should be prohibited private practice. Holding no brief for any class

of practitioners, we however think that no medical man should be deprived of his right to minister to the sick as he likes and be rewarded for his labours according to his merit. Modern tendencies are in the direction of barring practice to those engaged in the teaching of purely university subjects in medical colleges; but to those who are engaged in the teaching of clinical subjects, medicine, surgery and midwifery with their specialities, there can be no question of prohibition except in the sense that each should strictly limit his work to the speciality concerned. Take for instance the case of any senior surgeon or physician attached to the large hospitals in Madras. It could not be gainsaid that his experience in his own speciality is very considerable and the public as well as the independent medical profession being aware of this fact frequently seek his advice in cases of difficulty. If such an individual is debarred private practice, everyone concerned would be the loser and we do not see the wisdom of such proposals at least in the case of the senior members of the staff. As regards the junior members of the staff the question of prohibition may be considered, but some amount of compensation in lieu of practice will have to be also sanctioned. We do not think that for many years to come the question of prohibition of private practice by government medical officers, or the curtailment of the salaried staff or their replacement by Honorary personnel, could be seriously considered by the authorities and the only question that the government or the public could immediately devote their attention to, is to enquire if any irregularities exist in the present management of government hospitals. This could no doubt, be enquired into by a committee as recommended by the conference above referred to and we welcome such an inquiry for we feel sure that very little in the way of irregularity exists in our hospital system.

Our hospitals are rendering invaluable services to the public and to judge from the over-crowded conditions of the wards and the long waiting lists now becoming so common, need of the hour is for more hospital accommodation. There is no question of the popularity of these institutions and we hope, therefore, that any inquiry ordered by the authorities would be so arranged and conducted and action taken thereon in such a manner as not to hamper the great social service rendered by these institutions to the public of the presidency.

* * *

We are glad to say that our Surgeon General is trying to improve and modernise the teaching of medicine and one of the important changes effected so far is to introduce experimental pharmacology as a subject to be taught. It replaces the old materia medica partly. We are fortunate in having secured the services of Dr. J. C. David, M.B.B.S. for teaching this important subject. He had been deputed to Calcutta by the Government under the advice of the Surgeon General to study the methods adopted for teaching this subject effectively. We are certain that Dr. J. C. David will give a good account of himself and we wish that his department will be equipped without stinting as soon as possible.

* * *

We have received from the president of the Medical Co-operative Society a copy of the rules and regulations. We regret we could not find time to review it. It will be reviewed in our next issue.

* * *

We regret to announce the death of Mr. V. V. Bamford, Military Student of the II year whose photograph is published in the other page. We extend our heartfelt sympathy to the bereaved family.

—————

The
Late Mr. V. V. Bamford



Student II year
Madras Medical College.

In Lighter Vein.

Sparklets.

Practice may not make a doctor perfect, but enough of it will make him rich

* * *

THE PAST, THE FUTURE & THE PRESENT.

At Christmas-time some people think of the past, and some of the future, but, I am sure most of us think of the Present.

* * *

Off Guard.

Matron: "Can you explain why it is, Nurse, that every time I come into this Ward I find you reading?"

Nurse: "It must be those rubber heels of yours, Matron!"

* * *

Turned Down.

John: "Beloved, There is something trembling on my lips——"

Beloved: "Yes, I know: why ever don't you shave it off?"

* * *

Little Helen (rejecting medicine)—I don't want to take the nasty, bitter stuff.

Mother—But how do you know it's nasty and bitter? You haven't tasted it.

Helen —You said it would be good for me.

* * *

"That seems a very intelligent spaniel," said the visitor to the kennels, nodding towards a mettlesome little dog. "Oh, yes," replied the owner "very intelligent". Whenever I say to him, 'Hey, Kim, are you coming, or are you not?' he either comes or he doesn't."

* * *

The doctor had taken the temperature of the stockbroker who lay seriously ill.

"It has gone up to 104," he announced in a solemn voice.

"Gone up to 104!" shouted the stockbroker "Then sell out, man, sell out!"

* * *

Traveller: "It's a nuisance that these trains are always late."

Porter: "But, sir, what would be the use of the waiting-rooms if the trains were always in time?"

* * *

Conscientious Employee: "Could you give me a day off from the office, sir?"

Boss: "What do you want to do?"

Employee: "To commit suicide."

* * *

"What you need, madam" said a physician to a lady patient, "is oxygen. Come every afternoon for your inhalations. They will cost you a guinea each visit."

"There" said the lady. "I felt sure that other doctor didn't know his business! He told me all I needed was fresh air!"

* * *

Friend—I just saw a young man trying to kiss your daughter.

Modern Mother—Did he succeed?

Friend—No.

Mother—Then it wasn't my daughter.

* * *

"I can truthfully say that none of my customers has ever complained of my work."

"What was your work?"

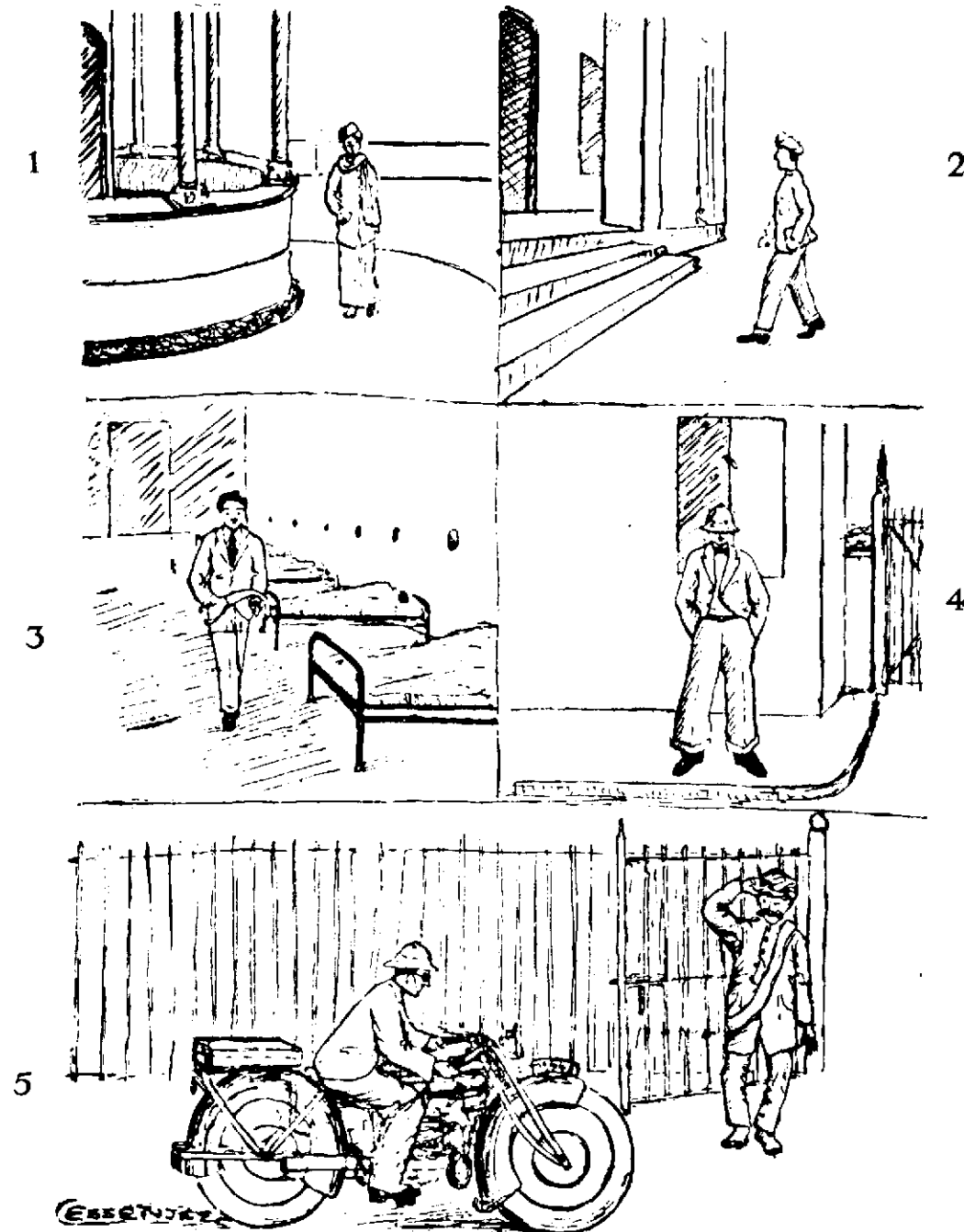
"I am a coffin maker."

* * *

Call the Iceman

A student nurse, inexperienced in reading the clinical thermometer was horrified when, taking the temperature of a patient, that instrument apparently registered 120. She hurriedly dispatched a note to the doctor,

OUR PORTRAIT GALLERY.



The Evolution of the Madras Medical College Student.

reading, "Please come at once. Mr. Jones's temperature is 120." The doctor did not come, but he sent this message, "You had better send for the fire engine. I can do no good."—*The Argonaut*.

* * *

A doctor had a late night call and was just preparing to start out when the telephone bell rang and a man's voice asked him to call at once. "I really must apologise for bringing you out on a night like this," he said. "Oh, don't worry," said the doctor, "as a matter of fact, I have just had a call from another patient in your road, so I shall be able to kill two birds with one shot".

* * *

George had just met his girl at the end of the street, where she was waiting for him. She was looking into a confectioner's window when George made his presence known by remarking :

"Weel, Kate, what are ye gaun to have the nicht?"

She, not inclined to ask too much, replied—"Oh I'll just take what you'll take, George."

"Oh, then, we'll take a walk," said George, as he led her away.

University of Madras

Medical Examination Results

The following is the list of successful candidates at the Medical Examinations held in October 1927:—

First M. B. & B. S. (Old Regulations.)

SECOND CLASS

1. Duraiswami, B. C.
2. Gopal Kini, Mangalore.

Second M. B. & B. S. (New Regulations.)

PART I.

- | | |
|-----------------------------|----------------------------------|
| 4. Ali Kunhi, P. M. | 53. Lakshminarayana Aiythala, K. |
| 5. Ambu, M. | 55. Mahadevan Bharati |
| 7. Atchamamba, K. | 56. Manavikraman Raja, P. K. |
| 8. Balakrishna Menon, A. | 57. Manikkan, Alice Y. |
| 9. Balakrishna Shenoi, K. | 59. Martinus, G. F. |
| 11. Bhagavat, T. G. | 60. Mascarenhas, F. P. |
| 12. Bhushanam David. | 64. Nanjappa, D. R. |
| 13. Chandrasekharan, N. | 68. Pubalarayan, G. |
| 16. Chathurbhujdas, M. | 69. Purushotam Pai, A. |
| 18. Chintan Nambiyar, K. K. | 70. Raghava Ayyangar, S. A. |
| 19. Christadas Williams | 73. Raju Shetti, Y. |
| 22. David, C. S. | 75. Ramachandran, A. |
| 24. Dhanapati, Y. | 76. Ramalingam, E. |
| 25. D'Silva, C. B. | 83. Rangayya Gupta, P. |
| 26. D'Souza, H. C. | 85. Rukmini, C. N. |
| 27. George A. T. | 86. Sadasivam, V. R. |
| 30. Gopalrajan, A. K. | 89. Saradambal, L. |
| 31. Harivittal Rao, P. | 90. Seshagiri Rao, A. |
| 34. Jacob, J. | 94. Srinivasan, P. R. |
| 37. Janaki Ammal, A. R. | 95. Subbaraya Prabhu, M. |
| 39. Joseph Selvam | 97. Sundaram T. K. |
| 41. Kantayya, G. Noble | 99. Sundaresan, E. |
| 42. Kasturirangachari, K. | 100. Thomas, A. |
| 47. Krishna Rao, B. | 106. Velayuthan Nayar, P. |
| 48. Kurian, V. T. | 108. Venkatarama Sarma, M. |
| 49. Kurian, G. | 112. Vethavanam, D. C. Ranita |
| 50. Kurian, K. T. | 113. Visvanathan, P. |

Second M. B. & B. S. (Old Regulations.)

SECOND CLASS.

- | | |
|---------------------------|----------------------------------|
| 176. Sampath Ayyangar, N. | *130. De Lemos, J. B. C. |
| *164. Raghava Rao D. | *125. Bower, Enid M. |
| *160. Oommen Sosa, P. | *123. Balasubramanyam, V. |
| *193. Sundaram, V. K. | *127. Chacko, T. N. |
| *140. Hart Florence M. | *143. Janaki, S. |
| *126. Chacko Anna W. | 159. Oomen, P. K. |
| *192. Sundaram, T. P. | *161. Padmanabha Pannikar, T. G. |
| *188. Sriramulu, G. | *194. Sundari Bai, M. |

* Has yet to pass Materia Medica.

Third M. B. & B. S.

FIRST CLASS.

216. Govindan Kutti Menon
- Distinction gained in
Pathology and Hygiene.

SECOND CLASS.

- | | |
|-----------------------------------|---------------------------|
| 242. Sankaranarayanan Unnithan S. | 231. Natesan, K. S. |
| 207. Arumugam Pillai, K. | 236. Padma, A. S. |
| 220. Itty Sarah P. | 241. Sankaran, N. S. |
| 212. Chokkalingam, R. V. | 228. Muhammad Abdul Hadi. |

Final M. B. & B. S.

PART I

- | | |
|--------------------|-------------------------|
| 251. Eapen, A. J. | 254. Narayanamurthi, K. |
| 252. Koshi Rebera. | 255. Paul, C. R. |

PART II

- | | |
|--------------------------------|-------------------------------|
| 274. Krishna Rao, K. | 280. Muthayya, R. E. S. |
| 263. Ganapati Subramanyam. | 282. Narasinga Rao, Mangalore |
| 261. Chandrasekhara Rro, V. N. | 287. Ramachandran, M. |
| 271. Kesava Menon, M. K. | 294. Sankararaman, S. |
| 272. Krishnaswami, R. | 300. Venkatarama Ayyar, T. S. |
| 276. Madhavan, P. | 304. Verghese Saramma |
| 277. Mathias, M. | |

Second L. M. & S.

- | | |
|-------------------------|-----------------------------|
| *115. Achyuta Menon, P. | *152. Madhava Menon, P. |
| *117. Achyuta Navar, M | 171. Rama Rao, S. |
| 133. Edward, P. S. | +184. Srinivasalu Reddi, N. |
| 135. Ganapati, R. V. | +189. Subbaraman, A. N. |
| 136. Gangadharan, N. | |
- * Has yet to pass Materia Medica
+ Obtained passing marks for Second M. B. & B. S. Examination

Third L. M. & S.

- | | |
|----------------------------|---------------------------------|
| *206. Arul, E. J. A. | *229. Narayana Nayar, V. R. |
| 208. Balakrishna Menon, K. | 234. Nemraja Alva, K. |
| 214. Ganapati, C. K. | 235. Nilakantan Nambiyar, M. P. |
| 217. Govindarajulu, V. | 244. Subrahmanyam, V. |
| 227. Madhavan Nayar, K. | 246. Syed Muhammad Khan Sahib. |
- * Obtained passing marks for the Third M. B. & B. S. Examination.

Final L. M. & S.

PART I

- | | |
|---------------------------|----------------------------|
| *249. Brahmanandam, P. V. | 253. Marthandam Pillai, P. |
| *250. De Rozario, C. F. | *256. Venkatachalam, A. S. |
- * Obtained passing marks for Part I of the Final M. B. & B. S. degree Examination.

Part II

- | | |
|------------------------------|-------------------------------|
| *260. Chandrasekharan, S. | 291. Ramaswam. Aiyar, S. |
| 265. Guruswami, P. | 298. Sankaran, K. A. |
| 270. Karunakara Menon, C. R. | 297. Vaidyalinga Ayyar, P. V. |
| 278. Mathuranayagam, T. | 299. Vedamanikkam Kamala, V. |
| 279. Muhamad Habbilulah. | 301. Venkataraman, L. S. |
| 284. Narayani, N. K. | 302. Venkataramanan S. |
| 289. Rama Rao, A. | |

* Obtained exemption in Surgery & Midwifery for M. B.

The following candidates who appeared for the various examinations for M. B. & B. S. Degree have qualified for a pass in the corresponding examination for the L. M. & S. Degree.

Second L. M. & S.

- | | |
|----------------------------|-------------------------------|
| *137. George, K. | *170. Ramanathan, T. R. |
| *142. Jacob, C. | 172. Ramaswami, K. S. |
| *155. Martinus, Shelagh A. | *182. Shanker Rao, A. |
| †156. Martinus, W. E. | *202. Venkata Subramanyam, V. |

* Has yet to pass Materia Medica

† Obtains L. M. & S. by combining the results of March & October examinations.

Third L. M. & S.

- | | |
|-----------------------------|---------------------------|
| 222. Johnson, A. S. | 232. Natesan, N. |
| 224. Krishna Rao, V. | 233. Natesan, P. |
| 230. Narayanaswami Ayyar A. | 248. Venkatarangam, M. P. |

Final L. M. & S.

PART II

- | | |
|-------------------------|------------------------------|
| 258. Anantachari, M. D. | 281. Narasimha Pandit, T. L. |
| 259. Bappu, K. | 285. Padmanabhan, R. V. |
| 262. Eapen, J. J. | 286. Rajaratnam, T. P. |
| 264. Gopalan, S. | 288. Ramachandran, R. |
| 266. Hari Haran, V. S. | 292. Rangachari, P. |
| 267. Jacob, K. O. | 295. Sundaram, T. K. |
| 269. Joseph, T. J. | 298. Varghese, M. C. |

B. S. Sc. Degree.

PART I

- | | |
|----------------------|-------------------------|
| 306. Seshadri, T. K. | 309. Krishnamurthi, M. |
| 307. Subba Rao, D. | 312. Vijayaraghavan, N. |
| 308. Gopaalan, M. | |

PART II

Second Class

- | | | | |
|-------|------------------------|---|-------------------------|
| Rank. | | | |
| 1 | 309. Krishnamurthi, M. | 4 | 312. Vijayaraghavan, N. |
| 2 | 307. Subba Rao, D. | 5 | 306. Seshadri, T. K. |
| 3 | 314. Rajagopalan, N. | 6 | 315. Sundaran. |

Current Thought Press, Triplicane, Madras.

Stanistreet Products

ALL OF WHICH BEAR THE HALL MARK
OF INTRINSIC MERIT

Drugs,
Chemicals,
Spirituos
Preparations,
Tinctures,
Extracts,
&c. &c.

Leprosy
Preparations
Sodium Morrhuate
Sodium Hydnocarpate,
Sodium Soyate,
E. C. C. O.,
&c. &c.

Over a century of successful trading is an
achievement for any business house.

We have 105 years to our credit

We are the Largest European Firm
of Manufacturing and wholesale Chemists
in the East

Supplies of our Products and other Particulars from
our local Agent,

Mr V. SRINIVASAN,
44, Rattan Bazaar Road, Madras

or

Direct from Head Office,
SMITH STANISTREET & Co. Ltd.,

18, Convent Rd., Entally,
CALCUTTA

When writing to advertisers, please mention this Magazine

Current Thought Press

INVITE enquiries of all classes of
Artistic, General and Commercial Printing

PRINTERS OF THIS JOURNAL

Rates Moderate

Trial Solicited

18, Pycrofts Road, Triplicane, MADRAS.

WELCOME TO ALL ANGEL & Co.,

beg their esteemed Patrons and the General Public to visit their New Establishment Show Room which has now been opened at No. 1, Stringers Street, George Town, where an entire New Stock of all the usual lines of goods they handle will be hereafter available at Their Most Popular Low Prices. This New Shop has been opened in extension of their old Establishment, No. 298, Esplanade Row, which will continue to be carried on as usual, for the Convenience of all Concerned. Your continued patronage is earnestly solicited at either of their Establishments.

298, ESPLANADE ROW, MADRAS.

When writing to advertisers, please mention this Magazine



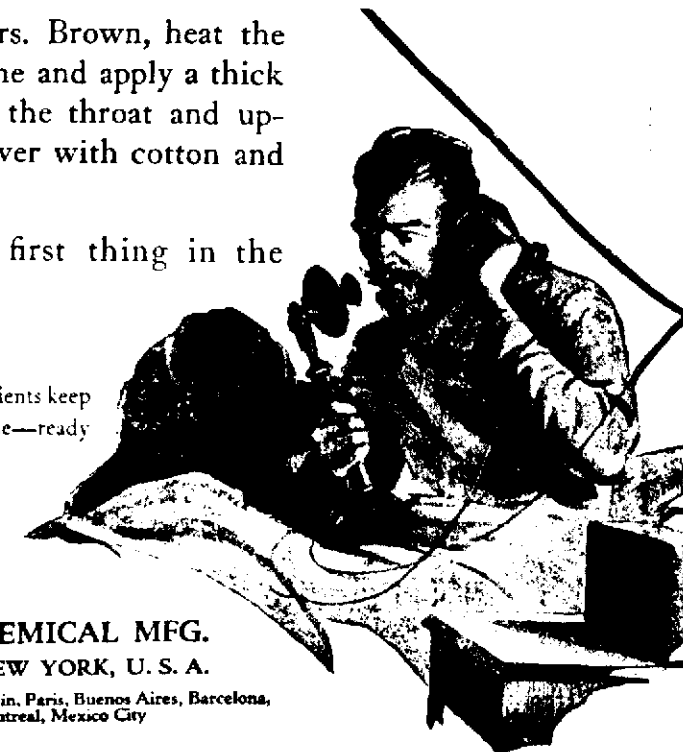
On a
Night
like this!

Yes, Doctor, we have Antiphlogistine
in the house, thank goodness!

All right, Mrs. Brown, heat the
Antiphlogistine and apply a thick
poultice over the throat and up-
per chest. Cover with cotton and
gauze.

I'll call the first thing in the
morning.

DOCTOR, have your patients keep
Antiphlogistine in the home—ready
for emergencies.



THE DENVER CHEMICAL MFG.
COMPANY NEW YORK, U. S. A.

Laboratories: London, Sydney, Berlin, Paris, Buenos Aires, Barcelona,
Montreal, Mexico City

When writing to advertisers, please mention this Magazine

Dr. M. C. Nanjunda Row's

SPECIALITIES

The Great Chamundi's Specific for Cholera

The only Unfailing Cure for the dire Epidemic
Price Re. 1 Per bottle.

Pandaram's Herbal Purgative Oil

The Unparalleled Remedy for infantile Constipation and Indigestion
Price As. 12 Per bottle.

M. C. N's. Anti-Malarial Pills

A Most Wonderful Discovery for the permanent cure of Malaria and its
Sequelæ
16 pills for Re. 1.

M. C. N's Nervine Tonic Pills

The unique cure for Spermatorrhœa, Nocturnal Emissions and for
Nervous and Seminal Debility.
It is a boon for the enjoyment of happy life
Price per phial Rs. 4.

M. C. N's Bathing Oil

Best Cooling Oil for chronic head-aches and certain eye diseases
Indispensable to Lawyers, Students and Brain Workers
(Cooling to the Brain)
6 oz. bottle Re. 1.

Challenge Tooth Powder

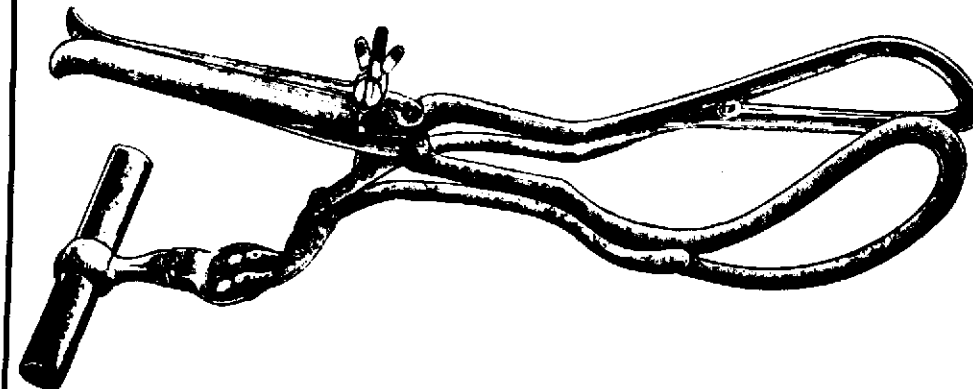
A powerful antiseptic that instantly relieves pain, kills the germs that cause
decay and strengthens the gums preventing tartar
As. 4 per tin.

M. C. N's Eclectic Pharmacy & Dispensary

49, Singarachari Street, Triplicane, Madras.

When writing to advertisers, please mention this Magazine

MIDWIFERY INSTRUMENTS



All varieties of Midwifery Instruments are stocked. English
German and of M's. Down Bros., Ltd., instruments are available.

Milne Murray Forceps with axis traction rods from	Rs. 25 to 70
Nevilles forceps do. do. do.	... 20 to 30
Long Barnes forceps do. do. do.	... 12 to 20
Simpsons Perforators	... 7-8 to 25

Curettes, Vulsella, Specula etc., held in stock.



"S"

CHEST PIECES. "Seetharam"	... Rs. 3.
"Dural"	... Rs. 7-8.

Other varieties from As. 12 to Rs. 5

Can be had at:—

SEETHARAM & CO.,

Premier stockists of Instruments in S. India.

386, Mint Street, (Sowcarpet Post Office.)

MADRAS G. P. O.

When writing to advertisers, please mention this Magazine