THE ANTISEPTIC
1936

SEPTEMBER -33- 9
OCTOBER - 33-10

REGD: No. 9 M. 429. SEPTEMBER, 1936. Vol. XXXIII No. 9

The Antiseptic

A Monthly Medical Journal

Edited by

Dr. U. Rama Rau & U. Krishna Rau, M.B., B.S.

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Editorial & Publishing Offices: 323, Thambu Chetty St., G. T., Madras.

London Office: 8 & 9 Ludgate Square, E, C. 4.

Subscription Rs. 5, Foreign 10 sh. a year. Post paid. Single Copy As. 12. In advance

Index to Advertisements, see page 54.

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Vol. 33 No. 9.] [Sept. 1936.

The Antiseptic

ESTD. 1904.

A Monthly Journal of Medicine and Surgery.

Editors: Dr. U. RAMA RAU & U. KRISHNA RAU, M.B., B.S.

Editorial and Publishing Offices:—323, Thambu Chetty St., Madras.

Annual Subscription Rs. 5. Foreign, 10 Sh. Post Paid.

ORIGINAL ARTICLES

SOME RARE DISEASES OF THE ENDOCRINE SYSTEM AND THEIR SYMPTOMATOLOGY *

BY

PROF. EUGENE DE THURZO'

Debrecen. Hungary.

DISEASES of the endocrine system are more frequent among women than among men. This is particularly true if we consider not only well marked cases, that is, the classical clinical pictures, but also mild forms, the so-called "*forme fruste*", and further the transition forms from normal to hormonal dysfunction and mild endocrine-vegetative neurosis. Because of the race-preserving functions of the female organism the very distinct and accurate regulation in correlative function of the endocrine glands is very complicated and therefore the hormonal functions are more easily altered. The same is true for the vegetative system whose functional regulation is closely correlated with the endocrine system and based by the same means on different synergistic and antagonistic acting component forces. These are the reasons why the female organism more frequently shows well-marked pathological symptoms in the function of the endocrine and vegetative systems and particularly in certain periods of life. On the other hand, the majority of the female sex have at certain ages predispositional tendency for the manifestation of some mild

* From the Clinic for Nervous and Mental Diseases of the "*Istvan Tisza*" University in Debrecen. Director: Prof. Ladislas Benedek. Specially contributed to 'The Antiseptic'.

clinical form of endocrine disturbances and of endocrine-vegetative neurosis. If the function of certain endocrine glands is only very slightly increased or decreased, the individual differences manifest themselves in the kind of reactions and in the functional mechanism of the end-organs ("Erfolg sorgan" in German) of the endocrine system. By "end-organ", I mean the organs in which the final manifestation of the endocrinal function is evident. In such cases we observe variations in the severity of the so-called "*oligosymptomatic*" (Oligo=means few) endocrine diseases. The diagnosis in such cases is frequently very difficult and most of the patients are "labelled" ("etiquette" in French), being called hysteria, neurasthenia, neurosis or psychoneurosis. By accurate analysis and by using more improved and better developed methods of examination we are capable of making a finer distinction in the diagnosis of the endocrine-vegetative neurosis cases.

We can see in just such cases with mild neurotic complaints and with seemingly inconsiderable functional alterations, that the disease cannot be influenced and the complaints cannot be cured with complete success in spite of a rather long treatment. Therefore, I think that we have to expect further development in the field of endocrine-vegetative neurosis by more accurate clinical observation and symptomatical analysis. We shall then have a more sound basis and support and more correct fundamentals for treatment instead of vague experiment.

I am here reporting some cases seen in general practice seldom diagnosed, although not rare, with a description of the clinical pathological picture based upon my observations. It is known that we speak, in cases with a very slight degree of decreased function of the thyroid gland, about *Hertoghe* disease, and in cases of very slightly decreased function of the suprarenal glands about *hyposurronalism* ("hyposuprarenalismus benignus" in Latin). The mild degrees of polyglandular insufficiencies manifest themselves also in very varied clinical pictures. More or less marked forms of those are the *thyreo-sexual insufficiency* of Bocharelt and the pluriglandular infantilism. The mild pluriglandular insufficiency manifests itself clinically in most cases only as a neurosis. Frequently there can be observed only some mild signs of "*partial*" infantilism (for example only partial psychic infantilism) and temporarily a hypofunction of the suprarenal glands. In addition to those syndromes mentioned, the clinical picture shows the "*angiohypotonia essentialis*" of the Italian author, Ferrannini, which denomination is a very

striking one. According to my observations the symptoms of this *angiohypotonia essentialis* appear and are observed by physicians, most often during puberty or in pre-climax and climax.

It is a fact that there are such persons, in whom the intensity variations of some endocrine glandular functions are performed between the normal upper and lower limits, but the same endocrine glands are nevertheless of inferior value. This means that such an endocrine gland is working using all reserve forces with a tense functional intensiveness. Such a function is going on with effort, reaching already the maximal functional accomplishment, instead of the so-called functioning with "*optimum*" *Force*, as is emphasised by many authors. Such persons are not really sick but nevertheless show some peculiarities of constitution, temperament, and personality. These peculiarities and the predispositional tendency for peculiar kinds of reactions and their causes must be sought in decreased function of some endocrine gland or in more of those. Decreased function manifests itself only in certain circumstances. According to my opinion in such cases it is correct to speak only of the "*hypasthenofunction*" of certain endocrine glands which have only a diminished capacity to be adapted for a higher functional effort than normal. The function of an endocrine gland can therefore show three kinds of pathological variations, *i.e.* hypofunction, hyperfunction, and *hypasthenofunction*. ('thenos'=means force, *capacity for effort*). In such a sense we can speak about three different kinds of thyroidal disturbances, *i. e.* the *hypothyroidism* which shows the myxœdematic clinical picture, the hyperthyroidism, which shows as prototype the exophthalmic goitre and the hypasthenothyroidism. The latter type have been spoken of by *Wieland* as hypothyroid constitutions and by *Lery* as hypothyroid temperaments.

The diagnosis of *Hertoghe* disease is by some authors very restricted and by others is used in too broad a sense. Some authors consider as *Hertoghe* disease only the mild forms of myxœdema, the so-called benign myxœdematic cases, and others consider as *Hertoghe* disease the mild *oligo*-or *mono-symptomatic* cases of thyroid hypofunction; that is the hypothyroid constitution for which I have proposed the name *hypasthenothyroidism*. This disease occurs particularly in the female sex in the mentioned life periods, in which the functional requirement and working effect of the endocrine gland have to be increased. Under these circumstances, the endocrine gland is working with a hypasthenofunction and the symptoms of the disease are temporarily manifested.

Hertoghe disease is a benign disease of the thyroid gland. Patients with *Hertoghe* disease are usually small, and rather thick-set, with short thick necks, having short extremities, short thick fingers and sturdy hands with cushioned hand-back. They are usually phlegmatic in nature. Ill-humoredness, clumsiness, and idleness with a tendency toward depression are the characteristic signs of the disease also. The skin of such patients is regularly pale and on some parts of the body, particularly the face, alterations may occur which can be mistaken for *Quincke's* oedema. The most important symptoms are the great idleness and slowness in every movement and the motoric weakness. According to my observations in some periods, in which the complaints grew worse, the patients with *Hertoghe* disease are quite incapable of working for weeks or months, and after this period may be quite well for one half to one and one half years showing only some mono-symptomatic manifestations. The constant finding of decreased metabolism with 10—15% is an important support for the diagnosis. In the clinical examination we may find diminished force of hand squeezing and in some periods sluggish and in other periods normal tendon reflexes. According to my observation we frequently find functional heart murmurs. In addition, we may find signs of the so-called neurohypotonic heart of Zondek. In some such cases Zondek speaks about mono-symptomatic cardial hypothyroidism or about the cardial equivalent of chronic benign hypothyroidism. The blood pressure is often low and the hæmoglobin and the number of red blood corpuscles may be diminished also. The patients have no appetite and suffer from meteorism and other digestive troubles.

Early in *Hertoghe* disease we see the clinical pictures of nervousness, the patient is easily fatigued, there is senility precox, sensitiveness for cold weather, transitory œdemata, uncertain migraine-like headaches, menorrhagias and metrorrhagias, and pains in the whole body. The symptoms of motoric weakness and deficient energy feeling are admitted to the above mentioned symptoms only in certain circumstances (sexual phase or a period of deficient nourishing). If there are other symptoms associated with these we are already dealing with a transitional form of "*forme fruste*" myxœdema.

I am repeating the case of a female patient with *Hertoghe* disease who was observed for a long time by treatment with thyroid tablets. The case is as follows:

N. G. 30 years old No hereditary taints. She had some childhood diseases and two years ago a follicular tonsillitis.

The disease began in August 1929, She felt unable to work because she was getting abnormally tired, and because of pains and weakness in her hands and feet. Her gait is very slow. Sometimes she feels her arms so tired that she cannot lift them. No alteration in speech, urination or defecation. No fever. Present stage: Small, clumsy patient with pyomic body constitution. The panniculus adiposus on face, trunk and pelvis region is increased. She has some degeneration stigmata. Her visible mucous membranes are pale. There is cardiac dullness at the lower edge of the third rib, and the apex of the heart is in the medioclavicular line. No murmurs above the apex, aortic or pulmonic regions, but a marked systolic souffle in the middle line of the sternum. Pulse is regular, 88 beats per minute. Blood pressure 108/80 mm. Hg. There is slight meteorism and sensitiveness to pressure throughout the abdomen. Pupils react normally and cerebral nerves show no alterations. Nerve points, supra—and infraorbital etc. are sensitive to pressure. Triceps reflexes cannot be elicited temporarily and radial reflexes are sluggish. Knee and Achilles jerks are in some periods absent even with reinforcement methods. At other times, she feels better and the reflexes are present. There are no pathological reflexes and alterations in the sensibility. Mechanical irritability of the muscles is increased. The squeezing force of the hands is diminished on both sides according to the dynamometric examination, which if repeated shows an increasing weakness of the muscles. During the time she was under my observation her feelings of weakness and slowness of movement have increased. The weakness in the occipital muscles is so disturbing at times that she cannot hold her head up. In the evening she often has unpleasant pains in her back and her extremities feel cold. Hæmoglobin 80 % (by Sahli Hb. method.). The qualitative blood picture shows a well marked lymphocytosis and mononucleosis. Red blood corpuscles, 3,030,000 c. m. m. Basal metabolism—12%. The electric examination of some muscles is shown in the table on the following page. The complaints of this patient have been cured by the administration of thyroid tablets (0.3 gm. t.i.d.) for the whole time in which she was taking these and for months after such treatments.

It must be mentioned in this case of *Hertoghe* disease that at the electric examination the elicited muscle contractions have been slow and sluggish and appeared only after a period of latency,

and after repeated elicitation (6-10-15 times) showed a total exhaustion or practically could not be elicited. The sensibility for electric stimulation by Galvanic or Faradic current have been increased. Therefore according to my observation on Hertoghe disease we have to pay attention for the diagnosis to the electric examination also.

Stimulated point: Facial nerve common point.	Faradic Current in coil distance.		Galvanic Current in M. A.	
	Right side. 7	Left side. 7	Right side. 1.8	Left side. 1.8
Musculus pectoralis.	Distance—7.10 slow contractions can be elicited after longer latency.	Distance — 8 Slight contraction.	8	10 Slow contraction.
Musculus biceps.	Distance — 7 Slow, contraction getting weaker.	Distance — 7 Slow, tonic contractions quickly exhausted.	4	4
Nervous medianus.	Distance — 6 Slow, tonic contraction.	Distance — 7 Slow, tonic contraction.	2 Totally exhausted after 15 repeatedly elicited contractions.	2.5 Totally exhausted after 10—20 repeated elicited contractions.
Musculus tibialis.	Distance — 7 Slower than on left side contraction exhausted after 7 times repeated.	Distance — 7 After 15—20 contractions no more elicitable.	3.2 Totally exhausted after 10 repeated elicited contractions.	2.8 Totally exhausted after 18 contractions.

The slightly decreased functional disturbance of the suprarenal glands is described as the benign constitutional weakness of the suprarenals. According to the description of Sergent and Bernard the clinical picture consists of the following complaints and symptoms: Headaches, nausea, diarrhoea, tendency to fainting, weakness of the blood vascular system and darker pigmentation of the skin. French authors call such cases "*insuffisience surrenale melanodermique.*" According to *Bauer* and *Pende* the more or less marked adynamia is the most important sign of hyposuprarenalism. In recent years I have had the opportunity to observe some very well marked cases of hyposuprarenalism developed in young girls after puberty. Generally speaking it is important to discover any sign of hyposuprarenalism in cases of neurosis which can be classified only by more accurate

clinical observation. The treatment can be only by this means successful.

The hypasteno function of the suprarenal glands begins to cause gradually developing complaints shortly after puberty. Great and easy fatigability, increased necessity for sleep, neurotic irritability, headaches mostly in upright position, digestive disturbances, loss of body weight, constant low blood pressure and dys—and oligomenorrhea are in the fore-ground. The weakness is very marked and temporarily appears adynamia in great degree. The migraine-like headaches, nausea, vomiting, depression, and an undeterminable indisposition show certain connection with the menstruation periods. The constant low blood pressure is besides the adynamia the most important symptom of hyposuprarenalism. According to my observations it is important that the systolic and diastolic blood pressures are close together, which is the opposite of the *Pende-sign* in hyperthyroidism.

I report two cases of benign hyposuprarenalism as follows:—

Case I. W. E. 19 year old girl. No hereditary taints. Scarlet fever in childhood and influenza several times. First menstruation at 13 years, and since that irregularly, often delayed to 6 weeks. Sometimes amenorrhea for 2 months. With menstruation sometimes abdominal cramps. The onset of disease was in March 1931. Temporarily heart palpitations, great weakness and trembling feeling. Since that time she feels weak and tired and even walks with difficulty. Temporarily in lying down becomes very excited, getting heart palpitation and trembling. She has no appetite. The feeling of weakness and heart palpitation often occur quite suddenly and she has anxiety and moral fear. She has steady headaches. During her indispositions she is trembling all over and is not sure of her movements. Present stage: She is of middle height, somewhat thin, and mild asthenic body constitution. Skin eveywhere on the body slightly brown pigmented. The creole skin color is chiefly on both cheeks and on the region of mammae further in all body bending regions well marked. Mucous membranes are pale. Over apex of heart systolic souffle, over pulmonic and aortic areas the systolic sound grows longer. Pulse softer, regular, 119 per minute. Blood pressure 100/80 mm. Hg. When her complaints are growing worse the blood pressure is lower as 89/64 mm. Hg. The elevation in blood pressure after adrenalin injections occurs rapidly in 1—2 minutes and

afterwards drops below the original value. Lungs show no alteration. Tongue slightly coated. Cerebral nerves show no alteration. Active knee jerks, developing dermography with hypercrinic neighboring joints. Basal metabolism minus 10%. During the whole observation time of 1 and one half years feeling of weakness, adynamia, and decreased squeezing force of hands with dynamometer only 10—15 points. She is bedridden and tired after any exertion. A stage of improvement was brought about in her condition by an injection course of suprarenal extracts and by administration of adrenalin solution 10—25 drops 3—5 i.d. The symptoms could be influenced also during the two years of alteration only very slightly.

Case II.—K. G. 27 year old school-teacher; no hereditary taints; sick for two years; constant tingling in ears and pressure feeling in head. She is very easily tired and all work is difficult for her. She has been treated since the very beginning of her sickness, but has shown no improvement. Recently her head-aches are getting more severe and her chief complaint now is pressure in the parietal region. She is now bad tempered, irritable, and over sensitive to extrinsic influences. She is easily upset and is easily fatigued. She often awakes nauseated. She is somewhat thin, of middle height, showing some stigmata of degeneration. The skin over her entire body is brown-creole colored. There is increased pigmentation of the palpebrae. Her heart sounds are normal. A systolic murmur is heard over the pulmonic area. Regular pulse of 102 per minute. Blood pressure 104/74 mm. Hg. Slightly vivid tendineal reflexibility. During almost two years of observation constant great fatigability, weakness, and adynamic stages. The dynamometric valves for hand squeezing are for limits from 10—30. Now she is unable to work most of the time. Menstruation shows oligo—and temporarily amenorrhea. She has taken Wenkebach powders (Pulv. Digit., Chinidin, and Ext. nucis vomicae), Ephedrin tablets t. i. d. and 10—15 drops of Adrenalin t. i. d. In addition she was given general tonic treatments, sinusoidal faradic current baths, and tonic medicaments. We have had most success in influencing her complaints by subcutaneous injections of suprarenal extract, Cortigen. She also got injections of ovarian and corpeus luteum extracts. Blood pressure sometimes only 83/60 mm. Hg. In such periods the headaches, nausea, and adynamia grow worse. Against the supposed hypotonia in spinal fluid pressure consisting in connection with the vascular hypotonia we administered intravenously 6—10 c. c. of distilled water. We had very good results from these injections.

In both cases the development of the disease was after puberty. The dark pigmentation of the skin, the well marked adynamic states, the constant angiohypotonia, the slightly decreased basal metabolic rate and the observation of many other clinical symptoms over a long time assure without any doubt in both cases of the patient with neuropathic constitution the diagnosis of *hyposuprarenalism*. The treatment of the neurosis by the usual methods was quite unsuccessful. By the ovarial extract and suprarenal cortical preparations in injections, and further the subcutaneous administration of strychninum nitricum in doses of 1—10 mg. succeeded in relieving the complaints at least during this treatment and for some months thereafter. We consider advisable the general tonic treatments, electrotherapy by sinusoidal faradic current, and multipolar baths, air-bath, massage, gradually performed systematic exercises, practising deep breathing, and to administer three times daily 10-10 drops of Adrenalin and Ephetoms' tablets.

It is a very interesting observation in our hyposuprarenalism cases and generally with patients showing a clinical picture of angiohypotonia essentialis that they have a higher blood pressure when prone than when in an upright position.

We can thus explain the fact, that the complaints of such patients get worse while working in an upright position and are relieved in the resting period and when lying down. In cases of well marked angiohypotonia, in the cause of the very unpleasant headaches in frontal region, the nausea, vomiting, etc. the low spinal fluid pressure plays a role as a corollary of the very low blood pressure. In such cases it is best to give intravenous injections of distilled water to increase the low spinal fluid pressure.

SOME PROBLEMS IN VENEREAL DISEASE TREATMENT IN THE MOFUSSIL*

BY

CAPT. C. S. S. SARMA,

Asst. Surgeon, Pollachi.

I PROPOSE to talk to you to-day about some problems that we, in the mofussil, are facing every day in connection with venereal diseases. I do not intend to mystify you in any manner. There are a few, who believe that venereal diseases are the result of one's own folly or imprudence and the victims have none else but themselves, to thank, for all their sufferings. This is a very purblind and miserable attitude to take. It is also extremely suicidal. It is, as though, a neighbour sat quiet and uninterested when perhaps a house at the end of the street had caught fire. All hands must join in putting down the fire, as a flying ember and a stray spark, carried far and away by an ill wind might start a conflagration, far away from the source of the original mischief and the results may be quite disastrous and out of all proportion.

So, it is with the first and foremost of the venereal problems, viz., *its alarming increase*, on all sides and in all intensity. Time was, when people blamed the world war as the most potent factor in the spread of venereal diseases. But in the times of economic depression that followed, the lures of the unadjusted girl and the uninstructed man about town have been no less universal and venereal saturation has been going on in the countryside as well as in urban areas, amongst industrial as well as agricultural populations, amongst the well to do, as well as amongst the daily wage earner, amongst the happily married as well as the ones condemned to a single life. The causes for this lie deep and cannot be probed into their intimate sources.

Two institutions are working in Great Britain for preventing the spread of venereal diseases, viz., the Social Hygiene Council and the British Association for the prevention of venereal diseases. They are diametrically opposed in their principles and methods, although both wish to achieve the same object. One, the British Association, advocates the open sale from all chemists' shops and propaganda by the press, of all methods and appliances for the

* A paper read before the Cuddapah District Medical Association under the presidency of Rao Bahadur Dr. K. Raghavendra Rao, B.A., M.B., C.M., D.T.M., Dt. Medical Officer, Cuddapah, and specially sent to 'The Antiseptic' for publication.

prevention of venereal diseases, as well as contraceptives. The other, the Social Hygiene Council, does not believe in too much openness, as it is prone to abuse. It is argued that the danger of disease and pregnancy arising from illicit intercourse is by far the most deterrent of all correctives that could be imagined as efficacious to protect the young of both sexes. The others argue that such a view is old and antiquated and that capital sentence though in vogue since times immemorial, has not materially diminished the murderous propensities of mankind and it were criminal folly to expose the young to temptation and offer them no advice to escape from the consequences of their yielding to it, which are harmful both to themselves in the first instance and society in the long run. Influential sections of the professions and leaders of the public are ranged on either side and a war is going on in the press and platform as to the superior claims of the one over the other for public support. In India, where marriage is universal, industrial conditions not so completely hopeless as in the west, and where the forces of tradition and culture, operate towards the sanctity and permanence of the marriage union, we cannot take up the controversy one way or the other. We will have to note the fact that both methods are possible and the intelligent handling of the material is all that is required and the doctor, lawyer, teacher and the lay social worker must all be co-ordinated in their respective spheres to bring the maximum amount of knowledge to bear on the subject. It is specially true, that in the large cities of India, the problem is very acute and social welfare workers with the requisite knowledge and moral calibre are badly needed. You will be interested to learn that not long ago the Venereal specialist of the Government General Hospital, Madras, delivered two addresses on the Radio on Venereal Diseases to the general public.

This anti-venereal work is also part of the League of Nations Cultural activity. They have an extensive network of international organization to prevent the smuggling of young women and children into prostitution, to rescue girls from houses of ill fame, to found orphanages and dormitories for fallen women and raise the tone of life in those places once peculiarly designated as red light areas. It will be impossible in the scope of this small paper to deal with the control of prostitution, which is quite different although closely allied to combating venereal diseases. Suffice it to say, the first problem is, do you or do you not want open propaganda in press and platform, free and unobstructed sale of anti-venereal and anti-conceptive drugs, appliances and

devices? I incline to the view that we do want open and scientific guidance and the problem cannot be burked by diluting it with religious or moral dope and concealing its appeal amidst thick layers of unmistakable gibberish, imposing restrictions only to placate some political opinion or party interest.

The second problem that directly arises out of the first is the problem of the "*Venereal Clinic*". There is as much urgency for venereal clinics to be started all over the Presidency, as there is for leprosy clinics, or hook-worm survey or malaria work, or an anti-rat-campaign or bore-hole latrine propaganda or free quinine distribution. But for the innate prejudice with which mankind has accustomed itself to view the venereal sufferer, the lot of the venereal sufferer, would have long ago improved. The mad man in the asylum, the convict in the jail, the leper till of late, were the society's most ostracised beings. Humane treatment has worked wonders in the starting of mental homes and psychiatric clinics, and the criminal in the jail is educated into a gentleman wage earner, and the foul diseases of leprosy and venereal afflictions are now receiving the attention so long overdue to them.

The problem in connection with the venereal clinic is its cost, the agency that should run it, whether it should be voluntary or compulsory and whether it should function separately or in combination with other departments of medicine. In India, cost is a huge bugbear and the Government is approached so often for the various types of medical relief which are usually offered to the public by private agencies, that they find financing even necessary undertakings to stem the tides of racial poisoning a huge burden. The difficulty is increased doublefold in that there is no independent medical profession, till of late on whom the government could depend to shoulder even a part of the huge responsibility to render adequate aid. The existence of quackery especially directed to lie in ambush for the unwary venereal sufferer of either sex, is a real menace in India. From every big village to the most organised city, a hierarchy of quacks dog the footsteps of the venereal victim and it is ten times to one that a man takes resort to or is kept steady and safe in modern methods of treatment. There is a despicable method of some get-rich-quick medicos, which I must here mention and which is but a form of qualified quackery, rendered all the more heinous by the violation of all rules of medical ethics. It is where the patient rules the doctor, where the doctor offers no resistance. Injections will not be given where there is every reason for their

continuance. Operations will be postponed or abandoned not at the discretion of the doctor but at the whims and fancies of the patient or his chief relative. Marriages will be solemnised, physical fitness will be certified to, abjuring truth and honesty, a conspiracy of silence will be put up when everything required that the grave complications ahead should be proclaimed from house tops. Such being the case, private clinics, with an eye to the revenue and working costs and business aspects have no place in a poverty and ignorance-stricken country like ours. Government, willy-nilly or in their stead, the local bodies, should run these clinics. Believe me, when I say, these are vastly far more important and efficacious than even maternity and child welfare centres, for which there appears to be so much solicitude and which are all nothing but irrigating the desert waste if the partners afflicted with incompletely cured or uncured venereal stigma are allowed to reproduce themselves. A huge fund similar to the British Empire Leprosy Relief Fund, the Dufferin Fund, the Radium Endowment Fund and other types of Medical Benevolent Schemes, should be raised and placed at the disposal of Government and run on lines similar to the administration of Red Cross Funds. It is indeed not a question of individual bias or the frightened vision of a venereaphobic who sees and portends the syphilisation of the world. Statistics are slowly accumulating to prove the alarming rates at which venereal contamination is going on and even if funds collected for the cure or relief of lepers, cancer victims, tubercular patients and other afflicted beings are to be properly utilized, a goodly portion will be required to rid the victims of their venereal taint in the first instance. Why not then start clearing the muddier stream from the very source? Clinics should be started everywhere and there should be days allotted to the cure of venereal diseases or their investigation. The practice of allotting two days for leprosy in the week and none for the venereal in most mofussil hospitals and dispensaries is a great drawback. The routine out-patient work which at best is a symptomatic-treatment stunt, highly vitiated by hasty diagnosis, slip-shod prescribing and compounders who have mental reservations regarding the doses and uses of the various ingredients in the prescription, achieves nothing but a nominal register at the end of the year. And the only return which the authorities expect is an increase in number and not the quality of the medical relief which is a very real thing and which the public in the locality are keenly sensitive about, and are quick to recognise, pay for and continue to the best of their light and

leading. I wish the out-patient work of a dispensary was portioned off into particular disease days, like leprosy, syphilis, rheumatism, tuberculosis, digestive, heart and miscellaneous, so that at least the preliminary labelling would have been done by others and the doctor will be able to see in bulk all those who thought that something was wrong with these particular systems which would receive pointed examination and attentions and probably greater diagnostic acumen and better results in treatment. This however, is by the way. The main point is in such clinics financed wholly or partly by Government or local bodies, no charges should be levied for advice, diagnostic tests, treatment, prophylaxis and so forth.

This leads me directly to the discussion of the problem of the *venereal patient* himself. A person suffering from venereal disease is not like any other person having even a graver or more contagious disease. The element of shame and secrecy, the fear of social opprobrium, loss of respect and esteem at home, in the office and amidst one's normal environments, do not act with such far-reaching effect on the victims of any other ailment, however disfiguring and disconcerting they may be. He or she should be handled with care and extreme gentleness but at the same time with firmness and thoroughness. Several countries have invoked the aid of legislation to this purpose. It will read like a romance if the history of legislative methods to combat venereal diseases comes to be written even in the so-called minor powers of Europe like Norway, Sweden and Denmark.

Let me give an example. Syphilis and gonorrhoea are notifiable diseases by every practitioner. just like cholera or small-pox. They are notifiable not by name but by a number. The doctor notes every particular about his patient and also elicits the name of the partner, male or female, who communicated the disease. He sends only the number in his register to the health officer of the District. So long as the party undergoes treatment by a qualified doctor and so long as there is no default before the standardised full course of treatment with tests is completed, the attending doctor does nothing but complete the cure. But if the attendance is discontinued or treatment is perfunctorily undergone, the physician sends further particulars to the health authorities and the man or woman is traced and fined. Treatment centres and prophylactic cubicles are furnished at the rate of one per every 5000 of the population. These propbylactic cubicles are open day and night and any person who wants to use them has to push into the slot two-pence or merely a brass token if poor and the cubicle

door opens and he is let into a place where everything he is likely to require is so pictorially represented on the wall, that self-treatment without the aid of anybody is possible. If any aid is needed, there is one in charge who will attend to it most willingly and courteously without exhibiting undue curiosity. The way to use the soap, dry the parts and dab some spirit and apply calomel ointment and instil argyrol 20 % into the urethra and watch for further signs and symptoms are all graphically illustrated on the wall. It is believed that syphilis has vastly yielded to this early and persistent attack to the extent of 60 % and the other venereal complications are also greatly subsiding with the sole exception of gonorrhoeal and post gonorrhoeal complications which continue to baffle the experts of every country. When will such co-operation be possible in a country like ours between the patient, the doctor and the public authorities? It is said in Sweden, the victim is asked to take a letter addressed in polite language to the he or she disseminater of the disease to undergo prompt treatment and on his or her failure to bring the patient to the clinic, the law is set in motion and fines are levied not for acquiring or concealing disease, but for refusing to get cured and contributing to racial degeneracy, in so unworthy a manner. You will be shocked to hear marriage-proposals being made, by responsible, affluent, even educated parents, because their wards have contracted venereal diseases and should soon be married, before the news gets abroad and likely alliances break away. The acquisition of venereal disease during the wife's absence on pregnancy, delivery or long illness and its perfunctory treatment and concealment is ruining more homes than one has any idea of and is the cause of life-long invalidism for many a mother after confinement. It is time that men and women realise the limitations of the vow of fidelity, sworn into holy wedlock and not make a great fuss, about confessing each others' lapses. It is of course, mental pain of the first magnitude to make a revelation of this nature, between father and son, wife and husband, friends and relations. But one is merely adding insult to injury, if by smugness, a fell disease is implanted and all chances of early treatment are annihilated by downright humbugging and beating about the bush. I have traced many a difficult confinement, puerperal sepsis and post-partum pelvic inflammation and invalidism to the husband's gonorrhoeal infection and imperfect treatment thereof. I should therefore request you to keep in mind that the venereal patient is no more a derelict from the common human path, is more to be pitied than pelted with abuses or treated with

an ill-conceived notion that he got only what he deserved. He should be given every facility to understand beforehand what his stray acts of irregular intercourse may lead him to and also practise prophylactic methods before and after and on failure to surrender himself to society and submit himself to its laws and provisions, as in that remarkable country Sweden, where they say the public health principles are so well understood by the people, that they have achieved an enviable standard in all Europe. Your problem therefore is to provide a decent room, plenty of illustrative charts in the vernacular, attendants of known probity to administer prophylactic treatment and lastly medical men of intelligence, patience and that high quality of zeal, that feels itself called upon to save the race first rather than add some money to one's coffers out of the ooze and stink of the world's worst misery *viz.* venereal disease. How far private enterprise and public support will dot even the big cities in India with treatment and prophylactic centres, remains to be seen.

I was informed by my friend the Madras Venereal specialist Capt. R. V. Rajam, M.R.C.P., M.B., M.S., that Government is contemplating the compulsory opening of such clinics in all taluk headquarters and primarily where the incidence is very high. Now what is a high incidence? Statistics are so unreliable, that many forms of skin diseases are mistaken for syphilis and vice-versa. So many forms of sorethroats while they are due to syphilis are mistaken for tonsillitis, pharyngitis, and laryngitis due to other causes. Stomatitis of syphilitic origin is not well investigated in the mofussil, as well as obscure early stomach disorders, which may be well due to syphilis. Fluid collections in the abdomen, the various forms of ascites and dropsy are symptomatically treated; most mofussil physicians entirely ignore the possibility of a syphilitic cirrhosis of the liver, kidney or pancreas; syphilis of the alimentary tract, so frequently seen in the surgical clinics of surgeons familiar with abdominal work, would have entirely escaped their original mofussil medical attendants. The attacks of Bronchial asthma, suddenly supervening in a previously healthy young man, who had just squandered his fortune after loose women were traced to secondary syphilis and the consequent laryngitis ascribed to tubercle was speedily got rid of under anti-syphilitic remedies. While thus hasty diagnosis and imperfect treatment are adding their quota to the misfortune of the venereal sufferer, statistics that are evolved out of these lightning diagnosicians are entirely vitiating the correct estimate of the spread of the disease, the localities of their increase, the remedial steps to be

instituted and so on. In America no less than in our benighted country is also felt the grave errors of hasty diagnosis, filled up from day to day. They finally decided to obviate its inaccuracy by assigning a *venereal day*, fixing with previous notice a particular date in the month—say 31st May, 1936 and giving wide publicity to it, just as they give to the decennial census to gauge the increase of the population. On that day, every Government, aided, charitable or private institution or even individual is requested to send in a card giving the various types of venereal patients undergoing treatment. The figures are checked with the figures for the year and an approximate idea is obtained. It is said that there is going to be a similar move in our presidency. I believe that this is the simplest way of arriving at some real "figures" and we should all earnestly co-operate to get at some reliable data before we can start work on efficient lines. A huge machinery will have to be set in motion to get these figures and only after realising the extent of the incidence, proper remedial agencies could be started. With the lack of trained venereal experts, the task is rendered very difficult. Even then we are faced with the problem of what is a standardised method of diagnosis and treatment, which even the veriest tyro of a medico, with a 10 days' intensive coaching as in Leprosy, Anti-rabic, Anti-plague or other specialised treatments as in Artificial pneumo-thorax, cataract extraction, dental technique, skin diseases, etc. can be trusted to give the venereal sufferer. The Social Hygiene Council started a world-wide campaign of instruction by sending out Dr. Lees and a Lady doctor to do propaganda for the better understanding and treatment of venereal ailments and the formulation of a simple, intensive and economic way of administering it. The venereal speciality in Madras and in the Mofussil are the direct outcome of it. Some men and women also have been subsequently trained by the venereal specialist. But the mofussil hospitals are not equipped with even the minimum equipment required to carry out these simple lines of treatment. The cost could easily be found but the defects of supineness of the medical officer who does not interest himself in procuring the equipment, fitting it, giving it his own personal attention, maintaining records, keeping abreast of the times by studying periodical literature about the progress of venereal work in other centres and using all laboratory facilities to make the work as scientific as possible are a curse! The situation at present is that there are three or four important venereal specialist centres in the presidency and barring these no systematic attempt is made to study the disease and combat it,

much less to evolve a teaching centre wherefrom post-graduate courses could be organised and the experience broadcast. It might interest you to note that at long last,in Madras, the venereal department is now housed in its own block of buildings and the venereal patients are now for the first time reclaimed from amidst the abandonment to the farthest corners of the General Hospital to the common amenities of hospital existence just like any other patient.

Mass treatment offers a very great problem in the mofussil. Lack of training of the medico is not the least important aspect of it. There is also lack of medicines. Talking of my personal experience, I may say, there is also lack of enthusiasm on the part of the staff, as this throws additional work on them and they do not want to slave away for nothing for anybody in general and most assuredly not for the venereal sufferer. The venereal sufferer undergoes in my opinion, the double torture of ridicule and contempt, even when the medical officer generously institutes treatment free, at the hands of his staff. When drugs fail out, these victims could not be induced to buy even the necessary stuff from the market, for they are not bound to pay for a thing which was given gratis only last week, and they suspect the M. O. or staff to be up to some tricks, to wheedle some money. Even if you institute a particular treatment day, other urgent work, medico-legal or a surgical emergency, an indisposition or administrative work, interferes with the treatment, and unless the ideal of a whole-time venereal specialist, an honorary worker, one for each sex, is secured and drugs and appliances are supplied on a liberal scale, an efficient mofussil venereal clinic will be a far off dream. Granting that such preliminaries are satisfactorily settled, there is yet the question of a standardised treatment.

From time to time the venereal specialists or their co-workers publish surveys and summaries of their research work, as well as the progress they were able to achieve in their routine treatment. For example neuro-syphilis, climatic bubo, congenital syphilis, syphilis of the special organs, were all investigated in Madras, Vizag, and Madura. Lympho granulomainguinale especially was the theme for controversial articles from various experts. Much useful data have accumulated at Madras, regarding climatic bubo and infective granuloma, about the initial lesion and diagnostic tests and curative therapy. From the specialists' point of view these are excellent in their own spheres. But what we want in the mofussil, where a phagedenic ulcer, an infective granuloma, a cancer penis, all receive the same sort of

attention or indifference, with a stray shot at an injection or two of Neosalvarsan, or perchance bismuth, throwing entirely to the winds microscopic methods, is a standardised form of treatment.

I make bold to say that the one or two injections of neosalvarsan so gallantly given at the earliest signs of syphilis, is a great harbinger of future trouble and practitioners should abandon playing with a fell disease like syphilis, if they cannot give the complete treatment.

I am assured by the specialist that this imperfect treatment only drives the spirochætes into the viscera and cerebrospinal fluid and the interior of long bones and organs of special sense. A frank florid cutaneous and muco-cutaneous type, it appears, spares the nervous system. Nothing will be more dangerous than getting into the fool's paradise that initial chancre, a crop of secondary rash, a mucous patch or two, a stomatitis have been got rid of by an injection of neosalvarsan, if the patient is going to default after the lightning cure and bargain for Tabes, optic neuritis, grave mental disorder or moral delinquency and various types of vaso-motor disturbances in the brain. The problem therefore is whether to treat the patient completely or not touch him at all. The Indian mind is loath to believe in the continuance of a disease when its most obvious signs are disappearing or have disappeared. Intravenous therapy is a double edged sword. It quickly advertises the results but at the same time sensitizes the victim, if he is not to complete the course.

I would suggest the more extended use of the intramuscular preparations of arsenic, like the Myosalvarsan and sulfarsenol, along with bismuth, simultaneously. Even bismuth alone persistently given in the mofussils, when the supply of neosalvarsan has failed, has produced very gratifying result as the cure is slow but sure; the patient is on the expectation of a complete recovery and voluntarily continues his attendance, where one dose of N. S. will spirit him away for months. The use of gloves is another feature which is absent in the mofussil when treating venereal cases. Often the mofussil ward boy while dressing venereal sores, is also handling virulent cellulitis and abscesses of all kinds with his ungloved and unsterilised or unsterlizable hands, instruments and dressings. If with this he is asked to irrigate the anterior or posterior urethra of half a dozen urethritis cases, the melee and commingling of infective material from one to another are well nigh perfect. I may be presuming to you a badly-run, tumble-down, ramshackle mofussil dispensary, treating venereal

diseases, but my problem is not to bemoan the loss of furniture or luxurious fitments. I plead for the gloved hand of the medico, to dress the ulcers of venereal origin to take diagnostic materials on slide, pipette or ampoule and to give the lavages, the injections and the minor techniques of massage, dilatation punctures, etc. The ward boy in most mofussil Hospitals is an evil accomplice in ignorantly spreading disease from one to another and when even ulcers most clean, when first seen by the medico, turn out into phagadenic ones and further are complicated by virulent double buboes, I can only attribute it to the accident of the dressing room and the ungloved hand of the ward boy. Similar things could be imagined as happening on the female side of a venereal clinic. Often douching the vagina, a very minor procedure, is credited as a wonderful piece of therapy by the ignorant women who go to the outpatient. Even this is done with small amounts of fluid. without proper sterilization of the nozzles, with antiseptics of very low and practically no germicidal strength and such douching is seldom followed by topical application of remedies, nor the insertion of medicated bougies etc. These evils are the result of the medical man or woman not organising the treatment to the most trivial detail. The great problem is to study thoroughly the needs of a small venereal clinic and organise every detail of it and run it sufficiently long under the medical officer's own personal supervision before entrusting it to others.

The next detail is the sterilization of the syringes. Syringes are no longer boiled in Madras. They are simply immersed in absolute alcohol, washed in sterile distilled water and used again. A batch of three syringes will be sufficient for mass treatment. Needles are rendered more serviceable and last longer under this method. For blood taking a 5 c.c. syringe which is rinsed with boiling white vaseline saves many a repeat specimen for lysed blood. Of course, looking for the spirochætes under the dark ground illumination and Indian ink method or Fontana's stain are possible only with persons who have undergone requisite training. Even these could be easily negotiated if the worker is enthusiastic. But the use of a microscope is extremely necessary for the treatment of gonorrhœa and this leads me to the major problem of gonorrhœa. As I have already mentioned, syphilis is disappearing under the modern methods of treatment in the west. But gonorrhœa is already becoming insuperably difficult to eradicate. I read sometime ago in the medical annual, of a woman who had her cervix amputated for chronic gonorrhœal cervicitis but from whose vaginal vault living gonococcii were introduced

into the tissues to destroy the stains already in the cells which were even then found drug-resistant.

It is thus becoming evident, that gonorrhœa will not be brought under control unless the microscope guides the attending physician every day. The smear is the indication of the progress, the gonococcii present, the number of epithelial cells, their types, the polymorphos and the staining reactions of the gonococcii, the resolutions of infiltrations, the opening and squeezing out gland crypts with choked discharges. Massage of the prostrate gland, passing of bougies, the injections of calcium gluconate, collosal manganese, intravenous acriflavine and vaccines in the declining stages—all these should be instituted and the patient watched so that he does not indulge in sexual intercourse, when the cure is being sighted. The problem is not to aim at a clinical cure viz. the stoppage of the discharge but at a bacteriological cure that there are no germs latent or patent in his urethra, prostrate, seminal vesicles, or in the cervix, Bartholin gland ducts, mouth, rectum, etc. A gonorrhœal stomatitis has also been recognised and described as well as a gonorrhœal proctitis. The problem therefore is to treat gonorrhœa with the aid of a microscope from the beginning to the end and not yield to the patient's clamour to stop the discharge.

The patient must be told that the treatment would take any time between 3 to 6 or even 8 to 12 weeks, that the disease could be got rid of only then. When the disease is diminishing, you provoke a discharge and thus clear up all traces of the disease. Not even the most intelligent and educated person understands the rationale of this procedure and he hurls the epithet of incompetency on the devoted head of his medical attendant and rushes to the nearest quack who doses him with Sandalwood oil, cannabis indica and astringent, coagulative remedies of vegetable, and mineral origin, namely some preparation of organic calcium, of the type of sea-shells, coral or pearl and thus in effect seals up his urethra with concealed gonococcii-ridden discharge in every crypt of his glands and every chink and cranny of his urethral passage. Believe me, there are Ayurvedic and unani decoctions and confections and powders that stop a profuse discharge and that act better and in a less irritating manner than the proverbial sandalwood and san palmetto of time-honoured repute. It is no wonder when the mofussil medico, too proud to handle the venereal sore and inflamed urethra of his clients, prescribes alkaline mixture and a command to his ward boy to "irrigate", with what, how, when and how often, all left delightfully

vague, produces a secondary infected, florid urethritis with excessive discharge, that the poor sufferer should be spirited away by some mealy-mouthed Ayurvedic or Hakim and be doped with opium and sedatives and astringents that really do give perfect symptomatic relief and no further. The aftermath is truly horrible. Gleet of several years duration, cartilaginous strictures, tumefaction of the urethra at the glans even in quite young subjects, sub glandular penile fistula, extensive fistulous tracks, with secondary abscess, periurethral, scrotal and otherwise, elephantoid condition of the integuments, hypertrophied labiæ, with warts, strictures accompanied by piles, fistulæ, prolapse anus and stone, are all met in a nightmare of lost and wasted opportunities to give a perfect cure at some distant time, never again to be recaptured. The havoc caused by chronic, intractable gonorrhœal urethritis can only be seen in the mofussil and when once seen, the conviction is painfully borne home, that all practitioners and students should be well instructed in the art of treating gonorrhœa thoroughly and relentlessly, even as the disease thoroughly and relentlessly dogs the victim and baffles all well-meant measures.

The one great problem is to distinguish whether the attack is an acute or subacute one or only an acute exacerbation of a chronic gonorrhoea of some standing. The next problem is to distinguish what the chronicity is due to. Sometimes it is due to inveterate habits of the patient himself. He will not observe continence, he will use highly spiced food, he will not give either mental or bodily rest and will be leading a dissipated existence, while pretending to undergo treatment and will not be amenable to local treatment. Sometimes the patient reinfects himself from his partner and will not institute thorough treatment in quarters where it is most essential. I have in my mind a certain class of patients, belonging to the lower middle class and the wage earning classes who are the worst offenders in this respect. A man will attend a clinic, with mucous patches in his mouth, a rapidly sinking bridge of the nose, and ulcers on the palate and will be seen smoking a most evil smelling beedi or country cigar and which he will not abandon, preach however much you may. I have dozens of men with morning drop indulging in sexual intercourse, unmindful of this complication. Sometimes the chronicity is due to latent tuberculosis. I know of two cases who developed tubercular arthritis with sinus-formation of the meta tarsus and metacarpus, which had their origin in a chronic gonorrhoeal infection with "Rheumatism", who had their arm and foot amputated but who steadily went

downhill. Sometimes the chronicity is due to switching off treatment from one system to another, to doing nothing, or resorting to Christian science, magic and incantation. Having once diagnosed a chronic trouble in the urethra that is slowly exhausting the patient's vitality, treatment must be directed to build up a decent amount of immunity. For some time general treatment should be given and in this connection the system of indigenous massage with oil inunction and alimentary rest and feeding with rich vitaminous food and gentle diuretics of vegetable origin, go a great deal to detoxicate the alimentary canal, liver and kidneys and there is a speedy control over the disease which can be afterwards attacked locally by various manipulations such as irrigations, instillations and massages with cautery. Often the general treatment should last for periods spread over months. The so called "closed gonococcal focus in the joints, seminal vesicles, the fallopian tubes, ovaries, testes, prostate, all must be dispersed and by gently provoked general treatment, immunity level must be raised. In debilitated and refractory subjects, this aspect offers a very great obstacle indeed to a cure. There is the problem of the venereal disease in relation to marriage, pregnancy, contraception and social hygiene, into which I cannot enter owing to shortness of time. I don't want nor need to be encyclopædic, but you can easily visualise the advice you will have to tender and what situations you will have to meet with in practice, if you have to do your best not only by the patient, but to the unknown factors of the race, culture and religion into which we are born. Beyond the dissemination of helpful literature and confidential talks nothing much can be done at present. The vigilance committee, appointed under the Brothel's Act the rescue homes, the League of Nations Branch for the suppression of immoral traffic in women, the Board of Censors, the Sea Customs Act, the Liquor licensing Board, all these have a common meeting ground and help in the control of vice and vicious propensities which the youth is so helplessly inclined under modern civilization. I can only exhort you to join hands with the workers on these councils and in however small a degree, further their activities with your support.

I now come to place before you the statistics I have gathered in a small place like Prodattur where I started a venereal clinic in October 1933 out of my own accord. I was seeing nothing but venereal disease and its late or early complications in the out-patient departments on either side and the general diseases though no less serious were nothing compared in numbers.

The clinic was not popular in the beginning and patients defaulted after the first injection. In the three years, in all 356 men and 86 women attended the clinic. It was only towards the middle that the patients realised the usefulness of free treatment but owing to several circumstances, chiefly due to lack of drugs and other heavy and urgent work interfering with the treatment days, treatment was interrupted. Yet certain outstanding features of clinical importance were staring us in the face and I give below a sketchy outline of them, which are well worth your further investigation.

The first and foremost was the "*relapsing chancre*". Often without any secondary signs being visible, a patient will have a chancre breaking out in the same spot or in some other contiguous site; this event happening once in two or three months. 15 cases were quite remarkable for this recurrence. The ulcer breaks down and heals again. It has been noticed also in 3 or 4 women patients who had a primary sore in the labiæs. It was found the younger the age of the girl, the primary sore was the first lesion and for some reason or other primary sores were solely confined only to prostitutes. No married woman came with a primary sore. I attribute this to the reluctance on the part of the male to indulge in coitus with an incompletely healed primary sore or infective mucous patches in the mouth or lips or elsewhere, as such things can be obvious to any one and will suggest concealment. The prostitute cannot afford to be overcritical and the younger the victim the more inexperienced she is and also she is more under the duress of brothel keepers who try to make the most out of their youthfulness and consequently harass them into intercourse with every customer. The superstition that venereal diseases are cured by coitus with young virgins, may or may not be responsible for this state of affairs. I believe owing to the slow development of the vagina in the young virgin and the long time taken to accustom it to sexual intercourse, more trauma is caused at the vestibule and introitus and syphilis inoculated thereto by the male and hence the greater incidence of primary sore in young virgins. In older women, the cervix is the site of inflammation. Wherever it is possible, the use of a speculum will disclose the cause of many a refractory leucorrhoea. The infective type of man should usually have a mouth lesion or an incompletely cured ulcer himself, mostly a meatal chancre which when it is not completely healed inside may appear smooth and clean at the meatus. The cervix is the usual source of infection for the man, as well as moist condylometous patches on the

labia anus, mucous patches of the mouth, lips, axilla, groin, folds, etc.

We have learnt to dread the fissures of the mouth and fissures round the anus; especially when they are large, deep, thickened and patulous. They are accompanied by greyish ashy sloughy patches, often moist and full of spirochætes. A mouth full of these, may under betel chewing and dim light and alcoholic stimulation easily spread disease by the hundred and it were well that these are forewarned for they will be forearmed. We have met with rigidity and narrowing of the anal canal without piles or fistula with a thickening and nodular appearance of the mucous membrane and bleeding per rectum being the only clinical sign. Ulcers of the Rectum are thus quite common and require prompt treatment. Very often a history of secondary rash is elicited. The skin is a very complicated entity. It is of varying thickness in varying individuals; where mucous lesions preponderate, skin lesions may be mild or vice versa. In a hot and dry part like Cuddapah, probably secondary lesions are always mixed up with scabies, eczema, furunculosis etc. that at times a rash is either not noticed or not remembered. The youngest age at which a boy acquired syphilis was 14, and that for a girl was 15. The girl in one case was the active seducer of the boy who was a student in a High School, while his father was away in a mofussil station. It is remarkable how precocious even a girl prostitute can be or how suggestive conditions are in modern life. 163 cases of syphilis were treated, mostly with Bismuth and N. A. B. in the secondary stage. Concurrent syphilis and gonorrhoea were 45 in number. Chronic gonorrhoeal urethritis of the intractable type was 43 in number. Congenital syphilis cases numbered 3 on the male side and 4 on the female side. The female secondary syphilis were 40 in number, chronic gonorrhoea were 24. 14 cases of primary syphilis in young girls below 18 were treated.

The routine treatment consisted in giving Bismuth and N. S., if possible at one sitting at a week's interval in addition to local treatment. For gonorrhoea, milk injections were used and laterly vaccines. It was found that the two important festivals in the locality, Dasarrah and Mohurrum, attracted a number of prostitutes and the disease incidence was high, due to alcoholism and other causes of merriment inseparable from gathering of large bodies of men and women, from the neighbouring parts, with the added entertainment of gambling and easy money. It was noticed that gonorrhoeal cases suffered a good deal from

furunculosis, eczema, boils and skin affections of a Hyperkeratotic and exfoliative type. Most married women contracted gonorrhoea after puerperium and the disease was more an endocervicitis than a urethritis, which was practically confined to the nulliparous prostitute and which went on to cystitis, bartholinites and skenitis. The clandestine prostitute who spreads syphilis is almost always having a cervical sore or a mucous patch near the fourchette. Often the repeated acts of intercourse with the diseased person has been known to result in infection than a single, short and simple intercourse with the same person.

Statistics

MALE.			FEMALE.		
Primary syphilis	...	38	Primary syphilis	...	14
Relapsing	...	15	Secondary syphilis	...	40
Secondary syphilis	...	163	Chr. gonorrhoea	...	24
Chr. gonorrhoeal urethritis	...	43	Tertiary syphilis	...	4
Chr. gonorrhoeal Rheumatism	...	26	Congenital syphilis	...	4
Syphilis and gonorrhoea (concurrent)	...	45			
Late syphilis (secondary).		11			
Tertiary syphilis	...	11			
Congenital syphilis	...	3			
Neuro syphilis	...	1			
		356			86

THE MEDICO-LEGAL NECROPSY*

BY

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(Contd. from page 509 of the issue of 'The Antiseptic', Aug. '36.)

IN rare cases, rupture of the kidney, though a retro-peritoneal organ, fills up the abdomen with blood, specially in crushing injuries such as being caught in between the buffers or pressed against a wall by a cart, when the violence causes a tear in the peritoneum. It is common in the vehicular traffic accidents and fall from great heights.

In cases where there is urinous smell after opening the abdominal cavity, attention should be given to either the kidney or the bladder but bladder is the organ whose injury generally gives the urinous smell. Bladder, when full, may be punctured with a violent blow on the abdomen. Generally, the tear in the bladder is due to the fracture in or near the pubic arch, due to blow or accidents of the vehicular traffic when a spicule of bone is driven in, sometimes it may occur due to a fall from a height. The spontaneous rupture of bladder is a myth, specially if there is no organic lesion as stricture of urethra, but still the wall of the bladder should be properly examined for the presence of a disease in the walls and the boundaries, namely the bones. Of course the rupture of bladder is rather rare.

In cases of manifest signs of peritonitis, the whole of the intestine from duodenum (which should be ligated) should be dissected out from its mesenteric attachments. The upper end should be inserted with the mouth of a tap and the whole of the intestine gradually and slowly inflated with the addition of water, and the tear or puncture will be manifest if it is due to either. Of course it is needless to say that these perforations are sometimes too manifest. The position, measurements etc. should be accurately noted. Then it should be slit open along its mesenteric border and the inner coats should be examined to find out any trace of old disease or disorder or injury.

Stomach.—In case of food material lying free in the peritoneal cavity the stomach is the organ which should be examined first. It should be carefully dissected out from its attachments taking as much care as possible not to allow the further

* Specially contributed to 'The Antiseptic'.

escapage of the contents of the stomach. The perforation or rupture of the viscus is possible due to trauma without the external manifestation of injury but common in cases of stab and punctured injuries and also gun-shot injuries. Of course it should not be lost sight of that the spontaneous rupture of the viscus occurs in cases of gastric and gastro-duodenal ulcers and in some cases of cancerous growth. Perforations due to strong acids and alkalies poisoning will have their own tales. In sulphuric acid poisoning, the mucous membrane is black and pulpy, in nitric acid poisoning—yellowish coloration occurs, in arsenic, the organ is highly vascular and congested with a velvety floor, sometimes there is effusion of blood under the mucous membrane. The presence of clotted blood within the stomach without any apparently visible cause should lead the examiner to suspect that there may be fracture at the base of the skull. The smell of the stomach contents gives good deal of informations in cases of opium, carbolic acid, alcohol, hydrocyanic acid etc. The importance of the presence of alcohol in the stomach in vehicular traffic accidents should not be under-estimated. In case of sudden deaths with the history of blow or trauma in the pit of the stomach, no sign either internal or external can be found except some amount of visceral congestion in the area when an opinion as to the cause of death should be cautiously given and it may be said "Death due to the blow on the abdomen is not inconsistent".

In antemortem burns, specially of the abdominal regions there may be matting of the coils of the intestine and the congestion of the viscera. The so-called duodenal ulcers in the case of burns in my opinion is a myth, though it is mentioned in the text books. I shall be glad to have the opinions of my colleagues on this point. I have very carefully examined a number of cases (not a mean number, as the number of burn cases are not rare now-a-days on account of the suicidal or so called 'Snehalata Burns' coined after the girl who set fire to her sari to burn herself to death by saturating her sari with kerosine oil). The only thing, I noticed in these cases specially if the patient had lived for about 24 hours or more after the accident is the congestion of the duodenum. I never noticed any ulceration of the part, not to talk of the perforation. I shall be really glad to have the opinion of all my colleagues who are doing the post-mortem examinations on these cases rather frequently. The statistics of the individuals will help me to come to a definite opinion. In my opinion it is a 'myth.'

Head.—In cases of manifest injuries of the head it should be

taken up first. The dissections should be undertaken in the usual way *e. g.* by an incision from mastoid to mastoid over the vertex of the skull. The condition of the scalp, the amount of effused blood in or around the wound should be noted, along with the measurements of the wound and the description of the wound and the directions of the wound. This in majority of the cases helps to form an opinion as to the respective positions of the assailed and the assailant. In cases of the depressed fractures of the skull mention should be made, whether the brain matter is protruding out of the wound. A word of caution as to the congestion and effusion of blood should be mentioned so that it can be noticed in majority of the asphyxial deaths—violent or otherwise, namely, opium. The fractures of the skull should be scrutinised as to its line and in some case of lathi blows the fractures reach up to a suture and then there is disengagement of the sutures. In cases of heavy, sharp cutting weapon injuries, generally there are irregular fractures from both ends of the injury in a zig zag way. The bevelling of the wound should be noticed which sometimes helps the examiner to form an opinion as to the respective positions of the assailant and assailed. The skull cap should be opened with a saw in the usual circular way and should be removed with a chisel with as little force as possible so as not to cause the extension of fractures by hammering (in cases of fractures which have extended to the base of skull.) The meninges should be examined and the presence of blood should be examined and noted. In cases where there is haemorrhage it is my custom to scrape the blood clot and weigh the clot. Of course in cases of manifest injury on the meninges it should be noted and a note should be made in cases where the brain matter is protruding. Then the meninges should be carefully removed with the usual incision and the presence of blood clot if any should be noted. In these cases the blood vessels which have caused the bleeding should be carefully noted specially in cases of elderly people when the plea of pathological haemorrhage is raised. In cases of doubt the condition of the blood vessels should be carefully examined with a view to ascertain whether the bleeding is traumatic or pathological. If there is thickening of arteries it should be remembered that the haemorrhage may be due to natural causes. The lateral ventricles should be opened and examined to see the condition of the choroid plexus, the ependymal surface for the presence or absence of blood. In cases of haemorrhage of the base of the skull the aneurysm of the basilar artery though rare should not be lost sight of. In cases of manifest asphyxial deaths it is better to open the skull cap and

see the congestion of the brain, before the evisceration of the chest cavity is undertaken.

Spinal Column and Spinal Cord.—The spinal column and the cord are not generally examined in day to day post mortem examinations unless there is some suspicion of injuries at the region. In cases of hanging with a long drop there is the chance of the fracture of the upper cervical vertebrae (1st to 4th.) In strangulations where the force used is violence of extreme nature specially in children there is also the chance of fracture and dislocation of the upper cervical vertebrae. In cases of incised injuries of the neck the anterior part of the vertebrae should be carefully seen, for the presence of any nicking in the bone. This sometimes settles the question of suicide and homicide. A deep indentation in the anterior surface of the vertebrae always speaks much in favour of homicide. In cases of infanticide by twisting of the neck, the fracture of the vertebrae with marked lacerations of the neck is seen.

Materials for the Chemical Examiner.—It is generally assumed that the only materials,after complete necropsy, that are required for all cases are the stomach and its contents and one pound of liver, and one kidney. Of course it is needless to say that in majority of the cases these are the only things that are required by the Chemical Examiners. But it must be borne in mind that there are other cases which require other materials also for examination.

The viscera should be preserved in wide-mouthed jars (glass with properly fitted glass stoppers). They should be covered with rectified spirit. There is a general stringency by all medical practitioners in putting sufficient amount of alcohol. I think the jars should always be of 4 lbs. capacity. In majority of cases it is seen that the stomach contents are about 2 to 3 lbs. in weight. It is useless to push the thing with a little amount of spirit. The principle which should be adhered to, is to keep the things actually floating. 'Some' spirits are useless. They do not actually preserve them.

In cases where there is suspicion of alcohol, carbolic acid or phosphorus poisoning, saturated solution of purified common salt is the preservative to be employed. In all cases urine is to be preserved. Many of the poisons are excreted by the kidney and as such can easily be traced in the urine when their presence is not traceable in the stomach or when they have been oxidised by the liver. The urine should be collected in a clean vessel and preserved with a drop or two of formalin. In cases where the

vomitus is available, it should be collected and sent. They are much more important than the stomach washings. In case of stomach washings the first washings with plain water should be sent. It is better not to add any preservatives. In some countries the chemical examiners insist on some amount of faeces to be sent. It is said that it helps them in some cases. In suspected cases of gas poisonings *e.g.* Carbon Monoxide some amount of blood should be collected and sent. Sometimes brain is useful in testing alcohol, alkaloids, benzol, chloroform, ether and veronal groups etc. The liver will give indications of the presence of flurids, metals, oxalic acids, sulphonal, veronal group. Kidney—for the metals, specially mercury. Lungs tissue may be useful for the inhaled gases. It should be noted here that the toxicologist should be given as much information as possible, as regards the history of the cases, the symptoms, and the treatment adopted, if any. In cases of some poisons specially gases, volatile poisons, alkaloids, there is nothing to be wondered at if the poisons cannot be found by the chemical examiners. They might have been destroyed or oxidised or excreted. The veronal group can be found for as long as ten or twelve days after the administration, the metallic poisons may remain for a much longer period. The longer a man lives after the administration of a drug the lesser the chance of its finding by the chemical examiner. So, sometimes, the report of the chemical examiner says ' a trace of poison '. The medical examiner and the physician who treated the case are therefore in a better position to evaluate the report of a chemical examiner, because they are more conversant with the facts of the case and have been able to find out the physiological and the pathological disturbance of the whole system. An example here will clear my point. Supposing a man has been poisoned with 2 or more grains of white arsenic and the man lived for three days, the symptoms that will be produced will be of typical arsenical poisoning *e.g.* copious vomiting and copious blood-tinged purgation. The major portion of the arsenic will thus be excreted out and if after death, the medico-legal findings are consistent with the arsenical poisoning and if the chemical examiner's report shows only a trace of poison, a medical examiner must needs hesitate to give a positive opinion, because even after the excretions by vomiting and purging for two or three days, during which the patient lived and with the urine if any passed, it does not require much imagination to understand that more than a trace of arsenic will be found from the contents of 1 lb. of liver, one kidney and some urine, when it is known that arsenic

when absorbed circulates throughout the system and may even go inside the bones from where it can be traced. The chemical examiner only examines a small fraction of the total amount of the tissues through which the arsenic has circulated. So also in some cases of manifest symptoms of poisoning with opium specially when the patient has lived sometime after the administration of the drug, it is not astonishing to find a negative result of the chemical analysis as the alkaloids, glucosides and some other organic poisons are oxidised in the system by the liver and can be excreted out through the faeces, urine, vomitus etc. But if they produce indelible evidence of their toxicological properties by manifest symptoms, and organic and pathological changes which can be seen on the P. M. table, it need not deter a medical examiner or a physician to give opinion against the 'so-called negative analytical report of a chemical examiner'.

CASES AND COMMENTS

EXTENSIVE SYMPTOMLESS TUBERCULAR LESIONS IN BOTH LUNGS IN PROLIFERATIVE STATE REVEALED BY X-RAY

RAI BAHADUR G. C. CHATTERJEE, M.B., F.R.I. (Lond.),

Calcutta.

EXAMPLES of persons carrying on ordinary avocations of life, showing cicatrised remnants of old tubercular cervical glands, or ankylosed but healed tubercular joints, or healed caries of the spine can sometimes be seen by medical men in their practice. So one can think also of the possibility of occurrences of similar phenomenon in tuberculosis of lungs *i.e.* healed lung lesion ; but one cannot think of occurrences of healed lung cases, showing not even a vestige of physical sign or any symptom, but which can only be detected by x-ray. So to relate a case which the writer has followed for 5 years, will not be uninteresting.

The patient (S. 98) extraordinary condition of whose lungs as revealed by x-ray is seen in plate No xxxix, taken at a time (June 1936) when he was earning his livelihood by making copper utensils, entailing as it is, hard manual labour, and that for the last 3 years without any interruption, came to consult me 5 years previously in January 1931, for fever and cough and emaciation from which he had been suffering for over 2½ months.

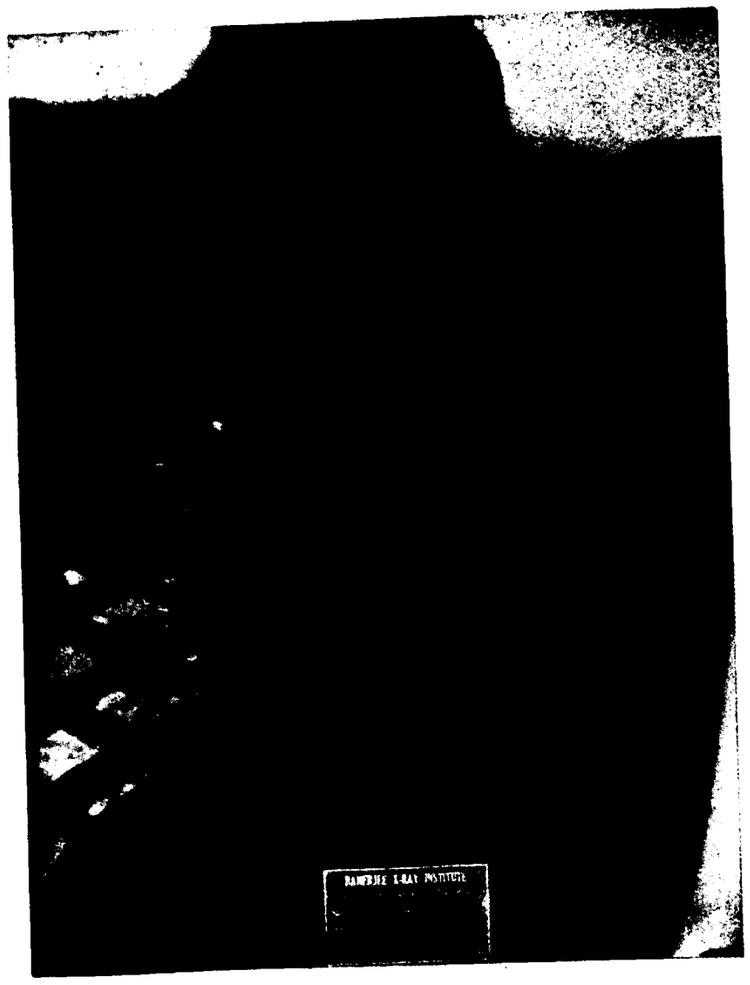

PLATE No. XXXIX.

The plate shows a dense shadow in the base of the left lung and also in the upper portion. Heart dragged towards the left. Right lung shows in the middle marked proliferative lesion, amounting to a cavity.

nation of his chest showed at that time a patch of consolidation, with signs of breaking down, in the left suprascapular region. As he was a penniless man living in a hut, on the ground floor, in a crowded part of the town, the pure air and sunshine which were required for the cure of his complaint, could only be got by his lying down in a charpoy in an enclosed space directly under the canopy of heaven, day and night, which he did on my advice.

Temperature was brought down to normal, after 2 weeks' rest in this state and then he was treated as an ambulant case by tuberculin in my clinic for 5 months during which he gained in weight from 100 to as much as 118 lbs. (see case report). After this, he joined his work which entailed severe manual labour as stated above, having had to hammer copper vessels, for more than 10 to 11 hours a day, he having no option in the selection of his occupation on account of poverty. He kept on visiting my clinic off and on, though not taking any injection. I used to take his weight and examine his chest at the time of his visits. I found later on, that he was losing his weight very much, though the lung signs remained apparently in the same condition as before.

A second course of tuberculin was given after a year. He started gaining in weight again. This time, it seemed, however that the physical sign in the left apex had increased in area and depth, being sort of a cavity—all the time he remained free from fever and without much cough. Again he started losing his weight. A third course was given on the third year of his complaint, but this time without any effect. Not minding the loss of his weight, he went on carrying on his work.

This year (after two years but five years after the onset of his complaint) he presented himself before me apparently in good health, weight having increased by 10 lbs., in the meanwhile, and not for remedy of any complaint, but to show me how he had improved. He told me that he was still carrying on his arduous work all along.

Chest examination showed complete absence of any physical sign, except slight loss of breath sounds over the left apex, the place where I located previously the cavity. I took him to the x-ray room, which revealed a state of things which I could not

dream of. The radiologist was also non-plussed by what he saw by x-ray, which he thought at first revealed fluid in the left chest but which opinion he changed to extensive proliferative lesion, evidence of which he failed however to find when he himself examined the chest by stethoscope and percussion. The statement which I made to him at that time that he was no longer a patient, but a healthy man working 11 hours a day and that he had a past history of which he saw evidence in the x-ray, astonished him. So he was an enigma both to the physician as well as to the radiologist.

Now to unravel the mysterious process which happened in his chest I can only infer from the old informations available to me and also in the light of present occurrences, that the disease originally started as an ordinary fibrocaseous lesion of the left upper lobe which later on ended in a cavity limited by fibrous wall. Later on, fibrosis or proliferative process extended from this centre to whole of the left lung, down to the base, and which dragged the heart to the left side. The proliferative lesion found by x-ray but not detected before nor at the present time in the right side could not be explained. All this happened without any fever probably during the period he was losing health. After this, immunisation process either due to introduction of tuberculin or auto-inoculation has again gained the upper hand. At present it has reached a static state of physiological balance which suggests that real healing has taken place, as it allows him to do so much manual labour. Besides he indulges in swimming which used to tire him before, but which it does not do any more. The cicatrical lung tissue surrounded by somewhat emphysimatous lung, prevented the physicians (me) to make out the lesion, which the x-ray did with the greatest ease, which the radiologist himself could not however interpret properly. The same remark applies to the proliferative lesion in the middle lobe of the right lung, detectable only by x-ray when it appeared and when it healed, it is very difficult to guess. (See case report).

True copy of progress report sheet of case S. No. 98. Left suprascapular region—2½ months fever (100°) by rest brought to 98°.

Date	Dose and variety of tuberculin (A. F.	Physical sign and weight.
3-3-31	1. m.	100 lbs.
9-3-31	80.000	102 „
16-3-31	500,000	104½ „ Crepitation & friction sound.
22-3-31	300,000	106 „ Crepitation audible.
30-3-31	200,000	108 „ Crepitation lesion.
6-4-31	128,000	109½ „
12-4-31	80,000	111 „
21-4-31	50,000	112 „
27-4-31	32,000	113½ „ Left suprascapular region.
12-5-31	20.000	115 „ Crepitation audible.
20-5-31	12,000	115 „ Crepitation audible.
30-5-31	8,000	116 „
6-6-31	5,000	115½ „ Crepitation less, audible.
	3,000	116 „ Crepitation audible.
	2,000	116 „ Crepitation audible.
	1,000	117½ „
	800	117½ „
	500	118 „

Fluoroscopy:

Whole of the left side from apex to base occupied by a dense shadow. Heart dragged to the left side, showing that there was no fluid, but extensive proliferative lesion.

Conclusion

1. The case illustrates that proliferative lesion is a sign of healing, and that prognosis is better than in an exudative lesion and that in spite of the presence of extensive cicatrised lesion an opinion reverse of what Pottenger advocates.

2. In spite of the presence of extensive proliferative lesion, the case may show not a vestige of physical sign or symptoms.

3. Finding of these lesions by x-ray, may lead to wrong diagnosis if not interpreted correctly on the basis of clinical history.

SODIUM SULPHATE *

BY

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SODIUM Sulphate is one of the most useful of drugs if indeed such a simple salt can be called "a drug".

If we look in a Materia Medica Book we shall not see much, if any, account of its use externally but actually it is most valuable in the treatment of wounds, especially septic wounds. A 12% solution is the optimum strength. Gauze is soaked in this and applied to the wound and over it jaconette or rubber to prevent evaporation. If the patient is provided with a bottle of the solution he can pour down a little at the side of the dressing in order to keep it wet and thus further enhance its 'drawing power'. This is not absolutely necessary and a daily dressing usually suffices. One so often sees patients with septic wounds on which have been plastered ointments or strong antiseptics which have little value or may even do harm. What is required is some solution which has the power of drawing the pus by osmosis without damaging the healthy tissue cells. The sodium sulphate dressing is both comfortable and cheap. It can be applied by any practitioner, or, for that matter, by any lay person without any fear of damage to the part, and its results in cases where there is pus are, in my opinion, superior to flavine, eusol, hydrarg perchlor and all the usual antiseptics.

Then internally the drug is well known in India for its value in bacillary dysentery; 60 grains of sodium sulphate with sodium bicorbonate grains 10 every hour or every two hours often act like a miracle in clearing up dysentery of the bacillary type, and should always be resorted to before emitine unless there is unmistakable evidence of amoebic dysentery by microscopic examination of the stools.

The value of sodium sulphate over magnesium sulphate is that it may be combined with an alkaline in solution. This is especilally useful in the case of children suffering from enteritis, where a mild alkaline solution with sodium sulphate grains 15 per dose for a child of 1 year is indicated.

Thus to summarise, sodium sulphate inside and out may be a wonderful remedy in the Indian Home. It costs only 2 annas a pound. It may be used in a 12 % solution (4 teaspoonfuls to the average cupful of water) as a dressing for any wound; as a strong purge in a dose of 4 teaspoonfuls, and as a specific in bacillary dysentery in doses of one teaspoonful every hour or so.

There are many fancy and expensive medicines on the market but here is a drug costing practically nothing which is of the utmost value. Let it not be despised.

* "Magnesium sulphate is incompatible with alkaline carbonates, phosphates, lime water, lead acetate, and silver nitrate."

MANAGEMENT AND TREATMENT OF A CASE OF PLEURO-PNEUMONIA

Complicated with Diarrhœa, treated in the Medical Wards, Town General Hospital, Pudukkottai

BY

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Chief Medical and Sanitary Officer, Pudukotta State.

Menakshisundaram.—Fairly built, young lad aged 21, admitted in the wards on 11-6-36 for the following complaints:—

Sudden fever; dry cough stitching pain in the middle of the right chest (duration 4 days). History of having been exposed to chill wind.

Condition on Admission.—Temp. 104°, Pulse 110, volume and tension fair, Respiration 26. Tongue coated, severe pain on the middle of the right chest. The pain was intensive by every kind of exertion of the patient and had the following accompaniments—loss of appetite and slight malaise. On examining the chest, the patient had restrained but rapid breathing, V F, V R, slightly increased on the right side. Friction sounds were well audible over the middle of the right chest. From the above signs and symptoms, it was diagnosed as 'Dry Pleurisy' of the right side, and the following treatment was adopted.

Absolute rest in bed.

Ice to the head,

Mustard placed over the painful area on the middle of the right chest, and the following mixture was given:

℞	Soda Salicylas	...	grs. 30
	Pot. Bicarb	...	grs. 45
	Liquor Ammonia Acetas	...	dr. 3
	Tr. Strophanthus	...	℥ 20
	Aqua Chloroform add.	...	ozs. III
	ft. mist 1 oz td.		

Glycerine Boracis applied to the tongue and Listerine Gargle was given B. D.

Bowels were regular, one in the morning and one in the evening.

Diet: Restricted to Barley water and thin Kanjee. Temperature reduced to 103° in the evening. Pain a little better and had 2 to 3 hours' sleep in the night.

On the next day, i.e. on the 5th day of the illness.—When the patient was examined, Temp. 104°, Pulse 112, volume and tension fair. Passed 3 loose motions, breathing a little rapid and there was some expectoration of sputum which was slightly tenacious. There was head-ache, and pain over the whole of the right chest. Urine was scanty and high coloured.

Physical signs.—Slight dullness on the lower right lobe, breath sounds were feeble; and fine crepitations were heard over the right lower lobe. Patient developing pneumonia.

On the sixth day.—The temperature at 6 A.M. came to 101°; but by 2 P.M. there was rigor and the temperature shot up to 104°. Pulse was 115 and the respiration was 30 and the patient had frequent loose motions in the form of septic Diarrhœa (more than 15 broad watery motions on that day).

On examination he had the following signs and symptoms:

Cyanosis of the lips.
Restlessness; lividity of the face;
Rapid breathing; Tongue dry and coated;
Herps present on both sides of the mouth;
Marked pain over the whole of the right chest.

On examination of the lungs, dullness was present over the middle and lower lobes of the right lung. Rales were marked Pneumonia well developed on right side.

On the 7th day.—The morning temperature was 104°, Pulse 120, Resp. 36 and the tension was weak; marked dyspnœa along with the above-said symptoms was present.

Lung condition.—(Right side) Dullness was marked over the whole of the right chest. High pitched bronchial breathing over the whole area; Bronchophony was present over the lower lobe and no rales were heard.

On the 8th day.—The morning temperature was 103°. Pulse 125, tension weak, Resp. 40 and the patient had semi-loose motions. The general condition of the patient was anxious as he had marked respiratory and cardiac distress. The patient had incessant cough and spat frequently rusty-coloured tenacious sputum.

On the 9th day.—The morning temperature was only 100.5°, Pulse 124 and soft, Resp. 40 and he had only 2 semi-loose motions.

General conditions were the same as on the previous day; but not marked and crepitations were heard over the lower and middle lobes.

On the 10th day.—The morning temperature rose only to 101.5° Pulse 100 and soft, Resp. 34 and 6 semi-loose motions and the general condition of the patient was better; Dyspnœa was better and respiratory distress was also relieved. Lung condition same as on the previous day.

On the 11th day.—The morning temperature was only 100.5°, Pulse between 94 to 100, Respiration 32 and 2 semi-solid motions. Tongue was moist and a little coated. Coarse rales were present only over the upper lobe and the middle and lower lobes were clear.

On the 12th day.—Temperature reached normal, Pulse 82, volume and tension fair and coarse rales were present only over the upper lobe.

From the 13th day onwards the lungs were clear, the tongue was clear, stools well-formed—one in the morning and one in the evening, and the patient felt better in all respects.

Management.—The patient was attended by Nurses and Doctors by turns. He had absolute rest in bed. Complication and progress of the patient were watched then and there. Good sleep was maintained throughout except for a day or two when the patient was at the height of the disease. The patient's strength was maintained throughout the disease and general sepsis was prevented by frequent Listerine Gargles and applying Glycerine boracis to the tongue and the lips every 2nd hour. The teeth were cleaned with $H_2 O_2$.

Treatment.—Temperature was reduced by constant application of Ice and by Diaphroetics, and Tr. Senega in small doses were given and the whole right chest was covered with Antiphlogistine and Bran fomentations were given for 2 days to clear up the secretion of the lungs in addition to the expectorants.

Cardiac muscular weakness was treated by 6th hourly injections of Camphor in oil, Digitalin, Strychnine and Adrenaline as well as Tr. Strophanthus and Tr. Musk orally.

Respiratory distress was treated with Oxygen Inhalations by nasal catheter for 5 minutes every hour for a period of 2 days.

Sleep was maintained by Ice applications when the patient had temperature of 103 to 104.

Septic Diarrhoea did not yield to even massive doses of astringents. Starch and Tannic acid as well as Starch and Opium enemas were required to arrest the Diarrhoea, which gave good relief to the patient.

Diet.—For two weeks of the illness, the patient was solely restricted to liquid diet and that too regulated by 2nd hourly intervals and was given mainly by the Nurses who worked in turns. Diet being Barley water, thin Kanjee and liquid Peptonoids.

After the temperature came to normal and when the motions were well-formed, the plain liquid diet was changed into thin gruel kanjee for 2 to 3 days and then to thick gruel kanjee. Milk was also given in small quantities in the form of Coffee. On the 22nd day little rice and fresh vegetables were also permitted.

The patient's strength was maintained by the administration of tonics and gradual increase of diet.

In this case the temperature gradually came down by Lysis and the patient was discharged on the 8th July after having been kept as an in-patient for a period of 27 days when he was in a fit condition to discharge his duties properly.

It is Diarrhoea that made the case more complicated and serious.

Endocrine Alterations after Superior Cervical Ganglionectomy

P. Collin L. Hennequin, et al. (C. R. Soc. de Biol., 1936., xiii, pp. 1406, 1407, 1410) describe the following changes occurring after excision of the superior cervical ganglion on both sides in the rabbit. In the antuitary a temporary disappearance of eosinophils and a totally "chromophobic" phase are produced and last for three weeks ; they seem to signify a massive excretion from a gland of its products. The blood picture shows a rapid monocytosis lasting nearly three weeks and accompanied by some neutropenia. In the thyroid a three-day phase of hyperactivity is followed by well-marked signs of secretion which last three weeks and (since they are absent after unilateral ganglionectomy) are not due to severance of nervous connexions. The authors incline to regard the changes in blood formation and thyroid activity as secondary to endocrine disturbance in the pituitary.—B.M.J.

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Vol. 33 No. 9.] [Sept. 1936.

The Antiseptic

ESTD. 1904.

A Monthly Journal of Medicine and Surgery.

Editors: Dr. U. RAMA RAU & U. KRISHNA RAU, M.B., B.S.

Editorial and Publishing Offices:—323, Thambu Chetty St., Madras.

Annual Subscription Rs. 5. Foreign, 10 Sh. Post Paid.

EDITORIAL

A PERMANENT LAY-SECRETARY FOR THE GOVERNMENT GENERAL HOSPITAL, MADRAS

INSCRUTABLE are the ways of Providence; equally inscrutable are those of the Madras Ministry of Medicine and Public Health. The recent proposal of the Health Minister and its approval by the Legislative Council to appoint Lt. Col. H. G. Dyer as permanent Lay Secretary to the Madras General Hospital on a salary of Rs. 1050 per mensem with a house rent allowance of Rs. 100 per mensem and with all other perquisites such as free passage and leave concessions for a period of two years in the first instance, cannot otherwise be justified. 'It is a piece of jobbery', said Sir A. P. Patro, the Ministry's own partyman and an ex-Minister to boot, and further comment is needless.

Let us go back for a while into the history of this appointment. On the 17th of July, last year, the Ministry of Health appointed this retired military officer temporarily on a salary of Rs. 750, with a house rent allowance of Rs. 100 and a conveyance allowance of Rs. 75 per mensem to investigate and effect retrenchment in the Madras hospitals. We were told that he had effected nearly a saving of one lakh of rupees in the J. J. Hospital, Bombay, and that his past experience in Bombay would stand him in good stead in Madras. We too gave our passive consent to this appointment, though we had our own misgivings in the matter. We observed in our editorial of Sept. '35: "While we have nothing to say personally against the Officer, we fail to appreciate the propriety on the part of the Government of Madras, in importing an European Officer from Bombay who is totally

ignorant of the dietetic habits, social customs and economic conditions of Madras, to interfere in a matter of life and death, as that of a patient in a hospital is, in preference to an Indian and a Madrasee. We trust, however, that Col. Dyer will carefully study local conditions before he begins to operate with his axe lest anything that might be done haphazardly and in a spirit of excessive zeal and enthusiasm might go to jeopardize the health and comfort of the poor patients struggling for existence in the hospitals".

Now, what has Lt. Col. Dyer done during the period he was in service from 17th July 1935 to 14th March, 1936, when he resigned and went home? What savings did he actually effect in rupees, annas and pies? The Health Minister informed the Legislative Council that he submitted a report and made some proposals for the better working of the hospitals. The proposals are:—(1) "Revision of the existing system of Hospital accounts on the basis of a system of the "Revised uniform system of Hospital accounts recommended by the Governing Body of King Edward's Hospital, London", (2) preparation of statistical tables of expenditure for in-patients and out-patients separately with a view to lay down definite standards of expenditure, (3) debit of the cost of certain articles supplied to the hospitals to the hospital accounts, (4) possibility of increasing hospital receipts from patients, (5) control of expenditure on diet and supervision of diet, (6) economy in the use of and control over the expenditure on drugs and dressings, (7) reduction in expenditure in the purchase of certain apparatus, (8) control of expenditure on consumption of water and electric energy, (9) opening of a central laundry for all city hospitals, and (10) opening of a dairy farm.

On a careful analysis of the above proposals, we find that items 1, 2 and 3, come under the purview of an expert accountant; items 4, 5, 6, and 7, come under the direct supervision of the Superintendent of the hospital or any medical officer deputed by him; items 8, 9 and 10 are technical works requiring a technician or technicians with special skill and knowledge in the respective branches. Does Col. Dyer combine all these qualifications in him?

Now, in connection with this appointment, was the Superintendent of the General Hospital ever consulted? Did the special Officer detect any waste or fraud or uneconomic running of the Hospital to justify the veiled withdrawal of the powers of the Superintendent, by the appointment of a whole-time Lay Secretary? Is Col. Dyer competent to supervise diet in the hospital and control the expenditure on it without coming

Major General E. W. C. Bradfield, C.I.E., O.B.E., I.M.S.,
Newly appointed Director-General of Indian Medical Service.

into clash on the one hand with the medical officers concerned who know best what to prescribe, irrespective of cost and on the other, with the patients whose likes and dislikes are factors to be counted? Does Col. Dyer seriously think that a central laundry for all hospitals in the City will be a practical proposition, as at every step there will be delay and consequently clamour and complaint from the hospital authorities? Will a central dairy farm serve the immediate needs of hospitals scattered in various parts of this city of distances? These are questions that suggest themselves to us and in matters of life and death, especially, we are prone to endorse the dictum "where ignorance is bliss, it is folly to be wise".

Perhaps in large hospitals, such as the General Hospital, a Personal Assistant of the grade, say, of a Deputy Collector may be necessary to supervise the clerical staff, to effect economy and stop leakages, and generally to help the Superintendent in his administrative work. In any event, the permanent appointment of a retired military officer on a fat salary to the Madras General Hospital is unjustifiable and unwarranted and the Hon. The Minister in creating this appointment at the fag end of his term and the Legislative Council in sanctioning it, when its life is under a brief spell of extension before actual extinction, have, we are constrained to remark, not served the public whose representatives they are, loyally and faithfully. The elections are coming. Let the electors beware!

Major General E. W. C. Bradfield, C. I. E., O. B. E., I. M. S.,

Appointed Director-General of Indian Medical Service.

A press communique from Simla dated the 26th August '36 notifies the appointment of Major General E. W. C. Bradfield, C.I.E., O.B.E.. I.M.S., as Director-General of Indian Medical Service in the place of Major General Sir Cuthbert Sprawson, I.M.S. about to retire.

Virtually for the fourth time in succession, Madras had the honour of providing an incumbent for the Director-Generalship of the Indian Medical Service. Though Major-General Bradfield is now the Surgeon-General of Bombay, he served the best part of his life-time in Madras and was better and more intimately known to Madrasis than to Bombayites. Hence our claim to own him and take pride in his present elevation.

Major-General Bradfield was born on May 28, 1880 and was educated in London and Edinburgh. He entered the Indian Medical Service in 1903 and was posted to N. W. Frontier of India. He served in Mesapotamia during 1918-19 and in the operations against the upper Mohmands in 1933. He was one of the officers in charge of the Hospital ship, Madras. He was awarded a medal with Clasp in 1908 and was latterly, twice (1918 and 1933) mentioned in despatches for his distinguished military services.

On the Civil side, Madras was his home. He was Surgeon and Superintendent, Royapuram Medical School for some time and Surgeon, and Superintendent, General Hospital for several years. He made a mark in Surgery and commanded wide practice and won the esteem and confidence of his patients. It was most unfortunate that the Surgeon-Generalship of Madras was denied to him. Before he was appointed Surgeon-General of Bombay, he was Assistant Director of Medical Services, Peshawar.

The problem of Medical Education is now confronting the best intellects of England and an overhaul is being attempted there. The problem in India is beset with greater difficulties and none but Major-General Bradfield who has long been connected with teaching work in one of the oldest Medical institutions in India is fitted to undertake the reform of medical education in this country.

We take this opportunity of congratulating Major-General Bradfield on his promotion and wish him good health and good luck.

GLEANINGS FROM MEDICAL PRESS

Medicine and Therapeutics

Artificial Fever Treatment of Chorea.—Since February, 1935, Clarke H. Barnacle, Jack R. Ewalt and Franklin C. Ebaugh, Denver (*Journal A. M. A.*, June 13, 1936), have treated thirteen moderate or severe cases of Sydenham's chorea with artificial fever, using the Kettering hypertherm, an air conditioned cabinet. In the treatment of the first few cases, fever sessions of two and one-half hours were given at intervals of from three to six days and at temperatures ranging from 103° to 106°F. (rectal). Experience has shown that patients respond more rapidly if the two and one-half hour fever sessions are given daily at temperatures of from 105° to 106° F. (rectal). This procedure materially shortens

the entire course of the chorea attack and quickly restores the patient to normal activity. Strict rest should be insisted on during the interval between treatments. The progress of the patient has been used as a guide to the amount of fever necessary. The average amount of fever administered was twenty-four hours at from 105° to 106° F. (rectal). There have been no recurrences to date. The amount of shock following the injection of triple typhoid vaccine, as shown by chills, vomiting, severe headache, extremely high fever and marked prostration, is a serious contra-indication when there is already a badly damaged heart. With artificial fever such complications can be avoided. There is a distinct advantage of artificial fever produced by mechanical means over the foreign protein method. One advantage is the controllability of the temperature. Treatment may be terminated instantly should unforeseen complications arise. Furthermore, a specified dose of fever may be administered at will. None of the authors' patients showed loss of weight during the fever sessions. An adequate fluid intake by mouth can be maintained with maintenance of the fluid balance.—*North West Medicine.*

Glutathion in Rheumatism.—*Clincia y Laboratorio*, 28:177, 1936, Zaragoza, Spain. By Javier Viar y Flores, M.D.

1. Sulphur is a vital, cellular compound, it being one of the principal elements of oxide-reduction of the tissues.

2. We find an element in all the tissues, a reversible system of oxygen supply or fixer of hydrogen, formed by derivative compounds of sulphur, as cystin or glutathion, both of which maintain a steady relation of equilibrium, between the amounts of reduced body to oxidized body.

3. This state of equilibrium may be considered of great importance to maintain and demonstrate with its determination the vitality and metabolical activity of the tissues.

4. This equilibrium in the normal individual reaches a proportional relation of some 71% of reduced glutathion in relation with the total.

5. The average amount of glutathion in the blood of a normal individual is: total glutathion, 35.50 mgs, of reduced glutathion, 25.50 mgs.

6, The amount of glutathion in the blood of a woman is less than in the blood of a man, yet it maintains the same proportional relation of reduced to oxidized glutathion: 71% of reduced glutathion.

7. The reduced glutathion is found in larger proportion in the slightly acid means (Hirsch) done in accordance with the increase obtained in the reduced glutathion, by the experimental asphyxia in the concentration of ions CO and consequently acidosis.

8. The chronical rheumatisms may be classified in two perfectly definite groups. Rheumatisms of inflammatory origin start of an occasional infectious origin, arthritis, and rheumatisms of non-inflammatory start, arthrosis, in which the occasional cause is unknown.

9. Both in the chronic rheumatisms of inflammatory start, arthritis, as well as the second one or arthrosis, the existence of a cause of a general order is necessary.

10. There exists in both of them an alteration of the functions of oxido-reduction, being thus a predisposing cause in the former and a determining cause of the articular alterations in the latter.

11. The proportion of total glutathion is somewhat diminished in the chronic rheumatisms.

12. The proportion of reduced glutathion with regard to the total is 82% in the chronic rheumatisms. Therefore, the proportion is quite larger than in the normal individual.

13. This increase of reduced glutathion indicates that the processes of oxido-reduction in the individuals affected with chronic rheumatism are not normal, this being perhaps the coadjuvant cause of the reduced metabolical activity of these patients, and particularly of their joints, because since these are normally the seat of great nourishing activity, of metabolical changes, they must suffer the consequence of a reduced general activity of metabolism.

14. This alteration of the nutritive changes of the individual affected with chronic rheumatism seems to affect more intensively the sulphur element and derivatives, as these elements are precisely the principal chemical compounds of the constitution of the joints.

15. It can thus be confirmed that in the chronic rheumatism, arthritis group, the essential point is an infectious cause, having its evolution on a ground with great alteration of its metabolism, and in the chronic rheumatism, arthrosis variety, the occasional cause is this alteration of its metabolism, having its evolution in an individual with an alteration that acts as a predisposing cause, as in the sclerosis by senility.—*American Medicine.*

Prevention of Hypochromic Anæmia in Pregnancy.—John C. Corrigan and Maurice B. Strauss, Boston (*Journal A. M. A.*, March 28, 1936), observed 200 normal pregnant women who presented themselves for routine care in the antepartum clinic when they were from three to seven months pregnant. Each patient was assigned a number in order. Blood for examination was withdrawn without stasis from an antecubital vein, and a careful dietary history was taken. Every woman was given a bottle containing 100 coated tablets, with instructions to take one tablet after each meal and to return the bottle and unused tablets at the next visit to the clinic. At all subsequent visits a fresh bottle or 100 tablets was given the patient. Unknown to her, the number of tablets remaining unused at each visit was counted and from these data the actual amount of medication taken was calculated. Patients who had been assigned odd numbers received tablets containing 0.2 Gm. (3 grains) of ferrrous sulfate: patients with even numbers recived tablets that were identical in appearance and size but contained lactose and no ferrous sulfate. Women who took less than one of the prescribed three tablets daily were excluded from the two series, as were also those in whom sepsis or hæmorrhage developed, whether during gestation, parturition or the puerperium. The average daily intake of iron of the treated group was 0.5 Gm. (7½ grains) of ferrous sulfate. At each visit and again one week after parturition, venous blood was withdrawn for examination. Hæmoglobin determinations were performed at monthly intervals and one week after delivery by the Sahli method, with tubes so calibrated that 100 per cent was considered the equivalent of 15.6 Gm. of hæmoglobin per hundred cubic centimeters of blood. Red blood cell counts were performed with pipets and counting chambers certified by the U. S. Bureau of Standards. Of the 100 women given no iron, twenty-four had less than 70 per cent hæmoglobin post partum. Of the 100 women given iron, none had less than 70 per cent hemoglobin post partum. The conclusion is drawn that hypochromic anemia in pregnancy may be largely prevented by the routine administration of iron, especially in the latter months of gestation.—*Illinois Medical Journal.*

The Aetiology of Whooping-cough.—Thirty years have passed since J. BORDET and O. GENGOU published in the *Annales de l'Institut Pasteur* (1906) an account of the bacillus with which their names are identified, and even now there is no universal agreement as to whether the bacillus is the sole cause of

whooping-cough or whether the primary agent is a filtrable virus and the bacillus an associated invader. Prof. Bordet claimed recently (see The Lancet, August 1st, p. 274) that the value of specific vaccine therapy, when given early in the disease to patients whose condition was not complicated by severe secondary infections, is now very generally accepted, and Prof. Th. Madsen supported this contention on behalf of Danish clinicians.

On the value of vaccine prophylaxis there is a considerable measure of agreement. There are still some sceptics, however, to be found in most countries, not only about the value of vaccines, but about the fundamental problem of causation. Thus A. R. Rich and his associates, while admitting the importance of the role played by the bacillus, consider that certain facts remain to be explained before it can unreservedly be regarded as solely responsible for the disease. They point to the unsatisfactory results of animal inoculation with pure cultures of the bacillus; in most experiments the introduction of the bacilli into the respiratory tract has been either completely negative or inconclusive. These workers consider that "while it is altogether likely" that the paroxysmal cough is due to the irritative action of the bacteria localised in the cilia of the respiratory tract leading to the production of plugs of tenacious mucus, this localisation in the cilia is not specific for the Bordet-Gengou bacillus. They instance a similar localisation of *B influenzoe* and of the *Bact. bronchisepticum* in canine distemper; the production of a paroxysmal cough follows human infections with these organisms. The influenza bacillus, they say, can commonly be isolated, often in pure culture, from the trachea and bronchi in fatal cases of whooping cough, and whereas the Bordet-Gengou bacillus can rarely be recovered from patients in the later stages of the disease, influenza bacilli are frequently present in abundance. Again, interstitial mononuclear cell infiltration of the bronchial wall, which occurs characteristically in whooping cough, is found in connexion with virus diseases, such as influenza and measles, which affect the respiratory tract, and this infiltration is readily produced experimentally by filtrable viruses alone. On the other hand, the same lesion is encountered in subacute and chronic pulmonary infections of bacterial causation regardless of the aetiology.

To test the attractive hypothesis that whooping-cough, like canine distemper, hog cholera, and swine influenza, might also be a virus-bacterial disease, Rich and his co-workers endeavoured to produce whooping-cough in chimpanzees, animals very

susceptible to human infectious diseases. By oral inoculation of the apes with unfiltered tracheal exudate from human pertussis they were able to produce a condition which they describe as similar to whooping-cough in all respects, including lymphocytosis and positive complement fixation. At the height of the cough Bordet-Gengou bacilli were recovered on cough-plates. Since inoculation of apes with pure cultures of the bacillus produced a similar condition, the authors conclude that the characteristic clinical features of the disease can be brought about by the bacilli acting alone. When apes were inoculated with bacteriologically sterile blood and filtered respiratory secretions, obtained from each of four early cases of whooping-cough, there resulted an upper respiratory catarrh without cough, and further, the one attempt made to transfer this "agent" from one ape to another by means of a bacteriologically sterile filtrate of the nasopharyngeal secretions was successful. The nature and significance of the agent which caused the catarrhal condition remains undetermined. The authors do not consider that their limited data permit of the conclusion that it is a specific filtrable virus that acts by increasing the susceptibility to infection with the Bordet-Gangou bacillus, as the filtrable virus is held to act in swine influenza or canine distemper. Nor can they state with certainty that the agent in question was not the virus of the common cold. Further experimental work is, as they say, necessary to determine whether this filtrable agent is demonstrable with regularity in the early stages of whooping-cough, and if so, whether it acts by enhancing susceptibility to the Bordet-Gengou bacillus. Rich and his colleagues agree that, if the favourable results obtained by Sauer in vaccine prophylaxis prove to be the general experience, one of the major objections to the view that the Bordet-Gengou bacillus is the sole cause of whooping-cough will be removed.—*The Lancet.*

Reactions after Diphtheria tests.—Attention has lately been drawn to two rare types of reaction that may follow the Maloney and Schick tests, and it is desirable that workers using these tests should have a clean picture of these reactions so that they will not be surprised or unduly alarmed if they meet them. In 1934 A. Taylor, of Dandenong, Australia, reported a peculiar reaction which in about 1 in 1000 cases follows the injection of formol toxoid used in the Moloney test, and it has now been described in some detail by C. R. Merrillees. The Taylor reaction develops in persons who would be passed as

Maloney-negative if the test were read at the usual time. It appears about 48 hours later than the Maloney reaction and differs from it by having a raised shiny surface and a mottled red colour. It develops later than the true Moloney reaction, being best read about the fifth day, and its discoloration is much more persistent. It seems to occur only in Schick-positive persons, and according to Merrillees it indicates that the subject is likely to react severely when given the usual immunising doses of formal taxoid. The other reaction was described in our own columns last week by Dr. Parish. It is a rare sequel to the Schick test, and the symptoms, which may come on a few minutes after the injection, are those that may be expected on injecting foreign protein into a highly sensitive person—local weals, oedema of eyelids and lips, faintness, and dyspnoea. Most of the people who reacted in this way had had previous injections of diphtheria antigens or antitoxin, and two were known to be sensitive to Witte peptone injected intracutaneously. Of 14 patients 4 were adults and the others children ranging in age from 11 months to 15 years. It is hard to estimate how often one may expect to encounter such reactions after the Schick test, but Monroe, Volk, and Park observed only 2 cases in 7000 immunisations. Parish points out that there seem to be no records of this type of accident before 1934, and he makes the interesting suggestion that they are due to the peptone which has in recent years been added to many preparations of Schick toxin dilutions with a view to stabilising them. Two of the patients in his own series were known to be sensitive to Witte peptone and he quotes a similar case of Bousfield's. Thongh the possibility of general reactions after the Schick test must not be forgotton, they are neither common enough nor dangerous enough to be considered a serious drawback.—*The Lancet.*

Relief of Intestinal distension.—Experiment and experience alike testify to the disastrous results of suddenly releasing pressure in obstructed bowel. Sir William Wheeler, on p. 361, describes the case of the patient who dies soon after a comparatively simple operation for the relief of obstruction, although the utmost care has been taken to combat shock. Such a patient dies with symptoms of acute toxæmia ; the operation that was designed to save him has almost certainly hastened his end. The fault, according to Wheeler's observation, is that the release of distension has been too sudden. Many operations for relieving obstruction include the insertion of a tube into the lumen of the

gut for drainage purposes, and in acute cases, Wheeler says, it is important that this tube should be of small calibre, and the drainage slow and gradual. He suggests that the cause of the collapse following sudden decompression is sudden vascular dilatation in the wall of the bowel: like those of the over-distended bladder or gall-bladder the damaged tissues cannot respond to the rapid increase of circulation, whereas gradual release of tension would be followed by gradual recovery. Aird and Henderson's experiments, reported on p. 373, provide equally cogent evidence of the danger, though not quite the same explanation of it. In animals they find that the initial rise of blood pressure resulting from rapid distension of the intestine by gas is followed by a fall, which they attribute to the pouring out of fluid into the distended loop. If the distension of the bowel is released within six hours, the reabsorption of this fluid is sufficient to raise the blood pressure; but if the release is deferred until after six hours the pressure falls. This is not because the damaged gut cannot absorb fluid: nor is it a nervous effect: and they are forced to conclude that the depressor effect of delayed and sudden decompression is due to absorption into the suddenly dilated arterioles of a toxin from the bowel. Whether they are right or wrong it is clear, as Sir David Wilkie put it, that gradual decompression is as essential in the surgery of intestinal obstruction as it is in the surgery of the prostate and gall-bladder.—*The Lancet.*

Female Sex Hormones.—H. G. Willard, in an article entitled : "The Female Sex Hormones, Origin and Therapy," in *North West Medicine* for November, states that the modern gynecologist must be well versed in endocrinology. The female sex cycle, in the absence of pregnancy, consists of the maturing of the graafian follicle, its rupture and the extrusion of the ovum and the development of the corpus luteum and its recession. From the graafian follicle is produced a hormone called folliculin or estrin, and influences the uterus through the blood stream, producing congestion of the endometrium with proliferative changes, which is the first stage in the preparation of the uterus for the reception of the ovum. With the extrusion of the ovum, the graafian follicle changes into the corpus luteum which continues to produce estrin, but whose secretion is now known as progestin. This hormone, acting through the blood stream, sensitizes the endometrium, produces final changes which are necessary for the implantation of the ovum and the development of the uterus incident to the continuation of pregnancy. If

the ovum, in passing down the fallopian tube, meets a spermatozoon and becomes fertilized, it becomes implanted in the prepared endometrium, and pregnancy results. The corpus luteum of pregnancy and the continued influence of progestin are necessary to prevent exfoliation of the endometrium and to protect the fetus during the continuation of pregnancy. If the ovary fails to function and there is not produced the hormones estrin and progestin, neither menstruation nor pregnancy can occur. The endocrine functions of the ovary are controlled by the anterior pituitary. The specific hormone has been called prolan. Anterior pituitary, with its hormone prolan, introduced into immature animals by transplantation or injection, may bring about early maturation and ovulation, and into senile animals, is said to rejuvenate their sexual apparatus, restoring menstruation and again making pregnancy possible. Growth deficiency with lack of development of the sex organs and delayed puberty and amenorrhoea may respond to anterior pituitary injections. Functional amenorrhoea in young women is helped by this hormone supplemented by ovarian hormones. During the menopause, ovarian extract seems to be indicated, but the results thus far have been disappointing. Uterine bleeding during puberty and in mature women before the menopause, not due to mechanical nor inflammatory causes, is usually associated with a deficiency of the anterior pituitary hormone, with secondary ovarian deficiency. The hormone treatment that has proven most successful consists of the administration of 100 to 200 rat units of anterior pituitary extract daily to control bleeding, this treatment being repeated with a recurrence of an abnormal menstrual cycle with bleeding.—*American Medicine.*

Tests for Hyperthyroidism—I. Bram in an article entitled: "The Quinine Test for Hyperthyroidism," in the Journal for *Laboratory and Clinical Medicine* for November states that while the recognition of typical exophthalmic goiter or Grave's disease is devoid of difficulties, the many atypical cases require laboratory tests for confirmation of the diagnosis. In 11 per cent of his series, both exophthalmos and goiter were absent at the time of the primary examination. Aside from the basal metabolism test, which, under proper conditions, is quite dependable, there are several other tests. Among these are: the adrenalin test, Kottman test, the blood iodine and blood cholesterol tests, the impedance angle test, and the quinine tolerance test described by Bram in 1920. Bram states that in his experience, the most dependable

tests for atypical hyperthyroidism are: (1) the experience and five senses of the doctor himself, (2) the basal metabolism, and (3) the quinine tolerance tests. Bram, in a series of over 4,000 cases of hyperthyroidism (with and without Grave's disease), found that over 95 per cent tolerated from 30 to 90 grains of quinine sulphate daily for weeks, without evidence of cinchonism. The relative immunity to cinchonism lent itself to the adoption of the test, whose technic is: The patient is given 12 capsules each containing 10 grains of quinine hydrobromide or sulphate, with instructions to take one capsule three times a day. If after 4 days, there are no evidences of cinchonism, the individual's reaction may be considered positive for hyperthyroidism. When 20 or 30 grains have been taken by persons in whom thyroid function is normal or deficient, symptoms of cinchonism develop. A sense of fullness in the head, impaired hearing with tinnitus, occasional dizziness and headache, less frequently gastric and bladder disturbances are experienced. If, however, the patient is suffering from hyperthyroidism, the daily administration of 30 grains of quinine may be continued with impunity for months, and often with improvement of the clinical picture. The merits of the quinine test are its simplicity, relative dependability, and cheapness. The results are not affected by emotional disturbances nor errors in technic, as may happen in basal metabolism tests.—*American Medicine.*

PROCEEDINGS OF ASSOCIATIONS, SOCIETIES, ETC.

The Kistna District Rural Medical Practitioners Association.

An ordinary meeting of the above Association was held on 22-8-'36 (Saturday) at Masulipatam in the D. M. O's office at 5 P.M. with Lt. Col. K. V. Ramana Rau I.M.S, District Medical Officer, in the chair. Mr. N. Rama Rau, L.M.P. Secretary of the Association, read the minutes of the previous meeting held on 19-7-'36 which were approved. Then, mentioning about the sad and untimely death, from Tetanus, of Dr. S. Rama Subbu, L.M.S. of Viraganur, he gave a brief life-sketch of the deceased member, and about the substantial work turned out by him as Secretary of the Provincial Rural Medical Practitioners' Association. He said that every Rural Practitioner owed a life-long and deep debt of gratitude for his services. All the members and the president standing, passed a condolence resolution upon his death to be conveyed to the bereaved family.

In continuation, the members also passed another resolution wherein they have requested Dr. V. Rama Kamath, Editor, Medical Practitioner, Madras, to select one capable Rural Medical Practitioner in the vicinity of Madras City to take up the place of late Dr. Rama Subbu and also to see that the next provincial conference be called for in the coming X-mas. Finally, there was a long discussion upon the subject of Refresher Courses proposed by the Surgeon General to the Rural Practitioners in which they contested that allowances may be sanctioned to them during such courses also that they may be given facilities for the courses not only at the Head Quarters Hospitals but also in bigger places like Madras, or Bangalore etc. in case the practitioners are desirous of having special studies. The President thereupon, said that he found during his inspections, that some of the Rural Practitioners, who are neither servants of the Local Bodies nor of the Government, are lacking in their professional knowledge and it is to such practitioners that the courses are quite essential.

The meeting came to a close by 6 P.M.

The Trichinopoly District Medical Association, (Registered).

A monthly meeting of the above Association was held at 5 P.M., on Saturday, the 22nd August, in the Ceylon Labour-Commission Office, Race Course, Trichinopoly, when about 45 members were present. Mr. N. H. M. Bowden, Ceylon Emigration Commissioner was 'At Home' to the members. After 'Tea' the Doctors were taken round the colony by Mr. Bowden and shown the various places of interest such as the resting-ward, the fly-proof-kitchen-room, the sanitary-cooking room, the dining hall where about 150 emigrants are fed at a time. The Doctors were well impressed with what they saw and appreciated the care taken by the Commissioner to look after the interests of the emigrants.

The gathering then assembled in the meeting-hall. In the unavoidable absence of Dr. Norman, Capt. Sangham Lal, I.M.S., District Medical Officer was proposed to the Chair. At the request of the chairman, Mr. Bowden spoke about the working of the Ceylon Labour Commission, how the emigrants were recruited and how they are sent to the Ceylon Tea estate and gave a very interesting account of the Ceylon Emigration. He also issued on the occasion, to all members, printed account of the working of the Institution with beautiful blocks and sketches. Then, Dr. V. Iravatham of Thirukattupally spoke for half an

hour, on the 'experience of a Medical Practitioner in Burma.' In his humorous speech he gave a very interesting account of the history of Burma, about the people and their customs, and the places of interest in Burma. He said that there was good scope for young and adventurous doctors, a good field for practice in Burma.

The chairman in his concluding remarks thanked Mr. Bowden for his kind invitation and thanked him for taking such kind interest in the welfare of the Ceylon-emigration. He congratulated Dr. V. Iravatham for his excellent interesting and humorous speech about Burma.

He also gave some of his experiences during his short stay in Burma during the time of rebellion.

After a hearty vote of thanks by the Secretary, Dr. P. A. S. Raghavan to the host, the lecturer and the members, the meeting came to a close at about 8 P.M. after a very enjoyable evening.

Medical Practitioners' Association, Nuzvid

Anniversary Celebration

The 4th Anniversary of the above Association was celebrated on 30-8-'36 in the Government Hospital, Nuzvid at 4 P. M. when Lt. Col. K. V. Ramana Rau, I.M.S., D.M.O., Kistna, presided. Many practitioners attended the function including Dr. D. W. Semmens of local Mission Hospital and the local lady private practitioner. A group photo was taken and refreshments were served after which the meeting commenced at 5 P.M. with prayer by Mr. A. V. Subba Rau, L.I.M., Dr. N. Rama Rau, L.M.P., Secretary, read his annual report which was adopted. A paper on 'Abortion' was read by Dr. P. Angaiah, L.M.P., and Dr. Mrs. N. M. C. Seshagiri Rau read her clinical notes upon a case of adherent placenta treated by her under Evipan Sodium anæsthesia. Dr. N. Rama Rau read a paper on 'Gonorrhœa, its complications and treatment'. The president thereupon dilating upon the above subjects mentioned two interesting cases he happened to treat. One was a case of a female suspecting herself to be pregnant for the first time, but sent by another medical officer diagnosed as 'ovarian tumour'; but laparotomy revealed a hard intra-uterine (fully distending the uterus to the size of a foot-ball) tumour with very thick (uniformly 1½" thick) walls and a smooth surface. Hysterectomy had to be done on section, the tumour contained dark brown gelatinous fluid with calcium deposits (Myxomatous degeneration) while the pathological report confirmed a fibroma.

The second was one of extra-uterine gestation, which he could not detect till the last, but was treated as a normal gestation at the time of labour at full term. Several manoeuvres to terminate the labour were of no avail until an escape of a purulent discharge came out through an opening near umbilicus which necessitated a laparotomy when extrauterine gestation was detected. Finally Dr. N. Rama Rau demonstrated a case of neuralgia, which he suspected to be sciatica though simulated sciatica differred from it in some minute aspects and which resisted all his treatments. The president and the members examined him and declared the case as not one of sciatica and suggested treatments to be adopted after much discussion upon the case.

The president in his closing speech thanked the secretary and the members for the honour done him and wished the association all prosperity and the meeting came to a close by 7-30 P. M.

The Tinnevelly District Medical Association. Palamcottah

Affiliated to the Indian Medical Association.

The monthly meeting of the Association and the President's function were held on Saturday, the 29th August 1936, at the St. Xavier's College Hall, Palamcottah, with the president Lt. Col. T. S. Shastry, I.M.S in the chair. Members numbering 79, including 5 lady doctors gathered from all parts of the District. The President, was "*At Home*" to the members.

After reading and passing the minutes of the previous meeting held at Courtallam, on Saturday the 27th July, 1936, resolutions offering congratulations to Major-General E. W. C. Bradfield, C.I.E., O.B.E., M.B., M.S, F.R.C.S. (Edin.), I.M.S., on his appointment as Director-General of Indian Medical Service and to Rao Bahadur Dr. A. Lakshmanaswami Mudaliar, B.A., M.D. (Mad.), F.C.O.G., (Eng.), V.H.A.S., on his election to the Vice-chancellorship of the Madras University, were passed *nem con.*

Cases of: (1) Aneurysm, left common carotid; (2) Osteoma Sarcoma right pubic bone; (3) Fœcal Fistula, right inguinal region; (4) Duodenal Ulcer were demonstrated by Dr. P. S. Srinivasan, L.M.P., Sub Assistant Surgeon, Government Head Quarters Hospital. Case notes of the above were read and fully discussed by the members.

Dr. P. S. Srinivasan, L.M.P., read case notes on the following cases:—(1) A case of Acute Abdomen; (2) A case of Rupture of Liver.

Lieut. Col. T. S. Shastry, I.M.S., gave an interesting lecture on "Acromegaly" giving detailed clinical notes of two interesting cases.

An excellent dinner brought the happy gathering to a close late at night.

A Health Exhibition was also arranged under the auspices of the above Association, in connection with its monthly meeting at the Headquarters (President's Function). It was held at the Armed Reserve Lines, Palamcottah, on Saturday, the 29th August 1936, at 9 A.M. under the Presidentship of Khan Bahadur S. Muhammad Ali Sahib Bahadur, B.A., Indian Police, District Superintendent of Police, Tinnevelly. This is the first time that a Health Exhibition was held in the Reserve Police Lines.

The exhibits consisted of posters relating to Cholera, Tuberculosis, Malaria, Small-pox, Fly-danger, etc.

They were very much appreciated by the gathering.

The posters relating to the prevention and causation of diseases were explained for the benefit of about 200 police constables and their families.

The Exhibition was kept open till late in the evening.

BOOK REVIEWS

Post Graduate Surgery—Edited by *Rodney Maingot*, F.R.C.S. (Eng.), Vol. 1. Anæsthesia, Abdomen, Rectum, X-Ray, Diagnosis, Radium. 1935 p.p. 1742 with 846 figures. Medical Publications Ltd., London, W. I. Sole Distributors in India: Messrs Butterworth & Co., Avenue House, Calcutta, Price 70/- net per Vol. or £ 9-9-0 per set of 3 Vols.

In this great work on Surgery, the 1st Volume of which is being reviewed, an attempt has been made to make good the previous "neglect of post-graduate teaching" in English medicine. Basic knowledge of surgery has been assumed and more space has been devoted than is usual in works of this type, to descriptions of special methods of treatment including operative technique and the management of cases both before and after operation.

The team of writers who have collaborated in producing this volume includes such outstanding names as Cecil P. G. Wakely, Hamilton, Bailey, Hurst, Ernest Miles, Langton Hewer and Rodney Maingot, the Editor, which in itself speaks for the excellence of the book and its being up-to-date.

The present volume opens with a beautiful introduction by

Lord Moynihan. Part I, deals with anæsthesia in which general and local analgesia and the choice of anæsthetic in various conditions are discussed.

Part II deals with abdomen. This occupies the greater part of the book. Methods of diagnosis, medical treatment of peptic ulcer and a special chapter on the technique of gastrectomy with plenty of illustrations are the special features of the sections devoted to stomach and duodenum.

Only passing mention is made of the method of gastrojejunostomy without the use of clamps—a defect common to many other English books. We feel that it could have been described in more detail and illustrated.

Sections on gall bladder and bile ducts, liver and pancreas and spleen, are all beautifully illustrated and well written. Appendicitis and its complications and treatment are described by Hamilton Bailey in a most lucid and helpful chapter.

The sections on Intestinal Obstruction and complications following abdominal operations are dealt with in a very detailed manner, the various points in treatment and diagnosis being summarized wherever necessary.

Part III is occupied entirely by the section on Diseases of rectum and anus, the special features being detailed description of operations for piles, fistula in ano, fissure in ano and cancer Rectum.

Part IV and V cover the subjects of X-Ray diagnosis and Radium Treatment, the latter being written by Stanford Cade. Both these subjects are dealt with very exhaustively and profusely illustrated.

Summarizing our opinion about this book, we can only say this work is indispensable for "Post graduates who are engaged in the practice of surgery", for candidates going for higher examinations and for all who are desirous of keeping abreast with the modern developments in Surgery.—*P. G. R.*

Surgical Diseases and Injuries of the Genito-Urinary Organs—by *Sir John Thompson Walker*, D.L., M.B., C.M. Edin., F.R.C.S. Second revised edition edited by *Kenneth Walker*, M.A., M.B., B.C., (Cantab), F.R.C.S., (Eng.), 1936. 283 illustrations. 25 colour and 33 black and white plates, pp. 974. [Cassell & Co. Ltd., London.]

Many who must have read the first 1914 Edition of this book would have eagerly looked forward to a later edition of the same, and now after an interval of twenty two years, Mr. Kenneth Walker has been responsible for bringing out this new greatly enlarged volume. Except for four chapters on Trans urethral prostatic resection, obstruction of the bladder neck, impotence and sterility written by Kenneth Walker himself, all the other chapters are under the personal supervision of Sir John Thompson Walker and bear the impress of his experience.

Apart from the subject matter of the book, which needless to say is exhaustive, at the same time interesting, one cannot but be struck by the numerous coloured cystoscopic drawings, the illustrations of operations for hypospadias, prostatic obstruction etc., and the large number of plates of pyelogram in various urinary conditions, which make the volume extremely helpful to practising surgeons.

This book which has been described as the standard work of the British School of Urology, although originally intended by the author "to prove of value to members of the profession engaged in General practice and to those on the threshold of a surgical career" ought to be in the hands of, and prove useful to urologists, general surgeons and practitioners.—*P. G. Rau.*

The 1935 Year Book of Radiology—*Diagnosis*: Edited by *Charles A. Waters* and *Whitmer B. Firor*. *Therapeutics*: Edited by *Ira I. Kaplan*. Published by The Year Book Publishers, Inc., Chicago, 1935. Price $ 4.50, post paid.

This is a well got up compilation of the past year's world literature indicating the advances in Radiology. The comments of the editors about the topics selected are as usual very illuminating, and carry the weight of authority with them. The increasing use of thorotrast particularly in the diagnosis of diseased conditions of the nerves, lymphatics and of arteries, serial X-ray studies of the bronchi and the ureters, X-ray diagnosis of pancreatic tumours and of placenta prævia, soft tissue radiography of tumours of the breast as an useful adjunct in the routine examination of such growths, are some of the "bright spots" in the book. The editors favour the discontinuance of the use of proper names in association with osteochondritis juvenilis. As regards therapeutics, Coutard's protracted fractional method has justified itself by the successful results obtained by various workers. Angina pectoris, syringomyelia, and acute anterior poliomyelitis are now amenable to roentgen therapy. The modern tendency in dealing with cancer of the cervix is that irradiation is the treatment of choice, and that surgery should supplement and not displace it. The medico-legal aspects of radiology are ably dealt

with in the book, as well as the methods of protection against harmful radiations. These are some of the outstanding features which have caught the reviewer's eye, but their mere mention does not do full justice to its usefulness as an authoritative reference book, which any radiologist would be proud to possess. The editors of the book quote with approbation the words of Ross Golden: "Radiology has become of such vital importance in medicine that no stone must be left unturned to attract to it the best men in the medical profession, to give them the best possible training, and to protect them from exploitation, to the end that the work in general will be of the highest possible quality; if this is accomplished, there need be no fear for the place of Radiology in medicine". We heartily commend this book for the work of "the highest possible quality" that it presents from cover to cover, and which is both interesting and enlightening.—*P. R. Rau.*

1935 Year Book of Urology—Edited by *John H. Cunningham*, M.D., Published by The Year Book Publishers, Chicago. Price $ 2.25.

This volume reviews the literature in this branch of surgery for the past year. The Editor has included only such papers as throw new light on the problems of urology and wherever necessary has quoted fully such papers as are important. Reading over the book, one is struck by the large number of articles helpful to the General Surgeon in a volume mainly concerned with urology.

Some of the abstracted articles are on the value of urea clearance test in kidney conditions, the use of urography in acute renal conditions for purposes of differential diagnosis, management of urologic complications after spinal injuries, auto urotherapy in eczema and lumbago, post operative Retention and its management, and the subject of anuria. Mr. Swift Joly's Ramon Guiteras lecture on urinary calculus has been reviewed at considerable length as an excellent survey of the aetiology of calculus.

Adrenalectomy and adrenal denervation in conditions of hyperthyroidism and peptic ulcer, transurethral operations, their technique and indications, management of early prostatic obstruction (an article by Auswortin Daires), cancer penis, its relation to phimosis and circumcision and operative results, stricture of the ex-urethral meatus in the elderly and its management are other articles reviewed, interesting alike to the urologist and the general surgeon.

It has not been our purpose nor is it possible to mention all the useful articles in this book; our object has only been to show

the wide variety of subjects discussed and the general usefulness of the book and we can strongly commend this handy volume at its modest price to all practising surgeons as an indispensable addition to their library.—P. G. R.

Year Book of Eye, Ear, Nose and Throat 1935.—By *Brown Bothman Shambauch*, 1935 Pp. 638, Price $ 2.5. The Year Book Publishers, Chicago.

This volume is one of the ten Practical Medicine year books, which are now in their thirtyfifth year. Nothing need be said by way of introduction to this book under review for we are sure most of our readers are already familiar with these volumes.

The authors have given a good summary of all the world's latest literature on the subject, giving the benefit of their experience by contributing their comments wherever possible.

As usual the book is divided into three parts. Eye, Ear, Nose and Throat, and each of these has been carefully edited and as such leaves little for us to say.

We wish this all the popularity that it deserves.

Clinical Tuberculosis—in two volumes—Edited by *Benjamin Goldberg*, M.D, F.A.C.P., etc., 1935 pp. about 1500 pages with 640 illustrations and 9 coloured Plates. Philadelphia. F. A. Davis and Company. Price $ 22/net.

In these two volumes consisting of over 1500 pages, Tuberculosis has been discussed from various aspects. There are about fiftyeight chapters in all contributed by thirtyfour different authors, each contributing in his own speciality. It is difficult to give a review of a work like this in the short space at our disposal, composing as it does matter so varied and different in quality.

There are, good many chapters excellently written and well worth anybodys perusal while the specialist and the interested would find it a ready helper, when confronted with difficulty. A glance over the list of contributors would tell any one that the best authorities from all over the new world have taken part in the edition of this book and, that it contains all the prevailing opinions on Tuberculosis is beyond dispute. However, we have failed to see any thing new or different from what has not been included in similar English publications.

In passing we might mention that we would have liked a more elaborate chapter on tuberculosis of bones and joints, a disease that is more prevalent in this part of the world. The

editor in chief deserves all our congratulations for having successfully produced such a useful work on clinical tuberculosis. We wish our readers would include these volumes in their next indents for their library.

Radium Treatment of Skin Diseases, New Growths, Diseases of the Eyes and Tonsils By *Francis H. Williams*, M.D., 1935 pp. 118 illustrated Price $ 2.0. The Stratford Company, Boston, Mass.

This book contains the results of the author's thirty years' experience in the use of Radium with instruments devised by him. The book is broadly divided into three parts. Part I contains a short account of the nature and properties of Radium, measurements of the radiation in air and in vacuum. Part II, gives a description of the apparatus and methods of treatment of diseases of Eye, while Part III, treats of tonsils as a source of infection. The book is handy and contains briefly what Radium can do in the cure of ills if properly used. We wish it all success.

A Text-book of Mid-Wifery in the Tropics.—by *Green-Armytage*, M.D., F.R.C.P., F.C.O.G., Lt. Col. I.M.S., (Retd.) and *P. C. Dutta*, M.B., (Cal.), F.R.C.S., D.G.O., L. M. Capt. I.M.S.—1936. Second edition. 447 pages, illustrated—'Butterworth & Co. (India), Ltd. Calcutta. Price Rs. 8.

Many of the problems and difficulties met with by obstetricians in the tropics are entirely different from those encountered by practitioners in the west and this is ample justification for a book of this sort. No one perhaps is better fitted to write it than Col. Green-Armytage who has spent over twenty years of his brilliant career in Calcutta. This second edition has been entirely re-written. The sections on ante-natal and post-natal care, toxæmias of pregnancy, diseases associated with pregnancy, haemorrhages ante-partum and post-partum, puerperal sepsis, obstetric operations and blood-transfusion are well written, Wherever possible illustrations have been appended as in the sections on Osteo malaria, fistulae, filariasis and post-natal exercises.

The present volume though a little longer is very well written in the manner of a synopsis and will be very useful to the student and practitioner in the tropics.

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NOTICE

The 28th Annual Conference of the All India Medical Licentiates' Association will be held at Agra during the X'mas week. Rai Bahadur Dr. Hari Ram of Delhi has been elected President of the Conference. All the articles and Scientific exhibits should be sent to the undersigned on or before the 1st December '36.

T. C. BASU CHOWDHURY,
General Secretary, Reception Committee,
Rekabgunj Road, Agra.

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The Antiseptic

A Monthly Medical Journa

Edited by

Dr. U. Rama Rau & U. Krishna Rau, M.B., B

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Editorial & Publishing Offices: 323, Thambu Chetty St., G. T., Madras.

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Vol. 33 No. 10.] [Oct. 1936.

The Antiseptic

ESTD. 1904.

A Monthly Journal of Medicine and Surgery.

Editors: Dr. U. RAMA RAU & U. KRISHNA RAU, M.B., B.S.

Editorial and Publishing Offices:—323, Thambu Chetty St., Madras.

Annual Subscription Rs. 5. Foreign, 10 Sh. Post Paid.

ORIGINAL ARTICLES

SOME PITFALLS IN THE CERTIFICATION OF THE INSANE*

BY

DR. BANARSI DAS, M.B., D.P.M. P.M.S.,

Superintendent, Mental Hospital, Agra.

THE Indian Lunacy Act IV of 1912 was passed by the Government of India to consolidate the law relating to insanity. This Act was amended from time to time as necessity arose. Each Local Government has issued certain rules under the Act to govern the subject in its own province or presidency. But the Act applies to the whole of India. In view of the many far-reaching improvements in our conception and treatment of mental disorders in the last 24 years, the Act needs revision. As the subject is now a transferred provincial matter such revision will have to be undertaken by the provincial legislatures sooner or later. The complete Act with schedules covers 50 pages and costs only 3 annas. Its careful study is the best safeguard against mistakes of procedure. The rules made by the Local Government will also repay perusal.

From the medical man's point of view, Form 3 of the medical certificate is the one thing in which he is specially interested. Those, who prepared this form, took special care to give detailed notes on the form itself to guide the certifying doctor. Yet, alas! how often one sees this certificate being given without sufficient care or consideration.

* Specially contributed to 'The Antiseptic'.

Under Section 18 of the Act the certificate must be in the prescribed form and it has the same force and importance as an affidavit. The certifying doctor should not forget the words of clause 3 of Section 18 : " Every medical certificate made under this Act shall be evidence of the facts therein appearing and of the judgment therein stated to have been formed by the person certifying on such facts, as if the matters therein appearing had been verified on oath ". Consequently one is liable to prosecution for perjury, involving rigorous imprisonment, if the serious nature of the matter is not realized. Nobody would dream of signing an affidavit or giving sworn testimony in the thoughtless manner in which certificates of insanity are issued by some people. In England medical men are so nervous about their liability under the Lunacy Laws that they seldom issue a certificate of insanity without consultation with a psychiatrist. Even those employed in mental hospitals take the precaution of joining the Defence Union as an insurance against prosecution.

As the law stands at present, certificates of insanity can be issued only by gazetted medical officers under section 14. One of the two certificates required under section 5 may be signed by a medical practitioner holding a qualification registrable in the United Kingdom. The licentiates are debarred from certifying. They have just started a movement for the removal of this bar. Where two certificates are required each certifying doctor must examine the patient separately from the other. The opinion must be based on facts personally observed. Facts supplied by others may be given to corroborate one's opinion. It will be noted that the law does not require a diagnosis. A statement of bare facts is enough. This is quite easy in the case of a wildly excited maniac. Depressed patients and others may need careful observation.

A few simple facts may be sufficient to establish the presence of a mental disorder. A long and rambling list of so-called facts may mean little. One should avoid expressions like " looks mad ". An insane person may abuse or attack others if he is molested. A sane person will do the same. But one may be considered certifiable if he abuses or attacks without provocation or sings and laughs without reason. Abnormal behaviour is the chief characteristic of mental disease. The patient's behaviour must be judged in relation to his environment. For instance, the average Indian villager is normally clothed only in a loin cloth and uses the nearest open space for his sanitary needs. Similar behaviour in an Englishman would be considered

sufficient justification for his certification. A mental patient may claim to be God Almighty. Another may state that his brother wants to kill him. This statement cannot be accepted without some investigation as it may be true or false. The patient has often no idea of the passage of time or where he is as his mind is confused. His talk may be a jumble of words with no particular meaning. Or he may refuse to answer even simple questions. He may laugh and weep without apparent rhyme or reason. In women one may notice a lack of natural modesty. The certificate should be based on facts demonstrating abnormal behaviour ; disharmony of mood, thought and word ; or marked emotional disturbance.

There is no legal definition of Insanity. The normal gradually shades into the abnormal. There is no definite line of demarcation between the sane and the insane. Perfectly sane individuals often exhibit states of excitement, rage and depression, which are supposed to be the hall marks of insanity. The large group of psychoneuroses or border line cases and the countless cults catering for the emotionally unstable and ill balanced in every community are clear evidence of the presence of mental disorder to a much greater extent than we are prepared to admit. No Government can possibly provide for the care of all persons of unsound mind. Therefore the doctor is expected to certify only those, who require care, supervision and control not only in their own interests but also in the interests of the community. He has to decide first whether the person is insane and next whether his insanity is certifiable. Having made up his mind, he should fill in the certificate and sign and date it. The date should be of the last day of the period of observation.

Under section 16 the magistrate issues a temporary detention order for a period not exceeding 10 days. The certifying medical officer can have it extended by 10 days at a time up to a maximum of 30 days, which is quite enough to enable anybody to make up his mind. This period is also sufficient to unmask malingerers. The man, who pretends to be insane to escape punishment for some crime, cannot easily keep up the same intensity of excitement for a whole month.

Under section 19 the medical certificate holds good only for 7 days. If no action has been taken within 7 days the certificate ceases to have effect. The violation of this important section is responsible for many patients being refused admission into the mental hospital and consequent hardship. When the patient is to be despatched to the mental hospital he should be carefully

examined to see if he is physically fit to travel. This elementary precaution is necessary as the mental hospital cannot undertake to treat surgical diseases like fractures and mastoiditis nor medical disorders like tuberculosis owing to the absence of facilities available in general hospitals.

INNOCENT TUMOURS OF THE CONNECTIVE TISSUE *

BY

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Of all tumours the innocent tumours (as the name signifies) are the easiest for operation. But in long-standing cases there may be signs of degeneration either cystic, colloid, calcarious, myxomatous or malignant in nature. These tumours are usually circumscribed, but may be diffuse. As the tumours increase in size, they cause abnormal pressure, and the surrounding tissues are involved, degenerated or even atrophied. Not unusually

Fig. 1. Before Operation.
Lipoma under the Muscles.

Fig. 2. After Operation.

* Specially contributed to the "Antiseptic".

either by distension or pressure on nerves they cause pain also, which especially compels the patient to seek medical advice. These tumours do not infiltrate and are gradually encapsuled, while malignant growths are inseparable, and not encapsuled; they infiltrate and finally replace the tissue amongst which they grow, and necrosis is common in them; on the other hand acute inflammation is not an uncommon complication in innocent tumours due to septic infection, and is sometimes followed by suppuration. Then again malignant tumours increase with greater rapidity than the innocent ones, and are associated with glandular enlargement and dissemination in other parts of the body and recurrence after removal.

Fig. 3. Before Operation. (Lipoma).

In this article I shall deal only with fibrous and fatty

Fig. 4. After Operation. (Metal Chips seen).

tumours; the former variety has a real capsule, while the latter may be circumscribed or diffuse; it sometimes dips down along

the muscles and should not be removed unless it causes much pain or great inconvenience.

Fig. 5. Keloid.

A lipoma is usually subcutaneous, but may grow under mucous membrane, beneath synovial stratum, and between muscles. They sometimes grow into an enormous size.

A fibroma is composed of bundles of fibrous tissues; they may be soft or hard and have usually no real capsules. They grow slowly under skin, submucous or subcutaneous tissues and sometimes within the muscles or under the periosteum: they may be congenital too and are common in young adults. Keloid is also a kind of fibroma of the true skin. It usually arises from a scar or cicatrix of sutures or burns and from holes in the ear made for putting on rings and so on. These tumours unless very carefully extirpated (leaving none of the affected tissues) grow again and again and I think, some subjects are specially susceptible to this sort of abnormal growth of the fibrous tissue, as I have seen keloids growing from each and every scar or cicatrix on the bodies of some persons. They are sometimes congenital too.

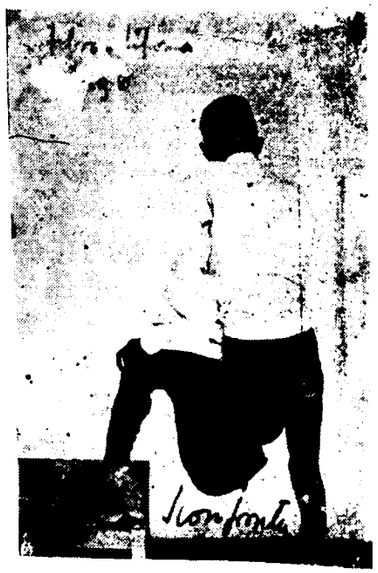

Fig. 6. Fibro-Lipoma.

Treatment.—There is nothing particular in this operation except those general procedures given in surgery. If the tumour be small, a linear incision would do; but if very big, an elliptical incision would be necessary along the longest diameter in such a way that the surrounding skin should neither be too small nor too large: but it is far better to be larger than being smaller, so that the edge of skin might meet without any *tension*. If it be pedunculated make an incision around the pedicle in a similar manner. "The capsule must be incised" urges Da Costa, "when the tumour is torn out forcibly or better, enucleated by dissection." As for fibromata it should better be removed, as it might turn into a sarcoma after sometime. If the tumour extends in between muscles it should be removed as far as possible by reflection or even division of the muscles concerned, which might be reposited or stitched afterwards. If the tumour be multiple, or too many all over the body, it is not judicious to remove them all at one sitting; the operation may be done at two or three sittings. If there be any oozing, it is better to leave a drainage for 24 hours at the most *dependent* part with regard to the position of the patient in bed.

A firm pressure of pad must be applied over the operated area in order to *reduce the gap* produced by the removal of the tumour and keep the parts *in apposition*, with properly fitting bandages; and the affected limb should be kept at rest by fixing it to a pillow, or putting up in splints.

Diagnosis of Carcinoma of the Stomach from a Fragment of Tumour Obtained During Gastric Analysis

L. G. JEKEL (*'Journal of Laboratory and Clinical Medicine, 21: 836-838, May, 1936*) *reports a case in a man fifty-six years of age with symptoms of six months' duration, in which the X-ray examination did not show the presence of a tumour conclusively and in which the diagnosis of gastric cancer was made by Histological examination of small masses of tissue removed with the gastric contents in the course of a gastric analysis. The author finds no similar case reported in American literature since 1907. In this case the diagnosis was made too late for successful operation, but the author is of the opinion that this method for the diagnosis of gastric carcinoma should not be overlooked, as there is a possibility of early diagnosis in this way. X-ray studies are a necessary part of any thorough gastro-intestinal study, but even in the hands of an expert, the findings may be indefinite or inconclusive. Too much dependence should not be placed on the X-ray examination to the neglect of other methods. Gastric analysis is a simple and inexpensive procedure that can be done in the office and is often of aid in clearing up obscure cases. Since normal gastric mucosa can be obtained through the stomach tube, tissue from an early cancer may also be obtained in this way, and careful examination of any tissue obtained in the course of gastric analysis should always be made.*—MED. TIMES.

LEUCORRHŒA*

BY

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LEUCORRHOEA is the term applied when there is excess in natural secretions.

Leucorrhoea is one of the symptoms of many diseases and it is not a disease. Function of natural secretion is to lubricate the surfaces.

Secretion from the Bartholin glands is clear, colourless and slightly acid. It could be at times seen swelling up from the openings of the duct on Vaginal examination.

Vaginal Secretion.—Varies in character. It is white, semi-solid and acid in virgins and nulliparous. It is opalascent and either alkaline or neutral in parous women.

Cervical secretion is abundant, viscid and is alkaline.

Endometrium and Tubal Mucosa secrete very little and the discharge is watery.

Types.—

(1) (*a*) Excess of natural secretion :—In normal person increase in natural secretion is during pregnancy and before onset of menses due to increased pelvic vascularity.
(*b*) Chlorosis and Anaemia. It is due to inflamed patches in cervical mucosa.

(2) *Serous discharge.*—It is rare except during pregnancy in certain cases of prolapse, late in puerperium, intermittent hydrosalpinx, in early cases of malignant disease of uterus, rarely in tubal papilloma or carcinoma and urinary incontinence.

(3) *Muco Purulent.*—It is due to (1) Inflammatory changes in genital tract. (*a*) Acute Gonorrhoeal discharge is yellowish green and very irritating. (*b*) In Chronic Gonorrhoea it is paler. (*c*) If Inflammation be due to septic germs it is whitish and pus like. (2) Pelvic abscess may open into uterus.

Purulent.—It consists of large amount of serum and pus cells and mucus. It stains linen yellow. It is due to

* Specially contributed to 'The Antiseptic'

sub-acute gonorrhoea with Erosion of Cervix, deep cervical laceration or Ectropion of cervix.

Offensive discharge.—Causes are many. (*a*) Dirty personal habits. (*b*) Foreign body in vagina *e.g.* retained and neglected Pessaries. (*c*) Ulceration in tumours *e.g.*, Sloughing Fibroid. (*d*) Cancer of Cervix, rarely cancer of body. (*e*) Slonghing of genital canal. (*f*) Senile Endometritis with Pyometria. (*g*) Rupture of Pelvic abscess into uterus. (*h*) Putrefaction of products of conception. (*i*) Urinary or fæcal fistula.

Clinical types.

(1) Little girls suffer from Vulvo-vaginitis due to either Gonococci or other pyogenic organisms. Discharge is muco-purulent.

(2) Young virgins.—Slight excess of normal discharge due to depressed general health.

(3) Virgins or Nulliparous.—Muco-purulent discharge due to Erosion, Gonorrhoea.

(4) Parous women below fifty.—Due to (*a*) Gonorrhoea. (*b*) Laceration of cervix with ectropion. (*c*) Erosion.

(5) Women past menopause.—Due to (*a*) Senile Endometritis with Pyometria. (*b*) Cancer of uterus and cervix.

Diagnosis.

Inspection.—(*a*) Vulva inspected to note condition of urethra and Bartholin's glands. (*b*) Cervix inspected by speculum examination. (*c*) Speculum examination also reveals fistulae if present.

Ascertain whether discharge is uterine or vaginal. Tampoon test is done for this purpose ; clean cotton wool plug is placed in contact with the Os. It is stained yellow at the point of contact if it is uterine discharge.

Treatment.—As Leucorrhoea is a symptom and not a disease, the cause should be attacked to cure it. As for example, leucorrhoea due to chlorosis or anaemia, should be treated with extensive liver therapy and Iron and Copper.

There are certain cases which require local treatment together with the general treatment of the causal factor.

Septic Vaginitis clears up in two or three days by douche and 15 % Protargol pessaries. I have found in such cases Neem Bark douche, Levico water douche and insertion of suppository Leuco by Avon & Co., efficacious.

Erosion.—(*a*) Levico water douche is given after clearing

mucus by application of liquor potash; next is to cauterize cervix with either Iodized Phenol, saturated Picric acid or 10 % Formalin. Erosion clears up in four to six weeks.

(2) Cauterization of eroded area by Paqualin's cautery. First clean the eroded area, dry it and apply cautery at dull red heat taking care also to cauterize the follicles and margins of the cervix to prevent secondary erosions; later, insert suppository Leuco by Avon Chemical Works into cervix.

Ionization of the cervical canal.

Endometritis.—Intra Uterine douche of either Iodine or Dettol followed by Intra-uterine application of Iodized phenol.

Post natal or post abortal discharge should be treated by evacuating uterus followed by Intra-uterine douche of any antiseptic such as Iodine, Lysol or Dettol to clear the surface. Glycerine is injected into uterine cavity after douching to clear up sepsis. At times, glycerine with 4 % mercurochrome acts much better in clearing up the sepsis.

Leucorrhoea during early pregnancy yields well to low cold levico douche. It tones up and cleans the mucosa.

WATER-ITCH IN TEA GARDEN PRACTICE*

BY

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WATER-ITCH is a form of dermatitis, which attacks the feet of many tea garden coolies during rainy season.

It is known by various names; in tea grarden it is called "water-itch, water-sore, and Pani-ghao." The text-books refer to it as ground-sore and Ancylostomal dermatitis.

Though it is not a serious disease, it is yet most important, for economic reasons in tea industry, to control the disease quickly during the busiest months of tea-manufacturing season.

Water-itch occurs almost always in wet weather particularly worst after a heavy rainfall and absent in the dry season.

Those parts of the plantation adjoining the coolies' lines are the favourable areas for spreading the disease. In wet weather those planted sections are covered with clay and human excreta, which harbour the ova Ancylostoma Duodenale. When the

* Specially contributed to the Antiseptic.

coolies are hoeing or plucking there the minute ancylostoma larvae which have hatched out in the soil may easily penetrate the barefooted skin which is macerated from passing over the slush. When the embryos, sufficient in number, have invaded the skin, pyococci and bacteria may also be introduced with them, which are the real cause of the dermatitis.

It almost invariably attacks the feet and only occasionally the legs. It begins with itching, followed by swelling of the feet, which increases with the next day, when the eruption appears. In some cases lymphangitis may complicate the condition, while walking or standing becomes very painful. The eruption consists of erythematous macules or slightly raised papules, which rapidly become vesicles, and it appears either singly or in herpetiform groups about the sole, and dorsum of the foot, but the most common region is between and beneath the toes. The vesicles usually develop into pustules and these in turn may form small or even extensive ulcers with a sticky exudate, gradually becoming dry and healing with exfoliation.

To prevent the dermatitis, faecal contamination of the soil should be averted, by instituting the pit or bucket latrines and by the destruction of the faeces in a small crude incinerator if practicable. There is no doubt the disease may also be reduced to a great extent, if the coolies' lines are set apart from the tea-bushes and a clear area is left behind the lines for defaecation. The contaminated mud there should be treated from time to time with quicklime. The practice of tar-painting the feet of the coolies followed by covering the parts with sand before their entrance to the contaminated area and of making them walk over phenyle or Pot. Permanganas lotion on their return from that area, may prevent the sore-feet to some extent. Cleansing the feet and foot-wear also serves as a protective measure against the disease.

Avoidance of faecal contamination not only prevents water-sore, but it is also the most effective method of controlling the Ancylostoma duodenale infection, which is the main cause of miserable life, prevailing most commonly amongst the women in tea estates.

The sequelæ of the infection are usually anaemia and dropsy, which are more detrimental to the women during conception, and render their condition precarious until the puerperal period is over.

Treatment of dermatitis in early stage.—To allay the itching, application of Gentian Violet 2 % solution is very efficacious; also it usually prevents the extension of vesicular stage and

reduces the inflammation. When the affected parts are enormously inflamed, hot phenyle bath is a standard remedy which causes relief of pain by producing contraction of the local blood-vessel walls. As a result, inflammatory exudates do not occur, congestion is relieved, and as the pressure on the nerve filaments, ceases the pulsating pain of inflammation passes away.

The complication of lymphangitis may be treated with remarkably good effect by the administration of Iodine solution intravenously. When pimples or vesicles are formed, excise the crown, remove the exudation and dress with acriflavine solution (1 in 1000) in a piece of lint, which perhaps is the best application. Tannic acid and Kaolin (1 to 10) easily prevent the exudation while weeping continuously and is uncontrollable by other remedies. When the exudation ceases, it is better to clean the part with Spt. Camphor and thereafter use a dusting powder containing Zinc, Borax, Starch, Camphor and Sulphur-sublimatum-equal quantities, which heals the lesion very quickly.

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THE HISTORIC BACK-GROUND OF MEDICINES*

BY

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General Remarks

THE claim has often been advanced that the West is the birth-place of Science including the science of medicine. Undeniably the contribution of West to the modern evolution of science with some of the epoch-making discoveries of the last few centuries has been substantial and praiseworthy. Some of the discoveries in the practical sciences have contributed to the material advancement and progress of humanity. The rapid means of communications on land, sea and air, the inter continental cable services, the radio, the telephone trunk tubes, the wireless, inventions in the domain of music, art etc. new methods of diagnosis, and treatment through X-ray, Radium and electricity making the most inaccessible parts of human anatomy

* Specially contributed to the Antiseptic.

accessible and visible to the eye and hand of the clinician and surgeon, are some of the notable achievements of the modern science which have brought the vast mases of hamanity on the surface of the globe closer together and given new orienation to the art and science of medicine and surgery. But there are certain domains, and medicine is one of them, in which many of the so-called present day discoveries of science are analytically found to be mere re-discoveries of the past knowledge which had been buried under the debris of time. Overlaid with the centuries-old dust and dross, the casual observer may find no resemblances between these records of the past and present theories and dogmas of science. But the discerning eye of an impartial student of comparative history will find intimate signs of similarity and often times, in certain essential respects, the basic germs of truth and fundamental seeds of origin, in the scientific lore of the past for many a theory and practice of the present-day scientist. The modern scientist may present his wares in a new and novel garb and guise with extraordinarily polished exterior characteristic of this age of glitter and glamour. This factor may mislead the unwary and beguile the based apologist of the modern cult to acclaim the achievements of science as an entirely new revelation or invention. But the seeker after truth will penetrate beneath this external adornment and shear off the outer covering to see with the clear telescope of history the true perspective relationship between the present and the past. It is this spirit of scientific research and unprejudiced mode of mind and scholarly patience and perseverance that have, in all times and ages, been the guiding stars to the seers and thinkers and men of light and leading to enable them to steer aright the bark of humanity from the shores of the dawn of history in the past to its unknown goal in the dimness of future. Each new step is an advance on the last and each experience a cumulative effect of the traditions and genius of the race : past goading the footsteps of the present on its onward march to the temple of success.

Lest I might be mis-understood, it is not the sentimental pride in the past which should be shed as early as possible in the interest of the progressive evolution of the race, that I wish to emphasise. " The past is of use in so far as it helps to build a future greater than itself." But the fact must be recognised that in the life of a nation as that of an individual, the traditions, and trials, the achievements and acquirements are the indispensable foundation stones to rear the structure of the future. The history of humanity is one long chapter of successes and failures, rises an

falls, progress and retrogression in the journey of human endeavour; each succeeding generation adding to or subtracting its own from the sum total of past knowledge and experience. The dogmas of the past may be the denials of the present and vice versa. Viewed in that light it would be agreed by all that a just and legitimate pride in the legacy of the past should be a salutary incentive to progressive evolution of science, philosophy etc.

It will be presumptuous on the part of any nation or country to claim the exclusive prerogative to inherit all the wealth of intellectual possessions or scientific achievements. There is ample historical evidence to demonstrate that ever since the morning of civilization in the remote past, other nations and countries besides the Western, have also thrown up thinkers and scientists, physicians and surgeons, seers and sages, who have contributed, not in a meagre measure, to the sum total of what the modern claims exclusively as his own creation.

The origin of Medicine

It is undoubtedly true that many of the original works on medical sciences have been destroyed by the depredations of warlike instincts of the human species and the victorious took very little care to preserve the literary treasures of the vanquished though he voraciously grabbed to garner the physical wealth and riches. This makes it difficult, at times, to establish some of the missing links in the chain of evidence. But whatever has been saved of these precious ancient work in the biggest library of Taxilla University which was burnt to ashes, leaves no room for doubt that the science of medicine, like so many others, had its place of birth in the East.

Lord Ampthill, the late Governor of Madras, while declaring open the Madras King Institute of Preventive Medicine said, "The people of India should be grateful to Col: King for having pointed out to them that they can lay claim to have been acquainted with the main principles of curative and preventive medicine at a time when Europe was still immersed in ignorant savagery. I am not sure whether it is generally known that the science of medicine originated in India, but this is the case and the science was first imported from India to Arabia and thence to Europe. Down to the close of the 17th century, European Physicians learnt the science from the works of the Arabian Doctors: while the Arabic Doctors, many centuries before, had obtained their knowledge from the works of great Indian physicians

such as Dhanwantri, Charaka and Susruta. It is a strange circumstance in the world's progress that the centre of enlightenment and knowledge should have travelled from the East to West leaving but little permanent trace of its former existence in the East."

European medicine down to the 17th century was based upon the Arabic and the name of the Indian Physician Charak, repeatedly occurs in Latin translation of Avicenna (Alu Sina) Rhazas (Alu Rasi) and Serapion (Alu Sirabi). Arab medicine was founded on the translations from the Sanskrit treatises made by command of the Khalif of Baghdad (950-960 A.D.) *Prof: Macdonell* in this connection says "The effect of Hindu medical science upon the Arabs after about 700 A. D. was considerable, for the Khalif of Baghdad caused several books on the subject to be translated. (*Sanskrit Literature P. 427.*)

Mrs. Manning says (in Ancient and Mediæval India Vol: I Pp. 353-54) "The medical works of India had already attained world wide celebrity when the Khalif of Baghdad collected the greatest works and summoned the most learned scientific men of their era to give brilliancy to Baghdad as a seat of learning."

Witness of History

In support of the fact that the Hindu medical works were largely translated by the Arabs and that these translations formed the nucleus of their science and that after being translated into European languages, they formed the backbone of the European Science of medicine, the following facts will be found interesting:—

(1) Barzouhyeh, a contemporary of the celebrated Sassanian king, Nosherevan (A.D. 531-572), visited India to acquire proficiency in Indian sciences.

According to Professor Sachan, the learned translator of Alberuni, "some of the books that had been translated under the first Abbaside Caliphs were extant in the Library of Alberune, when he wrote his India, "the Brahma Siddhanta or Sind-hind.....the Charaka in the edition of Ali Ebn Zain and the Panchatantra, or Kalila Damna".

(2) Almansur or Almanzar, who removed his seat from Damascus to Baghdad between 753 and 774 A.D., caused translations to be made from the Sanskrit, of Medical scientific works, among which we find particularised a tract upon poisons by Shank (meaning Charaka) and a treatise on medicine by Shashrud (meaning Susruta).

(3) Mrs. Manning says : " Later Greeks at Baghdad are found to have been acquainted with the medical works of the Hindus, and to have availed themselves of their medicaments."

(4) We learn with interest that Serapion, one of the earliest of the Arab writers, mentions the Indian Charaka, praising him as an authority in medicine, and referring to the myrabalans as forming part of Charaka's prescriptions.

(5) Rhazes was a greater physician than Serapion. He lived at Baghdad with Al Mansur. He wrote twelve books on chemistry. On two occasions, Rhazes refers to the 'Indian Charaka ' as an authority for statements on plants or drugs.

(6) Another celebrated medical man is Avicinna (Abu Ali Sina) called Sheikh Rais, or the prince of physicians, who succeeded Rhazes. He was the most famous physician of his time. He translated the works of Aristotle, and died in 1036 A.D. In treating of leeches, Avicinna begins by a reference to what " the Indian says," and then gives nearly the very words of Susruta, describing the six poisonous leeches, amongst which are " those called Krishna or black, the hairy leech, that which is variegated like a rainbow, etc."

(7) Sultan Firoz Shah, after capturing Nagarkot, had the Sanskrit medical works, found there, translated into Arabic by Ayazuddin Khalid.

(8) In the reign of Harun-ul-Rashid, the Hindu medicine was not only valued by the Arabs, but Hindu physicians were actually invited to Baghdad, and they went and resided in his court. For this information we are indebted to Abu Osaiba whose biographies are quoted by Prof. Dietz in his Analecta Medica, Wustenfeld, Rev. W. Cureton, Flu Muller.

(9) Abu Osaiba states that Manka was a Hindu, eminent in the art of medicine and learned in Sanskrit literature. He made a journey from India to Iraq, cured the Khalif Harun-ul-Rashid of an illness, and translated a work on poison by Charaka from, Sanskrit into Persian. Another Hindu Doctor named Saleh has also been eulogised by Abu Osaiba. He was, it is said, one of the most learned amongst the Hindus, and greatly skilled in curing diseases.

according to the Indian mode. He lived in Iraq during Harun's reign. He travelled to Egypt and Palestine, and was buried when he died in Egypt.

(10) Dr. Furnell, Dy. Surgeon-General and Sanitary Commissioner, Madras, in his lecture delivered on the 1st April, 1882, most vigorously supported the claims of Hindu Medicine as one of the most ancient and the most advanced sciences ever cultivated in the world.

It is a well known fact that the Hindus were the first nation to establish hospitals and for centuries they were the only people in the world who maintained them. The Buddhist India was studded over with dispensaries and hospitals. The Chinese traveller, Fahein, speaking of a hospital he visited in Patliputra says " Hither come all poor and helpless patients suffering from all kinds of infirmities (Gile's Version).

" The earliest hospital in Europe " says Mr. Vincent Smith in his Early History of India " is said to have been opened in the tenth century ".

The Scope and Sphere of Ancient Medicine

History furnishes unmistakable testimony that the Indian practitioners of the healing art had cultivated a high order of proficiency and their skill and ingenuity covered the whole range of medical, surgical, obstetrical, gynaecological and other branches of the science that would do credit to any nation in the world.

1. *Medicine. Professor Wilson remarks* : (Wilson's works Vol. III Page 269) " The ancient Hindus attained as thorough a proficiency in medicine and surgery as any people whose acquisitions are recorded. Their diagnosis is said, in consequence, to define and distinguish symptoms with great accuracy, and their materia medica is most voluminous."

Sir William Hunter (Imperial Indian Gazetteer " India " Page 120.) has the following on the scope of Indian Medicine: " Indian medicine dealt with the whole area of the science. It described the structure of the body, its organs, ligaments, muscles vessels and tissues. The materia medica of the Hindus, embraces a vast collection of drugs belonging to the mineral, vegetable, and animal kingdoms, many of which have now been adopted by European physicians. Their pharmacy contained ingenious processes of preparations, with elaborate directions for the administration and classification of medicines. Much attention was devoted to hygiene, regimen of the body and diet."

The "*Englishman*", (A Calcutta daily), in a leader in 1880 said: "No one can read the rules contained in great Sanskrit medical works without coming to the conclusion that in point of knowledge, the ancient Hindus were in this respect very far in advance not only of the Greeks and Romans but of Mediæval Europe."

In *Elphinstone's History of India* we read: "The acquaintance with medicines seems to have been very extensive. We are not surprised at their knowledge of simples in which they gave early lessons to Europe and more recently taught us the benefit of smoking Dhatura in asthma and the use of cowitch against worms".

2. *Surgery:—Mr. Weber* (Indian Literature, page 270) says: "In surgery, too, the Indians seem to have attained a special proficiency and in this department, European surgeons might, perhaps, even at the present day still learn something from them, as indeed they have already borrowed from them the operation of Rhinoplasty."

"Their surgery," *says Elphinstone* (History of India, Page 147) "is as remarkable as their medicine."

Mrs. Manning remarks (Ancient and Mediaeval India, Vol. II.page 346): "The surgical instruments of Hindus were sufficiently sharp, indeed, as to be capable of dividing a hair longitudinally.

Dr. Sir. W. W. Hunter (Indian Gazetteer, India, p. 220) says: "The surgery of the ancient Indian physicians was bold and skilful. They conducted amputations, arresting the bleeding by pressure, a cup-shaped bandage and boiling oil, practised lithotomy; performed operations in the abdomen and uterus; cured hernia, fistula, piles; set broken bones and dislocations; and were dexterous in the extraction of foreign substances from the body. A special branch of surgery was devoted to rhinoplasty or operation for improving deformed ears and noses and forming new ones, a useful operation which European surgeons have now borrowed. The ancient Indian surgeons also mention a cure for neuralgia, analogous to the modern cutting of the fifth nerve above the eyebrow. They devoted great care to the making of surgical instruments and to the training of students by means of operations performed on wax spread on a board or on the tissues and cells of the vegetable kingdom, and upon dead animals. They were expert in midwifery, not shrinking from the most critical operations, and in the diseases of women and children. Their practice of physic embraced the classifications, causes, symptoms and treatment of diseases, diagnosis and prognosis.

Considerable advances were also made in veterinary science, and monographs exist on the diseases of horses, elephants etc."

Dr. Seal mentions: "The Hindus practised dissection on dead bodies for purposes of demonstration.....Post mortem operations as well as major operations in obstetric surgery (the extraction of the foetus etc., were availed of for embryological observations."

Elphinstone's History of India, page 145, has the following significant remarks: "They cut for the stone, couched for the cataract and extracted the foetus from the womb and in their early works, enumerate not less than 127 sorts of surgical instruments."

3. *Anatomy:—Prof: Weber* (Indian Literature, Page 267) says: "In the Vedic period, animal anatomy was evidently understood as each part had its own distinctive name—The chapter of Amarkosh on the human body and its diseases certainly presupposes an advanced cultivation of medical science."

4. *Science of Chemistry.*—Mr. Elphinstone says: "The Indian chemical skill is a fact more striking and more unexpected."

Sir P. C. Ray, in his history of Hindu Chemistry, remarks, "Rasaratana—Samuchchaya (a modern work based on old Hindu medical works) is a systematic and comprehensive treatise on materia medica, pharmacy and medicine. Its methodical, scientific arrangement of the subject matter would do credit to any modern work and altogether it should be pronounced a production, unique of its kind, in Sanskrit literature." Dr. Ray further says, "We have only to refer our readers to the chapter on the preparation of caustic alkali, in the Susruta, with the direction that the strong lye is to be 'preserved in an iron vessel as a proof of the high degree of perfection in scientific pharmacy achieved by the Hindu at an early age."

The priority of the Hindus in making mercurial remedies a speciality and in respect of the internal administrations of metal generally is borne out by the fact that Charaka and Susruta are eloquent over their virtues.

Mr. Elphinstone offers the following: "They knew how to prepare sulphuric acid, nitric acid and muriatic acid; the oxide of copper, iron, lead of which they had both the red oxide and litharge, tin and zinc; the sulphuret of iron, copper, mercury, antimony and arsenic, the sulphate of copper, zinc and iron, and carbonates of lead and iron."

"Their use of these medicines seems to be very bold. They were the first nation who employed minerals internally and they not only gave mercury in that manner but arsenic and arsenious

acid. They have long used cinnabar for fumigations, by which they produced safe and speedy salivation."

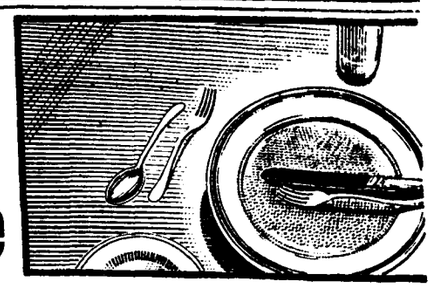
5. *Inoculation and Vaccination.*—It is a well known thing that the Hindu physicians of yore long practised inoculation. Col : King gives clear proof that both " Hindus and Mohamadens used inoculation by small pox virus as a protection against small-pox and certain it is that long before Jenner's great discovery or to be more correct, rediscovery of vaccination, this art of inoculation was used for a while in Europe, where it had been imported from Constantinople : and the knowledge of medicine which flourished in the near East at the commencement of the Christian era emanated, as I have already shown you, from India."

Col. King again quotes from a writing by Dhanwantri, the greatest of the ancient Hindu physicians : " Take the fluid of the pock on the udder of the cow or on the arm between the shoulder and elbow of a human subject on the point of a lancet and lance with it between the shoulders and elbows until the blood appears; then mixing the fluid with the blood the fever of the small-pox will be produced. This is vaccination pure and simple. It would seem from it that Jenner's great discovery was actually forestalled by the ancient Hindus.

6, *Hygiene, Sanitation Etc.*—Lord Ampthill said at Madras (Feb. 1905) : " Now we are beginning to find out that the Hindu Shastras also contain a sanitary code no less correct in principle, and that the great law-giver, Manu, was one of the greatest sanitary reformers the world has ever seen ".

Dr. Furnell, Dy. Surgeon General and Sanitary Commissioner Madras, in his lecture delivered on 18th April 1882 stressed that "as the ancient Hindus were superior to all others in other respects, so also were they superior to the others in recognizing the importance and value of water as well as in insisting upon preserving the water from filth of any kind whatever ". He then described the instructions contained in the Hindu medical works with regard to the use of water, which he said were most remarkable.

Lord Ampthill, Governor of Madras, at the opening of the King Institute of Preventive Medicine, remarked: " British rulers of India have been bringing back more of the knowledge which emanated from this country centuries ago; and when we undertake Municipal water supply schemes, with filter beds and hydraulic pressure; when we build hospitals and establish medical schools, when we promulgate regulations to check the spread of plague, or when we impose on local bodies the duty of watching over the health of the people, we are not introducing any modern



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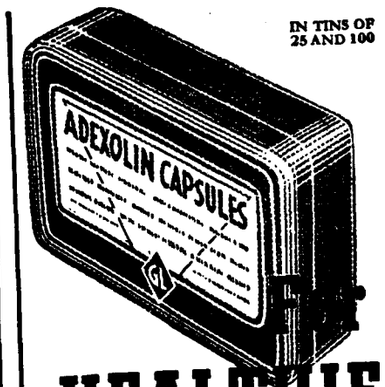

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innovations or European fads; but merely that which was done centuries ago and again centuries before that, but which has long since been forgotten by all except the historian and the archaeologist". His Excellency further added, "that the modern plague policy of evacuation and disinfection is not a bit different from that enjoined in ancient Hindu Shastras".

The Conclusion

The object of these lines is not to decry in any way the acquisitions of the present age. Some of the modern findings and their practical applications, especially on the surgical side, to the ministrations of human suffering are unique of their kind and unrivalled perhaps in certain respects. But the main purpose of the writer has been to draw the attention of the modern intoxicated observer to the potentialities in the past and what a keen and intelligent research worker can recover, given the proper facilities, sympathetic support and whole hearted co-operation by a National Government, many a "Gem of purest ray serene" hidden in this ancient unexplored and uninvestigated lore, to the great good and gain of the masses, the profession and the humanity at large.

A flood of light has already been thrown on the subject by savants like Chopra, Brahamachari, A. C. Roy and B. B. Das Gupta and others who are testing these treasures on the touchstone of modern scientific methods to assess their true values and virtues.

CASES AND COMMENTS

A CASE OF CHOREA

BY

A. C. ROY, M.B.

Balagaria Charitable. Dispensary, Balagaria, Midnapore

I WAS called to see a female patient aged about 20 years for irregular and violent movements of the limbs for the last ten days.

Previous History.—She had movement of the fingers and toes of the left side for the last 3 or 4 years. She had premature labour about 3 or 4 years ago and shortly after that the movement of the fingers and toes was noticed. She did not feel any inconvenience as she performed her domestic duties pretty well. She had double congenital cataract.

Present history.—All on a sudden about 10 days ago, she had

irregular and violent movements of all her limbs and the movements had continued since then. She had to be held by some one constantly. The movements were always present and she had no sleep for the last ten days. She could not now feed herself but had to be fed by some one. There was no trouble with urination or defaecation but she required some one to hold her during the act. There was no loss of control of the sphincters. For 7 or 8 days she was fully conscious and answered questions readily but later on she became semiconscious and could not respond readily and answered one or two questions only. She had missed her last period which was regular but the discharge was scanty. She was treated with Ayurvedic medicines for the last ten days but there was no improvement.

On examination the following points were noticed :—

(1) She was making irregular, involuntary, and violent movements of the limbs incessantly. She was restless and moved from one position to another unless held.

(2) She was semi-conscious and did not respond to questions readily and answered only one or two questions.

(3) Pulse—Rapid. Rate not counted ; Volume and Tension—Fair.

(4) Temperature—99° F.

(5) Respiration—Slightly hurried ; rate not counted.

(6) She had double congenital cataract.

(7) The limbs were flaccid and not stiff. Sensation was present all over the body.

(8) She complained of pain in her limbs.

(9) There was no difficulty in swallowing. Nothing abnormal was detected about other systems.

Differential Diagnosis :

(1) Chorea.

(2) Freidreich's ataxia.

(3) Hysteria.

(4) Epilepsy.

Freidreich's ataxia was eliminated, there being no (*a*) family history, (*b*) Scoliosis or talipes, (*c*) Nystagmus or (*d*) Scanning speech.

Hysteria was eliminated there being no (*a*) Contractions, (*b*) Clinching of hands or (*c*) Unconsciousness.

Epilepsy was eliminated as the patient did not lose consciousness at all.

The case was therefore diagnosed as a case of chorea from the following points :—

(*a*) Previous history—unilateral movement of the fingers and toes.

(*b*) Irregular and involuntary movement of the limbs.

(*c*) Movement constant.

(*d*) Patient conscious or semi-conscious.

(*e*) No trouble during urination or defæcation.

She was given a mixture of chloral hydras and Potas. Bromide (gr. vii ss. each) to be taken thrice daily for 2 days and even after 6 doses the mixture had no effect and she had even no sleep. She was then given an hypodormic injection of Hyoscini hydrobrom gr. $\frac{1}{100}$ and in about 15 mts. the movements stopped, the patient became quiet and she had sleep. It was now noticed that occasional movement of the left fingers and toes was still present. She was given a powder containing Hyoscine Hydrobrom gr. $\frac{1}{200}$, Desiccated Parathyroid gland—gr. $\frac{1}{10}$ and calcium lactas gr. v to be taken every 6 or 8, hours.

She had a few hours' sleep after the injection and when she awoke the movements returned as before. The powders were now given but the effect was only transitory. The patient became quiet and the movements stopped for nearly half-an-hour as soon as one of the powders was given. The movements returned again. As, even after taking 4 of the powders the desired effect was not obtained, next day she was given Liqr. morphine Hydrochlor and Liqr. Arsenicalis Hydrochlor to take. She died the same day (14th day) probably as a result of exhaustion.

Dysmenorrhoea : Insulin

A. Altschul (New York) reports that in a group of 12 patients, all nulliparas, suffering from primary or essential dysmenorrhoea, 10 received practically total relief from menstrual pain by using insulin from 3 to 7 days before or during the period. One patient was only partially relieved, while another obtained relief from one brand of insulin and not from another.—J. A. M. A., Apr, 18, '36, p. 1380.

AMŒBIASIS OF CÆCUM SIMULATI NG APPENDICITIS

BY

RASAMAY BHATTACHARYYA, L.M.P. (ASSAM), D.T.M., (CAL.)

Bokpara Tea Estate, Doom Dooma, Assam

HABIL (M) a Christian munda was admitted to hospital on 20—12—34, with acute pain in the right iliac fossa. Duration was two days.

Previous history.—He suffered from dysentery about ? years back for which he sought no medical advice but was 'cured' with some indigenous herb.

Present condition.—Attack of pain was acute and of a dragging down character. A thickened lump with some rigidity and tenderness was noticed in the region of the caecum. He did not look ill from general appearance. Nausea was present but no vomiting. There was some tenderness over the liver but it was not enlarged. Bowels were constipated and the tongue dirty. Pulse rate was 96, temperature 99° F. A specimen of stool was examined especially for Ent. histolytica but it was negative. A few hook worm ova were however found.

Treatment.—A soap water enema was given and a hot water bottle was applied over the affected area. By mouth a dose of carminative mixture with mx. of Tr. Belladonna was given thrice a day. On 21-12-34 the patient was kept under the same treatment and observed but there was little change. On 22-12-34 it was decided to give a trial of emetin injection as the negative finding of a single stool examination is of no significance. By mouth liquid extract of Kurchi was administered. A daily dose of emetin Hydro gr. i. was injected for six oonsecutive days. By 24-12-34 pain was much less, lump mucb smaller and softer. At the end of the full course both pain and lump completely disappeared and the patient was discharged cured.

Remarks.—Rogers and Megaw (1930) state—"It will be well to emphasize once more the importance of not mistaking thickening of the caecum in chronic and latent amœbic bowel affection for appendicitis. When this error in diagnosis is made the unfortunate patient is often subjected to totally unnecessary operation." Wilkinson (1935) made similar observations. It is thus clear that due judgment should be applied in dealing with this sort of case and a trial of emetin should be given before an operation is undertaken. Wilkinson gives a useful differential

diagnosis between chronic appendicitis and chronic amœbiasis which is reproduced below :—

CHRONIC APPENDICITIS.	CHRONIC AMŒBIASIS.
1. Discomfort in the right iliac fossa.	1. Discomfort in the right iliac Fossa.
2. Epigastric pain.	2. Epigastric pain.
3. Heart burn uncommon.	3. Heart burn very common.
4. Not relieved by alkalies.	4. Relieved by alkalies.
5. Nausea and vomiting.	5. Nausea common, vomiting uncommon.
6. Constipation.	6. Constipation.
7. Pain localised.	7. Pain diffuse.
8. The physical examination may be negative.	8. The physical examination is never negative.
9. Pressure in the right iliac fossa may cause discomfort in the epigastrium or at the site of pressure.	9. The pain is marked over the caecum and hepatic Flexure ; slight over the sigmoid.
10. Liver not enlarged.	10. Liver almost invariably affected in some degree.
11. Does not run in families.	11. Tendency to family infection.

Acknowledgements

My thanks are due to my chief Dr. W. F. Whaley, M.D., for his kindly going through this note and granting me permission to publish it.

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JACKSONIAN EPILEPSY IN A TUBERCULAR GIRL

BY

Dr. J. N. GHOSAL, L.M.S. *Calcutta.*

MISS Meghmala, aged now 9 years, had been suffering from enlarged submaxillary and cervical glands attended with fever and tonsillitis and cough since her sixth year. She was sent to Karmatar where after a stay of six months, she gained strength, weight and health and the fever and cough disappeared. She was brought back to Calcutta and remained well about a year.

In February 1935, I examined her and found, besides the cervical and submaxillary adenitis, a big nodular lump covering the umbilicus, below and to the left, of the size of a small orange,—tabes mesenterica. She was running a temperature up to 100 and had a suspicious cough as well. Her weight had also diminished considerably since her return from Karmatar,—she was weighing only 4 stones 1 pound then. The pulse

rate averaged 90 per minute, respiration 22 and blood-pressure 90/60. A course of Calcium injections were commenced. Her stool was examined for ova,—as some one suggested the lump in the abdomen might be round worms,—on 26-2-35 but nothing positive was detected.

In March 1935, she began to complain of a tingling sensation in her right thumb with inability to straighten it and this was followed by distinct clonic spasms 3 or 4 times a day lasting for 4 or 5 minutes at a time. Although there was no family history of Syphilis, a W. R. was obtained on 7-3-35, which was negative. She was continually running a temperature which ranged between 98.8 and 101.4 maximum. On the 10th of March, I first found her getting epileptiform seizures,—localized to her right hand, arm, right eyelids, eye and facial muscles,—typical Jacksonian epilepsy with full consciousness on the part of the patient. I prescribed Prominal for the fits, and Adexolin and Iodipin Tablets. The spasms did not recur for a fortnight and her temperature came down to normal.

In April, the fits again recurred and the fever and cough also increased. She was taken to Dr. A. C. Ukil's clinic and screened. The lungs were declared free from tubercular lesion but the shadow of the hilus was found increased in size. Arneth and Schilling count was undertaken and was found rather positive for a diagnosis of T. B. A course of Solganal B Oleosum injections was advised by Dr. Ukil and this was cautiously proceeded with up to the maximum limit. (Although she gained in weight and did not show any untoward signs even after No. 4 dose, still I am bound to admit that she got no benefit from gold treatment.)

In May and June, the spasms remained confined to her thumb and arm and seldom went up, she gained 2 pounds in weight, and Lipiodol was substituted for Iodipin, the Gold injections continued. On the 20th of June, a violent epileptiform seizure ushered in and the tuberculer nodules in the Internal Capsule seemed to have extended their attack to the tongue area particularly,—covering thumb, fingers, wrist, elbow, shoulders, mouth, eye and tongue,—all of the right side.

On the 8th of July, she had 3 severe seizures, her whole right arm twisted out of shape, she spoke indistinctly, complained of choked vision and a feeling of suffocation, drank lots of water and felt some relief with cardiazol and luminal. For more than a fortnight she remained very weak and had no more violent spasm although slight clonic twitchings of the right thumb and arm continued now and then.

On the 18th of July she complained of great heat of the head, became restless and with the onset of the epileptic fits, got up and tried to escape from the room. She passed urine very frequently,

felt choked and took cardiazol and luminal often. Gold injections had been stopped and an auto-vaccine prepared from her throat smear was given.

For a month she remained almost free from any violent attack and regained her lost vivacity and appetite. On the 19th of August a bigger attack ushered in ; with the onset of the epileptiform fits, her eyes turned up, mouth gaped, tongue protruded out, her whole body shook with the violence of the clonic spasms, there was catching of breath, lost speech, although consciousness was never lost. This condition lasted for about 4 minutes at a stretch.

Up to September 5th, she was again almost free from any complaint, the temperature ranged between 97 and 98.8, her weight increasrd to 4 stone 7 pounds. On the 6th a violent attack shook her and this time she felt severe pain and tingling in her tongue and during the fits became very restless. For a week these fits recurred again and again, temperature ran up to 101 but the pulse rate showed rather a decrease.

On the 15th of September, symptoms of Meningo-encephalitis developed,—intense headache and vomiting supervened, the pulse rate went down to 70 and the clonic spasms continued day and night, most often confined to the hand and arm and sometimes extending to the face and tongue and breast. On the 18th of September additional symptoms,—of a sensation of burning of the whole body followed by copious sweats supervened. The pulse rate went down to 60 per minute, headache and occasional vomiting continued. From 19th to 22nd, she nad no spasms altogether but the headache and vomiting were present, pulse came down to 50 per minute, the patient was reduced to a skeleton and she could retain almost nothing. From this time she was placed under the treatment of a reputed Kaviraj. The headache and vomiting disappeared early but then the spasms recurred although never again violently.

From October, she began to rally, the temperature and pulse rate remaining below normal for a long time.

For the last 8 months she is taking Kaviraji medicines and is keeping free from all trouble, although there is still enlarged glands on her neck and abdomen. Her weight is 4 stones only now but I hope for the recovery which at one time was almost out of sight.

Remarks :—This seems to be a rare case of chronic localized meningo encephalitis produced by small nodular tubercles growing on the left cerebrum adjoining the fissure of Rolando, embedded in the Internal Capsule. The lesions in the brain supervened in a case already suffering from tubercular adenitis and tabes mesenterica. The nodular growths must be multiple and growing either in the pia or embedded in the central motor area. Now that the patient is free from all brain symptoms, we may conjecture that the tubercular nodules have become calcified and

possibly absorbed because no paresis or loss of sensation is present. The symptoms presented by the patient from February to October 1935, were mostly irritative in nature and never destructive, although after every severe epileptic seizure she complained of loss of power of her thumb and arm.

The Signal symptom, that is the point of origin of the clonic spasm,—was the tingling and spasm of the right thumb. The order or march of the spasm was thumb, fingers, hand, wrist, forearm, elbow, arm, shoulder, then the eye and eyelids, then the right half of the face and lastly the tongue. On 2 or 3 occasions, during climax of fits, I had seen both the eyes and chest twitch and dance, but these were exceptions. Evidently the lesion therefore began in the middle third of the motor area and spread to the lower third.

That the symptoms had all along been irritative and never destructive is shown by the absence of any defect in the right eye, although she complained of blurred vision, faulty incoherent speech and loss of power in the right hand during fits,—no permanent paresis or loss of function has persisted and now she is free from any defect. The supervention of giddiness, headache, vomiting, slow pulse, loss of heat of the body indicated intracranial pressure, but she never lost consciousness during the whole course of the brain lesion, neither did she present any other signs of compression of the brain.

One thing I have noticed throughout this case, was that whenever the patient showed signs of well being and regained lost grounds and looked bright and jolly, she got severe attack. And when she became a skeleton, losing fat and flesh considerably, the fits disappeared,—possibly the tubercular nodules also lost growth concurrently. The ultimate recovery followed almost a moribund condition.

Stool Examination Report.—26-2-35. Yellow slimy liquid stool; Reaction—Acid; Mucus—Present; Pus cells—Nil; R.B.C. —Nil; Charcot—Leyden Crystals—None found; Ova. Protozoa—None found,

Wassermann Reaction.—7-3-35—W. R.—Negative; Khan Test —Negative.

Blood Examination Report.—6-4-35—Hemoglobin—65 (Sahli) (11.38 grams per 100 c.c.) R. B. C.—3,950,000. per c.mm; W.B.C. —14,761; Differential Count; Polynuclear—74%; Small Mono 20%; Large Mono 5%; Eosinophile—1%: Abnormal Cells—Nil; Parasites None found.

Schilling Hemogram.—Band form—37; Segmented—37: Lymphocytes—20; Monocytes—5; Eosinophiles—1.

Arneth Count.—I 48; II 31; III 18; IV 2; V

Arneth Index.—88.

Sedimentation Test.—7-4-35—Sinking of Corpuscles: 1 hour after—60; 2 hours after—71; S. M. R, 47-75; 24 hours after —76.

Vol. 33 No. 10.] [Oct. 1936.

The Antiseptic

ESTD. 1904.

A Monthly Journal of Medicine and Surgery.

Editors: Dr. U. RAMA RAU & U. KRISHNA RAU, M.B., B.S.

Editorial and Publishing Offices:—323, Thambu Chetty St., Madras.

Annual Subscription Rs. 5. Foreign, 10 Sh. Post Paid.

EDITORIAL

RECENT ADVANCES IN RADIUM THERAPY

RADIUM has been extensively used in the treatment of malignant tumours. This was the result of the empirical observation that in a large number of cases, the cells of malignant tumours are destroyed by an amount of radiation insufficient to destroy the normal tissues. Although it is very difficult to say whether the cells of malignant tumours, as such, are specially sensitive to the action of gamma rays, the majority of these tumours have biological characters which render them more sensitive than the cells of most adult tissues. Certain of these biological features have long been recognised as being associated with increased sensitivity to radiation. They may be briefly stated as follows:

(1) Rapidly growing tissues are more sensitive than the slowly growing.

(2) Individual cells are specially sensitive at the moment of nuclear division.

(3) The chromatin of the nucleus is the most sensitive part of the cell.

(4) Those tissues are most sensitive which approach most closely to the embryonic type, and the more specialised tissues are less sensitive.

All malignant tumours grow more rapidly than the tissues in which they lie and consequently their individual cells are constantly undergoing nuclear division, when their chromatin is

especially vulnerable. Moreover all malignat tumours are of a less highly developed and more embryonic type than are the tissues from which they grow, although there is, in this respect great variation.

So far as our present knowledge extends it is known that radium injures both the tumour cells and the tissue cells. The success in its use therefore depends on obtaining the maximum effect upon the tumour and the minimum effect upon the connective tissue. It is surely a mistake to imagine that any type of radiation can increase the power of the tissues to absorb the tumour. When we expose a tumour to radiation we can only aim at doing as much injury as possible to our enemy, the tumour, and as little as we can to our ally, the connective tissue. The margin between general destruction of the tissues and selective destruction of the malignant cells which are invading them is very small. It is therefore an essential factor in treatment that every element of tissue throughout the region treated should receive the same amount of radiation. For, if at any point there is a defect some malignant cells will survive : while if at any point there is an excess the supporting tissue will be destroyed.

If success is to be achieved, radiation must include the whole lymphatic field through which the tumour cells may have spread. Nothing could be more erroneous than to imagine that the tumour itself requires a longer dose of radiation, and that the distant metastases, consisting perhaps of only a few cells, will yield to a milder attack. It is indeed in these distant zones that tumour growth is most active.

Every portion of the region under treatment must therefore receive an equal quantity of radiation. The manner in which this is applied is by no means a matter of indifference. Since the cells are more sensitive at the moment of division we can only be sure that none has escaped when the radiation has extended over a certain period. Moreover, distribution of the radiation over a longer period produces less injury to the connective tissue, which have time to recover. On both accounts better results will be obtained if the treatment is extended over several weeks than if it is concentrated into a few days.

Success in radium therapy must thus depend very largely upon the solution of the purely physical problem of obtaining a uniform field of radiation. A moment's reflection will show that the first essential for this is a radiation of high penetration. Without this, only the surface layers of the tissue can be affected,

and they may indeed be destroyed by the radiation long before the deeper cells are aware of its presence. To the short wave-length of gamma rays, and their consequent high power of penetration, we owe primarily the power of radium to destroy tumours, for the penetration of hard gamma rays is at least ten times that of hard X-Rays.

To use these gamma rays to their full advantage it is essential, that all softer rays should be removed by suitable screening. By this means a more or less homogeneous radiation of high penetration is obtained, and we are assured that the deep cells of a malignant tumour will not be protected from destruction by the depth at which they lie. The radium is screened by adequate thickness of gold or platinum to eliminate all but the hard rays, and the problem of producing a uniform field resolves itself into that of arranging our radium sources in a suitable manner.

Another factor which must be noted and defined accurately if our results are to be at all comparable in different centres is the unit in which our radiation is measured. Without any doubt the r. unit is the ideal because with it we can compare the effects of radium and of X—Rays. The practical difficulties with this are numerous and have resulted in what is known as the 'natural radium unit. This is simply the amount of radiation delivered at a distance of one centimetre by one milligram of radium. This also is not very accurate as it does not make allowance for screenage.

Of the many methods of applying radium, one of the most generally useful is the insertion of needles. There are small platinum tubes with a diameter of 1·5 to 3 mm with a cavity occupying the whole length of needle and fitted uniformly with insoluble radium sulphate and having a silk thread attached to facilitate removal. The useful strength is given as one milligram of rdium per centimetre of active length. These needles are so arranged as to encase the tumour and provide a uniform cross-fire from all sides.

Radon seeds are small tubes of gold or platinum in which are sealed up minute amounts of radium emanation, itself usually sealed in a fine glass capillary. At first the physical effect is precisely the same as that of a radium needle but as time goes on the emanation decays till it becomes negligible.

Insertion methods suffer from the defect of discontinuity, so that a really uniform radiation is virtually impossible. This may be avoided to some extent at least by mounting the sources of radiation at a distance from the surface on plaques or moulds.

This by many is considered the most valuable method available for general use as the mould will provide uniformity by moulding over the area or surface to be treated. It is true that the calculation of the quantity of radium to be mounted on the plaque and its precise arrangement are matters of some difficulty but all things considered this is the method that is best suited for general purposes. The arrangement of radium and its dosage to give the intensity required at the surface concerned are details which can be obtained from any text book or from the very excellent article by Dr. H. S. Souttar in the February issue of our distinguished contemporary, the British Medical Journal and from which the matter for this short note is extracted.

Where, however, very large amounts of radium are available a uniform field may be obtained by what is known as beam radiation. In these, large amounts of radium are concentrated in special apparatus so arranged that the gamma rays emerge through a circular aperture. The aperture is surrounded by a dense cylinder consisting of a mixture of copper and tungsten. The radium is usually contained in a number of small cylinders closely packed together and surrounded by a mass of lead and so arranged that the rays pass through a primary screen of platinum about 3 mm thick and sufficient to cut off a large proportion of the softer rays. Whether these beam radiations are more effective it is still early to say but the results so far are really very encouraging. The beam has been used with very little risk and no appreciable injury to the patient. One difficulty in using these large masses of radium lies in the risk to those who are operating the apparatus. Their full protection involves huge masses of lead which render the apparatus unweildy. But recently, improvements have been made such as automatic pneumatic delivery which to a very great extent reduce the risk in this direction.

The methods of radium therapy are developing very rapidly. In combination with deep X—rays and diathermy, we have now weapons by which we can attack cancer in almost all its forms, and in many with the certainity of success. It is upon the combined efforts of the surgeon, the radiologist and the physicist that the future of radium therapy will depend.

GLEANINGS FROM MEDICAL PRESS

Medicine and Therapeutics

Physical Therapy in Constipation.—RICHARD KOVACS M.D., *The Physiotherapy Review, March-April, 1936.*—Constipation may be a symptom of a pathological condition of the gastro-intestinal tract or the outcome of incorrect habits or living conditions, but the author has adopted a general classification of atonic and spastic types. The atonic type is by far the more frequent and is characterized by weakness of the large intestine due to bad habits of eating, neglect of the urge for stool, weakening diseases, etc. In addition to general hygiene, diet, judicious medication and mental treatment, massage, exercise and low frequency electrical currents are of value.

Massage applied to the abdomen increases the tone of the abdominal muscles and brings about increased peristalsis by reflex action. It is not an effective measure in real ptosis and relaxation of the pelvic door. Abdominal massage need not be vigorous or prolonged. Slow and gentle movements at the rate of about 12 a minute and with a pressure only to dent the abdominal wall are sufficient. These are applied along the ascending, transverse and descending colon while the patient lies relaxed on a low couch. Ten minutes are sufficient for a treatment and they should be given daily at first, then every other day for several weeks. If no improvement is then noted, the massage treatment should be discontinued. Where stimulation of the general circulation and muscle tone appears desirable in atonic types of constipation, general massage should be given for ten minutes following the abdominal massage. No massage treatment should leave the patient all tired out.

Electric muscle stimulation combined with massage or applied alone, is the most effective measure to tone up the abdominal and pelvic muscles by active contractions. It is the method of choice in atonic cases where massage is not practicable, which prove to be more resistant, or where direct stimulation of the pelvic floor is desirable. It aids peristalsis by reflex action and increases glandular function and the venous return from the abdomen to the heart. A large moist pad electrode, five inches wide and seven inches long, is placed over the abdomen, and another one of equal size directly opposite, under the patient's back. Either the surging faradic or modulated alternating current

(Morse wave) is used. The current strength is gradually increased until definite contractions of the abdominal wall are evident. These should be synchronized with the rate of respiration, producing about 18 or 20 contractions per minute. At successive treatments a current of increased strength may be administered, and with ptosis it will be noted that the abdomen becomes increasingly more firm and the bowel movements are more regular. Treatments should last from 10 to 20 minutes and be given every other day for several weeks.

In particularly resistant forms of abdominal atony, especially in women with relaxed pelvic muscles after child-birth, a suitable rectal or vaginal electrode is employed instead of a back electrode.

The treatment of chronic constipation would not be complete without some form of exercise. General exercise serves to improve the general physical state and to react indirectly on the gastro-intestinal function. Abdominal exercise serves specifically to strengthen the abdominal and respiratory muscles and is chiefly applicable to atonic states. Tennis, golf, horseback riding, running or swimming, done in moderation and within individual taste and endurance, are beneficial. Walking is of little direct benefit. Special exercises are those which bring into play the abdominal muscles and those of respiration. They are best carried out on arising in the morning or, if this is impractical, an hour before lunch or dinner. They should be done on the floor and carried out daily for many months.

Spastic constipation is best treated with a general light bath in an electric cabinet or under a large heat lamp, followed by a mild alternate hot and cold douche. Ultraviolet irradiations are of benefit, as also is diathermy. Heat applied in various ways is the most effective measure possible to bring about sedation and overcome the spasticity that causes this form of constipation.—*The Medical World.*

Acetylsalicylic Acid with Magnesium Oxide for Prolonged Use in Rheumatic Infection in Children.—A. D. KAISER, M.D. *Journal of Pediatrics, January, 1936.*—Recent reports have indicated that magnesium has a definite synergic effect when combined with certain anti-pyretics, including sodium salicylate and acetylsalicylic acid, and that such combinations have a lower toxicity than the individual components. The author has used a combination of acetylsalicylic acid and magnesium oxide in the treatment of children with various manifestations of rheumatic infection for a period of six to 12 months. The preparation used

was in tablet form, each tablet containing $3\frac{1}{2}$ grains of acetylsalicylic acid and $3\frac{1}{8}$ grains of magnesium oxide; the daily dosage was 10 to 15 grains of acetylsalicylic acid. Seventy-five children were treated, with a control group of an equal number of children of similar age and symptomatology. There were four types of cases treated, each type having the same number of untreated controls. The first type had arthritic or muscular pains only: the second showed carditis in addition to arthritic or muscular pains; the third, chorea; and the fourth, chronic rheumatic carditis. In cases of the first type, 24 of the 31 treated children were entirely relieved of symptoms at the end of the period of observation, and only 10 of the 31 controls were free from symptoms. In types 2 and 4 there was no evidence of any effect of the treatment on the cardiac symptoms, but in cases of the second type with associated arthritic or muscular pains, 91 per cent of the treated patients were relieved of pain and only 65 per cent of the control group. In the eight treated cases of chorea, five were free from symptoms and three definitely improved at the close of the observation period: while of the eight controls, two were free from chorea, five improved and one was not improved. During the period of observation, there were four cases showing recurrence of rheumatic symptoms among the treated cases and 12 cases with recurrence among the controls. In most instances in the treated cases, the parents reported a definite improvement in the general condition of the child and wished to continue the drug. No untoward reactions were noted in any of the treated cases. The author concludes that the prolonged use of acetylsalicylic acid with magnesium oxide is of definite value in the treatment of rheumatic children, in that it relieves the arthritic or muscular pains, improves the general condition, and acts favorably in chorea, even though it has no definite effect upon carditis—*The Medical World.*

Blood Transfusion and Sepsis—By O. HOCHE, 58 *Tag. d deutsch. Ges. f. Chir. Berlin* (1934).

The author considers blood transfusion one of the most important factors in the treatment of sepsis. He gave 484 blood transfusions in 1932, of which 48, or nearly 10 per cent, were given for general sepsis. The mortality was 47 per cent. He recognizes two types of general sepsis; one is gas gangrene following wound infections, and the other is agranulocytosis. He gives large quantities of blood, up to 4,000 cc. in several sittings, from 350 to 500 cc. at a time. He reports 4 cases in some detail.

The first patient was a boy, 16 years of age, who sustained a contused and lacerated wound of the right knee from a fall in the street. The wound was dressed as usual and the boy given tetanus antitoxin. For ten days all seemed well, when the knee became inflamed and fever set in, terminating in suppuration of the knee joint. Incision and drainage were performed in due time but the patient's condition grew progressively worse, until he was given two blood transfusions, 500 c.c. each. The boy recovered slowly but was discharged cured after four months, though with a stiff knee.

The second patient was a girl, 18 years of age, who had been a diabetic for the previous five years. She had severe abscesses on the left leg and on both thighs. Her temperature was septic and her general condition was low, in spite of immediate surgical treatment. On the twelfth day after operation coma developed and the fever was high; two days later there was a severe hemorrhage from the leg wound so that the advisability of amputation was considered. Blood transfusion was given two days after the hemorrhage, followed by a favorable reaction, and the patient left the hospital after four months, cured.

The third patient was a 36-year-old man with an abscess in the right gluteal region. Gas gangrene having set in, in spite of all precautions, 350 cc. of blood were given, but to no avail. The patient died two days later, with the following anatomic findings: Gas gangrene of the right gluteal muscles extending to the contiguous tissues, embolic abscesses, fibropurulent and hemorrhagic inflammatory foci in the lungs, bilateral fibrinous pleuritis, acute cardiac dilatation, and lacunar angina.

The fourth patient was a man, 25 years of age, with severe injuries—fracture of the zygomatic process and pelvis, complete dislocation and laceration of the left wrist, and brain concussion. The fractures and dislocation were immediately reduced and the wounds treated accordingly. Tetanus antitoxin was given also. The wounds began to suppurate later and sepsis developed. The patient was given 500 cc. of blood transfusion. He made a good recovery and was discharged cured, two months later.

The author attributes the good results following blood transfusion to anti-body formation in the patient's serum, judging by a considerable increase in the body titer. It is not a panacea, however.—*Jour. P. I. M. A.*

An Improved Anesthetic Technique for General Surgery—by WILLIAM A. FRASER and JAMES T. GWATHMEY, *Surg. Gynec. and Obst.* (1936) 62:236.

This study was undertaken by the authors with a view of improving the present anesthetic technique—first, by abolishing psychic influences before operation; second, by securing a better brain block and greater relaxation during operation: and third by diminishing gas and wound pain after operation. More than 300 cases were studied. The authors commend the followlng technique as accomplishing the above desiderata:

Two hours before operation, give 2 tablets per os of ipral sodium (8 grains): one hour before operation, give the first hypodermic, intramuscularly, of dilaudid, grains 1/48 in 25 per cent solution of magnesium sulphate; repeat in fifteen minutes. Now turn patient on left side, Sims position, and give the following retention enema: Ether, 2.5 ounces; olive oil, 1.5 ounces; chlorbutanol, 10 grains. The result of the medication is a quiet sleep which is converted into surgical anesthesia and relaxation with an open mask, nitrous oxide or ethylene and oxygen being used, 15 to 50 per cent, to which a 5 per cent vapor of ether may be added, if necessary. In the words of the authors, the physiologic balance between respiration and circulation is retained, with the respiratory and circulatory rates normal, which is not true of any form of inhalation anesthesia, unless heavily premedicated. This sequence of hypnotics and analgesics, the authors further say, followed by a mild inhalation anesthetic, approaches the ideal. The relaxation is second only to that obtained by spinal anesthesia.

With this method all possible emergencies are provided for. In case of loss of blood or of unusual delay, hypodermoclysis of normal saline, 500 to 1,500 cc., plus oxygen and carbon dioxide, meets all requirements. The patient is unquestionably safer and more comfortable afterward than with any other method we now have. The long, quiet sleep after the operation is restful and life-saving, and enables the tissues to resume their normal relationship without painful reaction. It can be said that convalescence starts on the operating table.—*J. P. I. M. A.*

Hints on First Aid for the Unconscious—A Lecture by Prof. L. Petschacher (Wiener klin. Wschr., No. 41, 1935) is summarised by "Ars Medici."

With poisoning from alkaloids and soporifics the best remedy for unconsciousness is, in addition to lumbar puncture, 5 to 10 c.c.

coramin injected intravenously. Coramin is even more effectual in combating central disturbances of respiration (Cheyne-Stokes) than is lobelin. In case of emergency, a soda-water syphon turned upside down can be used for CO_2 inhalation: the gas should be allowed to escape from time to time through a tube held in the patient's mouth.

Blood-letting is indicated with acotaemic uraemia (tense pulse, smell) and with pulmonary oedema. Lumbar puncture is also useful in all forms of uraemia. Euphyllin (0.24 in 10 cc. glucose solution injected quite slowly intravenously) has proved valuable with angina pectoris, cardiac asthma, acotaemic uraemia. In case of doubt (whether cardiac or bronchial asthma or uraemia) a mixed syringe of ephedralin and coramin given slowly intravenously and when the pulse has improved, euphyllin with osmon: if the dyspnoea still continues give morphine or pantopon.

For acute collapse of the circulation, adrenalin, strychnine, sympatol, camphor, caffeine may be injected: ephedralin plus coramin intravenously is most to be recommended. Digitalis or strophanthin may be harmful because the heart which is not sufficiently supplied with blood then propels the blood which is circulating into the splanchnic vessels even more vigorously. In case of doubt (disturbances of conduction, auricular fibrillation, angina pectoris, etc.), remedies which affect the centre (caffeine, coramin, cardiazol, etc.) should be given first because it is scarcely possible to decide with an unconscious and almost pulseless patient before us what cardiac disturbance it is. Ephedralin may save the patient's life in cases of shock, whereas it may provoke a fresh attack with angina pectoris; strophanthin may work wonders with auricular fibrillation but may be harmful where there is a tendency to heart block and with shock. The intravenous introduction of quinine should only be tried very carefully when the patient is beginning to recover consciousness. A very rapid action of the heart suggests the existence of paroxysmal tachycardia or auricular fibrillation.—*The General Practitioner, Australia.*

Weil's Disease (Spirochætosis Icterohæmorrhagica)—Numerous cases of Weil's disease, occurring in small groups as well as sporadically, have recently been reported in this country. It is to some extent an occupational disease, attacking particularly sewer workers, coal-miners and fish-workers. Among 40 fish-workers in Aberdeen the disease has been exhaustively studied, and a clear-cut clinical picture is presented. Patients themselves

have diagnosed their own complaint, and amazed their own doctors by saying that they have the "fish-workers' disease."

There are three fairly distinct stages. The first or febrile stage, lasting approximately one week, corresponds to a septicæmic period. The onset is practically always sudden, and the invasive symptoms are occipital headache, muscular pains, nausea and vomiting. The last may be exceedingly troublesome, and as it is associated with acute abdominal pain, usually epigastric, may lead to an erroneous diagnosis. Some cases have been admitted to hospital, diagnosed as "influenza," others as "pneumonia." Signs of meningeal irritation were present in three cases, but a true meningitis developed in only one. Fever, present in all but one patient, varying from 99°–104°, was usually of 5 to 9 days' duration, although there was often a secondary rise in a proportion of cases during the third week.

Jaundice, which was present in only 60 per cent., developed from the 4th to the 7th day. Coincident with this, albumin, casts, and red and numerous white cells appeared in the urine, and the blood-urea rose to figures ranging from 50 to 397 mgrm. per cent., the highest figure being in a fatal case.

The second or toxic stage corresponds to the formation of antibodies in the blood, and the excretion of leptospira in the urine. The jaundice deepens, the temperature remains settled, and, in a few cases (some 18 per cent,), hæmorrhages into the skin appear either as purpura or as large ecchymoses. Their presence is a bad prognostic sign. The urinary signs also become intensified. Cervical adenitis is present in a third of the series.

The convalescent or third stage usually starts in the third week. During this time there may be a secondary rise of temperature, which is accompanied by an increased albuminuria. Only two cases were fatal. Both of the patients were elderly men, compared with the average youth, male or female, engaged in the fish trade, and both of them had suffered from a previous attack of jaundice.

A disease with such a protean symptomatology and varied course requires laboratory examinations for confirmation. The details of these are highly technical. Suspected material is injected after suitable preparation into guineapigs, which are very susceptible to the leptospira. But it is important to remember that for presence of leptospira the laboratory will furnish a maximum of positive results if blood is sent during the first stage of the disease; for antibodies, during the second stage; and if the urine is cultivated for leptospira, during the third stage. In this way

there is a close resemblance to typhoid fever. The spread of the disease by infected rats is a matter for public health authorities, and active measures are being taken in Aberdeen. with the co-operation of the Fish Trade Association.—*The Clinical Journal.*

Diabetic Psychoses—In a recent study of diabetic psychoses B. J. Lindberg, of Malmo, Sweden, accepts the criteria formulated by Schulze and Knauer as essential to the diagnosis of a diabetic psychosis. According to these (1) true diabetes must have existed before the development of the psychosis, (2) there must be no other demonstrable cause of the psychosis, (3) it must run a course parallel with that of the diabetes, (4) under appropriate anti-diabetic treatment improvement must take place with regard both to the diabetes and the psychosis.

A case fulfilling all these conditions was observed by the writer. A man, aged 46, without a history of diabetes or mental disease in his family, was admitted to hospital in June, 1935, in a restless, half-conscious state. The urine contained 1.79 per cent. of sugar, and the blood 0.24 per cent. Under a strict antidiabetic diet the concentration of the sugar in the blood fell gradually, and the urine was free from sugar after only three days. When he was discharged ten days later the concentration of sugar in the blood was reduced to 0.13 per cent. and the mental condition was normal. At home he followed a diabetic regime, but not very strictly, and after a few weeks he again became restless and partially unconscious. He was, accordingly, readmitted in July, in a state of complete mental confusion. This continued for some weeks and he was often delirious. The sugar content of the blood was determined every day, the percentage ranging from 0.16 to 0.17. When discharged in Sept of the same year his mental condition was perfectly normal, and the percentage of sugar in the blood was reduced to 0.1. This recovery was maintained under dietetic precautions, and when examined in Dec., 1935, he was well and happy, and there was no sugar in the urine. A striking feature of this case was the parallel course run by the concentration of sugar in the blood and the intensity of the mental symptoms.

The writer has collected 14 similar published cases, and his analysis of these brings out certain important features common to nearly all. It apparently is not the severity of the diabetes, as measured by the concentration of sugar in the blood or the degree of acidosis, which determines the outbreak of a diabetic psychosis.

The duration of the diabetes also seems to play no part: the interval between the development of the diabetes and the appearance of mental symptoms ranged from only a few months to 14 years. As many as 13 of the 15 patients were over the age of 50, and though the frequency of diabetes rises with age, this fact cannot altogether account for the average high age of the 15 patients. Disturbances of the internal secretions due to age or arteriosclerotic changes may, therefore, well play a part in the genesis of diabetic psychoses. Their prognosis is good, and as a rule they disappear in a month or two under anti-diabetic treatment.—*The Clinical Journal.*

Use and Abuse of Drugs in the Treatment of Children—J. P. PRICE, J. South Carolina M. A. 30: 221 (Nov.) 1934.

The author briefly outlines his observations on practical therapeutic measures for children as follows: (1) Cathartics. A mild laxative is advised, according to the symptoms in the case. The use of mild mercurous chloride and castor oil is distinctly forbidden. (2) Anthelmintics. The first step should be to prove that the child has a parasitic infestation, and then a sufficient amount of vermifuge should be given to relieve the child of the causative parasite. (3) Tonics and blood builders. (*a*) Appetizers are generally not advised. (*b*) General tonics are of distinct value in some cases. (*c*) Blood builders are used in cases of secondary anemia. From 10 to 20 grains (647.9 to 1295.9 mg.) three times a day of iron and ammonium citrate is advised. The value of liver for children is doubtful. (4) Circulatory stimulants. The following drugs are suggested: (1) epinephrine, caffeine, coramine and intravenously injected dextrose. Oxygen, digitalis and camphor are mentioned. (5) Respiratory stimulants. Caffeine, a 25 per cent solution of pyridine betacarbonic acid di-ethylamide and alpha lobeline may be used (6) Sedatives. Phenobarbital, bromides, chloral hydrate, magnesium sulfate and derivatives of opium are suggested. (7) Antipyretics, Drugs causing the reduction of fever are used too frequently. Hydrotherapy is suggested Acetophenetidin and acetylsalicylic acid are antipyretics, (8) Specifics. Quinine for malaria, arsenic for syphilis and salicylates for rheumatic fever may be employed. (9) glandular extracts. Insulin and thyroid extract have their place. (10) Serums, antitoxins and vaccines. Smallpox and typhoid vaccines and serums for protection against tetanus, diphtheria and erysipelas and meningococcic and streptococcic infections are given. Pertussis vaccine is suggested.—*A. J. D. C.*

Surgery

The Treatment of Pruritus.—While agreeing that removal of the cause is the ideal remedy for the relief of itching B. Fantus and T. Cornbleet (*The Journal of the American Medical Association*, June 29, 1936. cvi, 2144) in an excellent review of the therapy of pruritus point out that such an ideal is not always attainable, and takes some time during which relief must be afforded. From first principles they suggest that itching may be reduced by lessening the blood-supply to the skin, soothing the sensory nerve endings, softening the epidermis and depressing the sensory nerves. The following prescriptions are offered as fulfilling some or all of these considerations:—

℞ Menthol	...	2½ grains
Alcohol	...	15 minims.
Talcum	...	1 ounce

For use as a dusting powder after sponging the skin with 5 per cent. sodium bicarbonate in very hot water.

In conditions where softening is not desirable, the following solution can be applied as a gauze compress :—

℞ Menthol	...	¼ grain
Boric acid	...	200 grains
Water	...	1 pint

For soothing the nerve endings the addition of carbolic acid to calamine is often effective :—

℞ Phenol	...	15 minims
Calamine lotion	...	5 ounces

Again when there is an excoriated surface, as for example, in infantile eczema, a drying paste may be more suitable as an anti-pruritic medium such as :—

℞ Phenol	...	2½ minims
Tragacanth	...	25 grains
Glycerin	...	10 minims
Water	...	to make 1 ounce.

Apply to itching part and allow to dry.

For depression of the sensory nerves an ointment or lotion may be applied containing menthol and phenol the strengths of which may be varied according to circumstances, being kept low if the skin is acutely irritated. Two examples are as follows:—

℞ Menthol	...	5 grains
Phenol	...	10 grains
Rose water ointment (B.P.C.)		1 ounce
℞ Menthol	...	5 grains
Phenol	...	10 grains
Alcohol	...	1 ounce.

(NOTE.—These prescriptions have been freely adapted to to correspond with British usage.)—*The Practitioner.*

Diagnostic Errors in Pains in the Ear—C. Biehl (Mitt. d. Volksges.—Amtes Vienna, No. 7, 1935) says that not every pain in the ear indicates disease of the same. This may be due to caries of the teeth, sore throat, a tongue wound, a tonsillary abscess, or an affection of the larynx. Neuralgia of the N. occipalis minor and major may give the appearance of an otitis media or a mastoiditis. Slight pressure on the typical point clears up the situation. In the course of an otitis media, however, the sensitiveness to pressure which develops in the region of the emissarium Santorini may also indicate a sinus affection. A somewhat firmer grasp can reveal a cucullaris myalgia radiating into the ear. Pain with slight pressure on the tragus or the posterior caudal wall of the auditory meatus on the root of the auricle under the tragus indicates otitis externa, even if there is hardly anything to be found in the auditory meatus itself. The pain from otitis media is deep, beats with the pulse, and is not influenced by pressure on the auditory meatus. An occipitalis neuralgia, a beginning furunculosis, a lymphadenitis with louse eczema of the head, etc., may give the appearance of a mastoiditis (sensitiveness to pressure of the bone). Normal eardrum and hearing speak against O. media.

With inflammation of atypical mastoid cells, which extend forwards toward the cheek-bone or backwards toward the occiput, the pains are often no longer attributed to the middle ear, on account of the peculiar localisation, but are erroneously taken for a neuralgia or a beginning furunculosis. There may also be large cells at the tip of the mastoid process (terminal cells), which, when inflamed, lead to an inflammatory infiltration of the muscles which have their origin here. The result is pain when the head is turned, and holding of the head stiff, toward the affected side, so that one may readily think of a muscle rheumatism (check up on the ear).

With chronic otitis media, the pains may be either from the middle ear or from the auditory meatus (irritation due to pus). In contrast to the usually harmless mesotympanal suppurations, the epitympanal suppuration often causes destruction of the bone. Here, there are pains in the ear, or radiating pains in the head or on the affected side, frequently as the first symptom of a sudden complication. The pains may be relieved after a gathering of secretion (polyp, cholesteatoma) has been relieved, but the bone affection may run its course unaltered, and make an interference necessary. On the other hand, extensive disturbances of the bone may take place without pain, with scarlet fever, diabetes, tuberculosis, etc.—*The General Practitioner.*

Pyeloscopy as a Guide in Treatment—Those who have been fortunate in seeing in Melbourne Dr. J. Leon Jona's ingenious cinematograph of the working of the kidney pelvis and ureter, as revealed by pyeloscopy, will be interested in a paper on the subject which he read before the Royal Society of Medicine on January 23, 1936 (reported in Vol. xxix, April). At the end of his paper he gives the result of his experiments on human patients, and, these have a useful bearing on treatment in some conditions.

Pituitrin.—Pituitrin (1 c.c. intramuscularly) in the human being produces not so much an increase in intrapelvic pressure as a restoration to normal rhythm in cases in which some dysfunction exists. As an illustration of the therapeutic action of pituitrin the following case is of interest.

A patient suffering from a toxaemia of pregnancy had had her urine drawn off by vesical catheterisation a number of times after delivery. She developed cystitis and pyelitis, and complained very much of kidney pain, which was not relieved by morphia. Pyeloscopy showed antiperistalsis in the ureter up to the kidney pelvis. An injection of 1 c.c. pituitrin was given intramuscularly. In 10 seconds the antiperistalsis disappeared and the kidney pelvis continued to evacuate normally. Her pain immediately disappeared and her temperature came down to normal and she remained cured of her pain and pyelitis. The cystitis was treated and cured, and she was discharged from hospital well.

It appears that the kidney pelvis tends to continue to functionate normally once normal function has been restored.

Atropine.—1/100 gr. atropine subcutaneously produces contraction of the pelvis with a rise in intrapelvic pressure. Atropine cuts out the activity of the vagus fibres, and the results obtained in the cases investigated seem to indicate that the vagus exerts a tonic inhibitory action.

Histamine in the human being in the dose given (gr. 1/22 injected subcutaneously) causes a contraction of the kidney pelvis. In the human being with the small dose given, the amount which circulates must be very small indeed. In the dog the same dose produces a relaxation of the kidney pelvis.

Mercurochrome and *acriflavine* produce the same effect as histamine.

Eserine—When gr. 1/100 is given in the human being a contraction of the kidney pelvis with an increase of tone is produced. This is difficult to understand since eserine is a cholinergic drug whose action should be antagonised by atropine.

Aspirin — Ten grains by mouth causes a lengthening of the diastole of the pelvis and relieves pain due to hurried contractions.

Quinine, which the author had found, empirically, to relieve backache in some cases, has a remarkable effect in causing relaxation of spasm of pelvis and in ureter. In one case in which the capacity of the spastic kidney pelvis was only about 3 c.c., it gave great immediate relief, and when it had been given (gr. 5 t.d.s.) for a few weeks, the relief of pain was complete. Possibly this effect is due to its action of lowering the metabolism of tissues.

Morphine and *strychnine* in therapeutic doses both produce contraction of the kidney pelvis.—*The General Practitioner.*

Anisocoria in Chronic Appendicitis—K. SCHLAEPFER, Deutsche Ztschr. f. Chir. 244:311, 1935.

Sawitzkij and Buchman first called attention to anisocoria in chronic appendicitis. This is due to changes which occur in the sympathetic plexus of an inflamed appedix during scar formation. The sympathetic fibers of the appendix belong to the superior mesenteric plexus. The fibers go through the solar plexus to the roots of the ninth and tenth thoracic segments, then through the spinal cord to the ciliospinal center, then to the carotid plexus and through the long ciliary nerve to the muscle of Muller and the dilator of the pupil. In one series of 2,000 cases Buchman found a relative dilatation of the right pupil in 88 per cent of the cases, and in another series of 1,500 cases, in 93 per cent of the cases. For studying the pupils a diffuse bright light is essential. The phenomenon does not occur in rightsided inflammation of the pelvic organs, the liver and gallbladder. Tertiary syphilis and right-sided pulmonary tuberculosis must be ruled out. In 83 per cent of 60 cases observed by the author in his series a relative dilatation of the right pupil was observed. The majority of these cases were those of acute exacerbation of chronic appendicitis. From two and one-half to five months after operation the patients with anisocoria showed equal pupils, in agreement with the observations of Sawitzkij and Buchman. The author believes that anisocoria is a useful accessory sign in the diagnosis of chronic appendicitis.—*A. J. D. C.*

Results of the Treatment of Hydrocephalus by Endoscopic Coagulation of the Choroid Plexus. Tracy J. Putnam.—Arch. Pediat. 52:676 (Oct.) 1935.

The instrument consists essentially of a rod of optical glass eighteen centimeters long and approximately seven millimeters in diameter, with polished ends which serve both as shaft and as viewing system. The illuminating system consists of a bronchoscope light and carrier fitting in a grove in the rod. Two electrodes are carried in smaller grooves to the tip of the instrument, where they lie exposed in the field of view.

The advantages of this instrument are several. There is practically no space wasted in the cross section: all of it except the electrodes is devoted to the transmission of light. It can be used in a cloudy medium. It has no focus. Structures in the ventricle may be seen at a distance of several centimeters, or in direct apposition. Nothing projects beyond the field of vision. The current passes only between the electrodes so that the danger of damage to the walls of the ventricle is slight. The operator can watch and control the degree of coagulation of the plexus.

By means of a new instrument, it is possible to destroy the chlorid plexus of the lateral ventricles without draining the cerebro-spinal fluid, through a small triphine and cortical incision. Bipolar coagulation is used, so that current does not pass through the basal nuclei. A far better view of the operative field than with other endoscopes is obtainable. The operation has been performed forty-three times in twenty-two practically unselected cases with seven hospital deaths. Of nine patients surviving for periods of four to fifteen months, five are in satisfactory physical and mental condition, two are improved but still feeble minded, and two have continued to deteriorate. In two recent cases the results are still uncertain. Among the last ten cases operated upon there has been only one hospital death. Cortical atrophy appears to take place slowly in most cases of unrelieved infantile hydrocephalus. The commonest cause of mental defect in such cases is a concomitant cortical aplasia or other cengenital malformations of the brain.—*Archives of Physical Therapy.*

Surgical Treatment of Sciatica.—After discussing a classification for sciatica including the following groups:—fibrositis, pelvic growths, growths of the spine or spinal cord, sciatica with lumbar scoliosis and with sacro-iliac disease, A. Rendle Short (*The Bristol Medico-Chirurgical Journal*, summer, 1936, liii. 87) mentions that there still remains a group in which are many of the

severest cases and the most resistant to treatment. He considers that sciatica of this type, when the other causes have been excluded, may often be due primarily to neuritic adhesions between the nerve and the structures which surround it at the sacro-sciatic notch. In the anatomy room a fibrous band is not uncommonly found in the neighbourhood of the greater sciatic notch and the type of trouble produced is analogous to that found in the arm in cases of so-called "cervical rib." An exploratory operation with division of the band of adhesions with a blunt hernia knife is reported in several cases with complete cure of the sciatic pain. It is suggested that in cases suitable for treatment the muscles supplied by the external popliteal nerve will show most wasting. —*The Practitioner.*

Cod-liver oil Application in Eye Diseases.—The use of cod-liver oil dressings for various conditions of the skin secondary to trauma has been reported in recent years and E. Stevenson (*The British Journal of Ophthalmology*, July, 1936, xx, 416) now reports the employment of this substance in injuries of the eye. In a severe case of burning he applied one drop of weak atropine solution and dressed the burn with a thick pad of gamgee soaked in ordinary cod-liver oil covered with oiled silk and a bandage. The patient was instructed to keep the pad moist by pouring some oil on the outside if it seemed to get dry. Very good results were obtained particularly as regards absence of scarring of the lids. Other cases have now been treated with severe abrasions, ulcers, keratitis with swollen lids and similar chronic lesions. It is recommended that the oil be not used until any active septic process has subsided. A specially characteristic feature is rapid healing of blepharitis and the promotion of the growth of normal tissue. A special drop bottle is advised and one is made by Messrs. S. T. Pearson and Co., Ltd., Mitcham. The only disadvantage of the treatment appears to be the smell, but since small quantities only are used for the eye this is of little consequence.—*The Practitioner.*

Cod-Liver Oil for Wounds.—Based upon the theory that the growth of healthy repair tissue might be stimulated by certain of the vitamins, cod-liver has been used for some time in Germany and elsewhere in the treatment of wounds. From his experience in industrial work Lang (*Schweizerische medizinische Wochenschrift*, December 28, 1935, lxv, 1248) reports favourably on this method and adds certain practical points. It has been found that

ordinary cod-liver oil is too fluid, and making it into a thick ointment does not decrease its healing power. The stimulation afforded to epithelial tissue is so powerful that certain surgeons have almost ceased to employ transplanting of skin since wounds treated with cod-liver oil have healed so well. For the commonest type of industrial accident—various degrees of injuries to the fingers—a daily dressing of cod-liver oil ointment appears to yield excellent results. For partially amputated fingers the use of cod-liver oil and plaster of Paris appears to afford satisfactory healing. After coarse dirty particles and separated portions of connective tissue have been removed the finger-stump is thickly smeared with cod-liver oil ointment, and then put up in a plaster bandage, which is left on for ten to fourteen days. A second plaster after this period applied after a further dressing with cod-liver oil will usually be all that is necessary to secure a final healing with a minimum loss of tissue. This method is not applicable for acute septic processes of the hand and fingers on account of the intense reaction often promoted, and single dressing with cod-liver oil ointment is advisable. The same applies to third-degree burns when much secretion occurs after the use of cod-liver oil, but for second-degree burns the use of plaster of Paris bandages after the application of oil yields good results.—*The Practitioner.*

Auscultation of the Abdomen.—Despite the statement by Cannon thirty years ago that the study of the sounds produced by movements of the alimentary canal might be of clinical value, this subject has been greatly neglected. N. C. Stevens (*The New England Journal of Medicine*, July 9, 1936, ccxv, 22) has studied the results of auscultating the abdomen with particular reference to the peristaltic rate which he states is no more difficult to determine than the pulse rate. This normal peristaltic rate varies with the time of day and becomes more active after each meal. After the stimulating effect of the meal has passed away, the the normol rate is between five and ten tinkles per minute. Under conditions of hypermotility this may go as high as fifty or even the iodine, and these areas stain a deep mahogany brown. In the areas of beginning malignant change, the cells have become atypical, with atypical nuclei, have lost their glycogen and therefore do not accept the stain but appear as pinkish or faintly stained regions. However, this non-staining quality is also distinctive of other conditions and it must be emphasized that the Schiller test is only an aid to facilitate diagnosis of early

carcinoma and that it is not a proof of the presence of carcinoma. The second aid is the colposcope with which it is possible to study minute regions of the cervix highly magnified so as almost to permit of viewing the various cell changes taking place without actually removing tissue. It is probably of more value than the Schiller test because erosions can be studied and it furnishes a surer method of obtaining biopsy material.—*The Practitioner.*

Some Effects of Total Thyroidectomy.—The earlier reports on the results of complete thyroidectomy for intractable heart failure were naturally concerned chiefly with the effect on cardiac symptoms. It is clear, however, that the complete removal of a normal ductless gland is a drastic procedure, and it cannot be expected to be without far-reaching effects on a variety of physiological processes. A slight or moderate degree of myxœdema is the usual and desired sequel to the operation, and since its introduction this pathological state has been intensively studied under what amounts to experimental conditions. By means of observations made on each patient before and at intervals after the removal of the gland, valuable information has accumulated about the biochemical and other changes that accompany the development of myxœdema, such as could never have been obtained in the naturally occurring disease. A study of some of these effects based on 39 cases has recently been published. This series, which included 22 cases of angina pectoris, showed on the average a fall in the basal metabolic rate from +1 initially to −25 about ten weeks after operation. At the same time the blood cholesterol is found to rise progressively until, at the time that some thyroid medication is found desirable, the initial figure is almost doubled. In a few cases with approximately normal basal metabolic rates, the blood cholesterol was nevertheless high and, taking into account the general findings, it is considered that the blood cholesterol is the better indication of myxœdema. At least it seems unwise to pin too much faith on the basal metabolic rate, for as we know from observations on toxic goitre, abnormalities in thyroid secretion may occur with little or no effect on the rate. The estimation of vital capacity revealed no definite change after operation in the patients with angina, but in a minority of those with congestive failure an increase was noted, though not reaching a normal level. Measurement of the blood velocity gave some anomalous results, showing a diminished rate in some but not in all of the anginal patients after operation; where slowing was observed an acceleration could be produced by thyroid medication,

On the other hand, in patients with congestive failure who usually showed a low pre-operative blood velocity, the rate was in general still further reduced after operation, but no definite correlation could be made either with the initial cardiac condition or with the later myxœdema, and in one case the velocity was actually greater after operation. The estimations of the blood content of calcium, phosphorus, protein, iodine, and sugar gave no striking results except that an increase in sugar tolerance, was demonstrated after operation in two patients with mild diabetes. Observations on skin temperature showed that measures which lead to vasomotor relaxation were more effective after thyroidectomy, and in two cases with gangrene of the legs definite improvement followed the operation. Mental retardation has been considered to be one of the symptoms of natural myxœdema, but in the induced myxœdema there was, on the contrary, some increase in mental capacity as judged by symbol-formation tests. Another important point that emerged was that no anæmia has so far developed, though it must be noted that the period of observation has been short and it may be that the anæmia commonly found in spontaneous myxœdema requires a considerable time for its appearance. Finally, no favourable effect on hypertension could be reported, a finding which might be anticipated from the failure of subtotal thyroidectomy to influence accompanying hypertension and also from its frequent presence in spontaneous myxœdema.

A new light is thrown on the effects of thyroidectomy by a close study of 47 patients after operation made by certain social and welfare workers. By an interrogation of the patients themselves, of their relatives, friends, employers, and private doctors, these observers sought to discover exactly how much, if any, improvement occurred in their capacity for effort, ordinary social activities, and what emotional and personality reactions took place. A large majority were classified as having increased physical capacity and relief of symptoms, the assessment corresponding in the main, but with some differences, with that made on purely clinical grounds. It is considered that psychological considerations may be a contra-indication to this form of treatment, in that some patients with maladjusted personalities subsequently showed unfavourable emotional reactions. These precise observations, apart from placing the therapeutic procedure of thyroidectomy on a more secure footing, cannot fail to increase our knowledge of the endocrines and of thyroid pathology in particular.—*Lancet*,

The Treatment of Chronic Sinus Infection with Undenatured Bacterial Antigens—*F. C. Kracaw.*—Laryngoscope 46:26 (Jan.) 1935. Some time ago Krueger conceived the idea that a large portion of the failures accruing to vaccine treatment depended upon alterations undergone by the bacterial antigenic complexes during preparation of the vaccine. Krueger and Nichols have shown that proteins—the Major antigenic substances of the cell—exist in the live bacterium in the native form and that these proteins are rapidly denatured by temperatures over 40° C. Since the usual treatment for killing bacterial suspensions involves exposure to 60° C. for one hour, they point out that orthodox vaccine therapy has been carried out practically altogether with cellular proteins in a form entirely different from that existing in the live bacterium. In order to avoid denaturation in the preparation of bacterial antigens, Krueger developed a technique for physically disrupting the living cells.

The undenatured antigens are made from pathogens isolated by cultures taken from the nasal tract. The technical procedures developed by Krueger for preparing these antigens are described in various published reports. The antigens are employed for topical immunization and for general immunization by hypodermic injection.

A year or more after completion of treatment in a previously reported series of 45 cases, it was found that 28 of the 30 patients considered cured had maintained that status, while the 13 patients classified as presenting satisfactory clinical improvement all remained in this category. A second series comprising 62 patients showed 52 markedly improved or cured, 2 failures, and 8 patients in whom improvement was only moderate. On a percentage basis the present series revealed 84 per cent patients markedly improved or cured as compared with 66 per cent so classified in the first series. The improvement in results may be ascribed to a modification of technique involving a more persistent immunizing program.

In properly selected cases it is the author's opinion that topical and general immunization with undenatured bacterial antigens, prepared according to the technique outlined, is the method of choice for the treatment of chronic sinusitis.—*The Eye, Ear, Nose and Throat Monthly.*

The Value of X-ray Therapy in Chronic Sinusitis—*Edwin D. Warren.* Laryngoscope 45:864 (Nov.) 1935.

The author reports on 72 cases treated by deep X-ray therapy.

Every type of sinusitis has been treated except atrophic rhinitis. It was the author's purpose to determine the value of this form of treatment in all types of cases. On the basis that X-ray is of value in various types of infections and in reducing lymphoid hyperplasia its application in chronic sinusitis appears rational. In this condition the picture is typically one of an infected mucous membrane with lymphoid hyperplasia and multiple infected glands. It is this selective action of the X-ray having a greater affinity for glandular tissue that makes the procedure a safe and logical one. The action of X-ray on sinus mucosa is mainly one of death of the lymphatic cells followed by proliferation and migration in of histiocytes followed by proliferation and sclerosis.

Due consideration is shown involved structures during treatment by adequate protective coverings. The brain gets a light irradiation but not an injurious one.

The response to X-ray therapy of chronic sinusitis depends on the selection of cases. In some it is excellent, while others show practically no improvement. In the author's series 25 per cent have shown marked improvement, 40 per cent moderate improvement, 20 per cent transitory moderate improvement, while 15 per cent have shown no improvement.

The technique is described. It is emphasized furthermore that subjective improvement may be had without radiographic improvement. The greatest effectiveness is in the hyperplastic type and allergic or borderline allergic cases with attendant nasal infection. The chronic purulent types of many years and the type having had many operations show variable responses, most of which are not entirely favourable.—*The Eye, Ear, Nose and Throat Monthly.*

Physical Therapy

Ionization in Nasal Allergy.—The problem of nasal allergy continues to baffle the medical profession. On the one hand the the allergist endeavors to make a scientific diagnosis and then by specific therapy immunize the individual against the offending irritants. On the other, the rhinologist, disappointed with the results of specific immunization, resorts to non-specific measures, hoping by such means to render palliation if a cure is not possible. The allergist claims he produces good results. If we are to judge from the numerous cases which the rhinologist is called upon to treat, after injection treatment has failed, we cannot accept the allergist's claim as true. And, in fact, in some quarters, the

allergist is willing to admit that in the perennial type of nasal allergy non specific methods frequently must be depended upon to give patients relief.

From the time hay fever was first recognized, investigators resorted to local procedures in the form of cauterization to render the nasal mucosa insensitive. Cauterization whether by chemical means or intense heat has come down to the present as an effective means of treatment and is still employed by rhinologists in spite of the fact that it entails a certain amount of tissue destruction. The employment of escharotics in hyperesthetic rhinitis is preferred by some investigators who have found, in their experience, that chemical cauterization produces slightly better results than ionization. Of all the local procedures recommended, however, ionization stands out prominently as a therapeutic advance which merits serious consideration when the problem of nasal allergy presents itself. The numerous favourable reports from reliable investigators overshadow the inconspicuous few negative results from sources which possess only recent familiarity with a highly specialized technic requiring years of study to master properly.

The superiority of ionization over the other non-specific procedures can be readily ascertained by any interested worker. The clinical results are in many instances spectacular giving prolonged palliation to a large group of afflicted individuals irresponsive to other remedial agencies. That ionization should not be heralded as a cure has been pointed out by Hollender who has found, however, that symptomatic relief may last for an indefinite period.

Aside from the clinical effects of ionization which are admittedly good in the large majority of cases, certain basic problems have been investigated in connection with the method. Wenner found that zinc ions, although slowly moving, penetrate the skin; that zinc iontophores cause disturbances in the circulation of the blood through the smaller vessels and capillaries of the skin, and that the destructive changes in the skin following the procedure depends upon the strength and the duration of the current, the area of tissue treated and the concentration of the electrolyte.

Tissue changes in iontophoresis have been studied by Hollender, Cottle, Hurd, Alden, Smit and others. The findings are in most instances similar with some question only as to the regeneration of cilia. This is an important consideration in relation to nasal function and should be settled eventually. The fibrosis which ensues must explain in part at least the clinical

effects which result from the method, while other tissue changes are dependent altogether on the technic employed. Dean believes that ionization acts by thinning and splinting the mucous membrane. He states that it interferes with the absorption of pollen through the mucous membrane of the nose. The columnar ciliated epithelium is destroyed and in its place is found a hyperplastic and metaplastic epithelial lining. The surface cells have a tendency to become squmous. There is a tendency for this metaplasia to disappear and ciliated cells to be again produced.

The question now resolves itself: Do the clinical results of ionization outweigh possible deleterious effects to the nasal mucosa and to nasal function? This question is not easily answered. Even Dean avers that ionization improves most cases of allergic rhinitis, but he contends also that it produces deleterious results in the mucous membrane of the nose which last at least two years. He emphasizes that ionization should not be used unless the benefits are greater than the deleterious results produced. Such reasoning is rational but uncalled for. Patients have been clinically free from symptoms but their noses have been functionally good. Is it not a fact that often the results of our scientific investigations mislead us in the practical application of a remedy? This has occurred under other circumstances and seems destined to occur again in connection with nasal ionization.

It would be unscientific to argue that caution is unnecessary. The experienced rhinologist requires no instructions along these lines. The patients must be relieved even at the expense of insignificant tissue changes. How many individuals possess perfectly normal nasal mucosas? Our mode of living under all sorts of conditions of climate and weather constantly produce alterations in our nasal tissue which must of necessity interfere with normal nasal function. Granting that tissue changes result from ionization, are these out of all proportion to the changes cited? Is it essential to perform a biopsy of nasal tissue to determine whether a patient has a complaint to offer of his condition? Or shall we be content with objective determinations?

The rhinologist must pass on this himself. He alone can judge whether a certain treatment is indicated. Experience with ionization is essential in expressing opinions on its merits or possible deleterious effects. While the results of scientific studies are refreshing and beneficial, immature reports by the novice on limited amounts of material are not only unfair but usually unwarranted. To perform ionization scientifically one should have at least an elementary knowledge of the physics of the galvanic current. Too many clinicians have attempted ionization without a differentiation in their minds between a galvanic current and a high frequency current. Like surgery, technic in physical therapy can be learned by rule of thumb. The master surgeon knows his anatomy; the rhinologist thoroughly qualified to apply ionization first acquires a knowledge of the different electric currents suitable for therapeutic purposes in the speciality.—*Archives of Physical Therapy.*

Pediatrics

Avertin as a Complete Anaesthetic in Children.—JOHN BOYD. *Brit. M. J.* 1:1120 (June 1) 1935.

The author surveys seven hundred cases of anaesthesia with tri-bromethanol in amylene hydrate in children, describing the technic, the result and the possible danger. The conclusions are as follows:

"1. Avertin can be given to children as a complete anaesthetic with safety, provided a careful look out is kept for danger signals and the patient treated accordingly.

"2. Complete avertin anaesthesia in children is better and more suitable than basal anaesthesia followed by an inhalation anaesthetic.

"3. Complete avertin anaesthesia in children approaches more nearly the ideal anaesthetic than any other.

"4. It is much safer in children than in adults, as in the former there is better detoxication and elimination.

"5. The best method of administration to produce complete anaesthesia is to combine avertin 0.175 gram per Kg. body weight with morphine and atropine according to age, and 20 to 30 c.cm. of novocain as a field block.

"6. A 3 per cent solution of avertin is better retained than a 2½ per cent solution.

"7. The depth of anaesthesia is best assessed by nipping the skin of the neck and watching the arm for movements.

"8. The fall in blood pressure is not of serious moment.

"9. Complete avertin anaesthesia is contraindicated in (a) very young and (b) very cachetic children."—*A. J. D. C.*

Abdominal Pain in Children.—A. RENDLE SHORT, *Brit. M. J.* 1:1157 (June 8) 1935.

Short divides the group of children with abdominal pain into those with diarrhoea and those without diarrhoea, those under 5

years of age and those over 5 years of age. He does not discuss those with diarrhoea. He states that in children under 5 years of age appendicitis is not impossible but is distinctly uncommon. Intussusception is next discussed, and the classic symptoms are outlined. He thinks that sometimes mucous colitis of sudden onset is diagnosed as appendicitis, and an unnecessary operation is performed. Attention is drawn to the possible mistake in confusing intussusception and Henoch's purpura. Strangulated hernia is also mentioned.

In children over 5 years of age he thinks that a great many conditions occur and that many are mistaken for appendicitis. However, he discusses genuine appendicitis and calls attention to the classic symptoms. He then lays special stress on pneumococcic peritonitis, which, he states, is almost entirely confined to girls of school age and which is often mistaken for appendicitis. Although this type of peritonitis sometimes follows pneumonia, it is more commonly primary condition. He thinks that an operation rarely saves the child. There is a sharp differentiation between pneumococcic peritonitis and basal pneumonia simulating appendicitis. Influenza, he states, may often be accompanied by pain and tenderness in the lower right part of the abdomen, with fever. The most difficult of all conditions to diagnose is inflammation of the mesenteric glands in the angle between the terminal part of the ileum and the ascending colon. They may not be tuberculous, but in many instances they are. Tuberculous peritonitis is then discussed, as well as tuberculous spinal disease with abdominal muscles, with more or less recurrent abdominal pain, which many children complain of. This disorder is usually difficult to diagnose, and the author thinks that it is largely caused by mesenteric lymphadenitis, usually tuberculous. This pain, he thinks, is due to the fact that the splanchnic nerve fibers of the mesentery actually traverse the lymphatic glands and occurs when a wave of peristalsis, which would otherwise not be noticed, pulls on the mesentery. This is the pain which a child complains of frequently as "my pain".—*A.J.D.C.*

PROCEEDINGS OF ASSOCIATIONS, SOCIETIES, ETC.

Bombay Medical Council

The following extracts from a summary of the proceedings of the meeting of the Bombay Medical Council held on 7th September 1936 are published for information :—

The Council proceeded to consider further the application of Mr. K. A. Nanavutty for permission to be registered under section 7 (3) of the Bombay Medical Act, VI of 1912, and decided that

Government be informed that the Council is unable to recommend the grant of permission to Mr. Nanavutty to be registered under section 7 (3) of the Bombay Medical Act.

The Council proceeded to consider further the application of Mr. G. S. Kasyapi, L.M. & S., for the restoration of his name to the Bombay Medical Register and resolved that sufficient time has not yet elapsed before his application for the restoration of his name to the Register can be entertained.

The Council proceeded to consider the application of Mr. R. S Shah, M.B., B.S, of Rajkot, for the restoration of his name to the Bombay Medical Register and resolved that, in view of the information since received by the Council about Mr. Shah, his application for the restoration of his name to the Register cannot be entertained.

The Council proceeded to consider the reference from the Bihar and Orissa Council of Medical Registration regarding the report of the Sub Committee appointed by that Council to lay down a minimum standard of qualification for purposes of registration and it was decided that, while the courses and improvements suggested by the Sub-Committee are very desirable, they would require a course of studies lasting for five years.

The Council proceeded to consider the enquiry received from the Medical Council of India on the following points :—

(i) whether Indian Nationals who have obtained medical degrees of repute in foreign countries with which there is no reciprocity with India should be granted recognition of these degrees in India ?

(ii) on what basis the Nationals of such countries be recognised when they come to India ?

(iii) what is the present practice in both these respects in your Council ?

and decided that the Medical Council of India be informed as follows :—

(i) Indian Nationals who have obtained medical degrees of repute in foreign countries with which India has not established reciprocity should not be granted recognition of these degrees in India;

(ii) the Nationals of such countries, when they come to India, should not be recognised unless they obtain a qualification registrable by the Bombay Medical Council;

(iii) such medical qualifications possessed by both these classes of Nationals are not recognised at present for registration by the Bombay Medical Council.

The Council proceeded to consider further the draft revised Code of Medical Ethics and decided that it should be referred back to the Executive Committee for re-consideration.

The Council proceeded to consider certain suggestions received from Government regarding the proposal to institute a Provident Fund for the staff of the Council and decided that :—

I. The Registrar be allowed to join the Provident Fund, whether he is a retired Government official or not;

II. So far as the Clerk is concerned, his joining the proposed Provident Fund should be voluntary;

III. The suggestion of Government, *viz.*, that the rate of contribution of subscribers be fixed at 1/16th of their total pay, be accepted.

The Council proceeded to consider the following proposals made by Mr. M. N. Talati, L.C.P.S., a member of the Council :—

" That, of the six nominated members, Government be requested to nominate at least two of them from the class of general medical practitioners who are not Consultants ".

" That the Executive Committee shall consist of the President and five members of the Council and *not* six as at present". and it was decided that the Council is not in favour of either of the proposals made by him.

The Council proceeded to consider a proposal received from Mr. M. N. Talati, L.C.P.S., a member of the Council, for the appointment of a Committee to prepare a programme for the celebration of the " Silver Jubilee " of the Council next year and it was decided that the Council is not in favour of the proposal.

The Council proceeded to consider the Annual Returns showing the results of the several Professional Examinations held in 1935, compiled in the Council's office from the Returns supplied by the Licensing Bodies pursuant to the Rules of the Council and it was decided that a copy of these Returns, indicating the failures by each of the examining bodies be forwarded to the College of Physicians and Surgeons of Bombay and that the attention of the College be drawn particularly to the results shown against the several schools affiliated to the College.

The Tinnevelly District Medical Association

Affiliated to the Indian Medical Association.

The Association held its monthly meeting on Sunday, the 27th September, 1936 at Sankarankoil. Members gathered from all parts of the District.

After Tea Party and sweet music, the meeting began under the Presidentship of Lieut Col. T. S. Shastry, I.M.S., The Secretary

read the miuutes of the monthly meeting (President's Function) held at the Headquarters on 29-8-36, which were passed.

Tho following Clinical Cases were demonstrated :—

Dr. P. S. Srinivasan, L.M.P., Sub-Asst. Surgeon, Govt. Head Quarters Hospital, Palamcottah on (1) Penetrating wound-chest (2) Malignant Tumour on Left Thigh upper-third and Hobnailed Lungs (specimen shown).

Case notes of the following cases were read by Dr. P. S. Srinivasan :—

(1) Perforated Duodenum; (2) Malignant tumour on left thigh upper-third and Hobnailed Lungs; (3) Intussusception ; (4) Penetrating wound-chest.

The above cases were fully discussed by members. Then Lieut. Col. T. S. Shastry, I.M.S., summed up the salient and important features of all the cases.

Dr. K. Rama Ayyar, M.B., B.S. (Andhra), gave an interesting lecture on " The Role of X-rays in Medicine and Surgery ".

The President brought the meeting to a close by his remarks on the subjects of the learned address and proposed a vote of thanks to Dr. T. R. Srinivasa Iyengar, Selection Grade Sub-Asst. Surgeon, for his splendid arrangements.

Thereafter an excellent dinner brought the happy gathering to a close.

Health Exhibition

Under the auspices of the Tinnevelly District Medical Association, in connection with its monthly meeting at Sankarankoil, a Health Exhibition was arranged at the Board Gomathy Edward High School, Sankarankoil, on Sunday the 27th September 1936, at 10 A. M. under the auspices of Mr. Ghulam Muhammed, B.A., Revenue Divisional Officer Koilpatti. This is the first time that a Health Exhibition was held at Sankarankoil.

Lieut Col. T. S. Shastry, I.M.S., the President of the Association, welcomed the guests and requested Mr Ghulam Muhammed to open the exhibition.

Mr. Ghulam Muhammed in declaring the Exhibition open said that such Exhibitions are very useful, instructive and beneficial to the public and school children and promised to devote his best attention hereafter to encourage Health Propaganda.

Mr. Maduranayagam, the Health Inspector, explained in Tamil the exhibited posters on the prevention and causation of Tuberculosis, Flies, and Cholera, for the benefit of about 200 school children and public.

This was very much appreciated by the gathering.

BOOK REVIEWS

The Management and Medical Treatment of Children in India and The Tropics--By *E. H. Vere Hodge*, B.A., M.D., M.R.C.P., I.M.S., 1936 Eighth Edition, pp. 377. Calcutta : Thacker Spink and Co., Ltd. Price Rs. 7-8.

This popular work which was first published early in 1844 is in its eighth edition having grown considerably in size and usefulness now. The idea of publishing this work primarily was to provide the mothers of India living in outskirts, instructions in the care of children in health and disease. But with the growth of pediatrics it has been found necessary to give additional information so as to make it up-to-date and useful to medical practitioners as well, practising in mofussil stations. Such of those chapters, intended solely for the medical practitioners, have been marked as such; while the other chapters intended for lay people, have been written in simple language, avoiding much of the technical terms.

The first eight chapters in the book deal with the management of the expectant mother and the child that is to be born, in 'health'. From chapter ix to xxx the diseases of the children, arranged, system after system, are dealt with—an arrangement that would help a quick reference.

Chapter xxxi gives all about accidents and their treatment. Chapter xxxii and xxxiii describe of poisonings and on the administration of proper remedies. There is a useful appendix that gives information on Diets in health and disease, prescriptions vitamin content of different food system and suggestion for the mofussil medicine chest.

In the compilation of this book most of the staff of the Calcutta School of Tropical Medicine have given advice and information on various aspects. The usefulness of this book cannot be over estimated. We congratulate the author on his achievement and wish the book many more years of useful service to mothers in India.

Text Book of Pathology—By *Sir Robert Muir*, M.A., M.D., SC.D., LL D., F.R.S., 1936, 4th edition, pp. 994. London : Edward Arnold & Co. Price 35/-net.

Little need be said by way of review to this popular text book which is in its fourth edition ; the previous edition appeared in 1933 and since then there have been important additions to knowledge in various departments and in this present edition

most of them have been incorporated. Their incorporation has not enlarged the size of the book, but has been achieved by choice selection and economy of words. Among the additions may be mentioned (1) on lymph granuloma inguinale, (2) the use of supravital technique in the diagnosis of monocytic leukæmia etc. About 25 new illustrations have been added.

This is a book that contains sound teaching on pathology. We have no doubt that this new edition would soon gain its usual position among the text books.

Post Graduate Surgery, Vol. II.—Edited by *Rodney Maingot*, F.R.C.S., (Eng.), Medical Publications Ltd., London, W. 1 Sole Distributors in India : Messrs Butterworth & Co., Avenue House, Calcutta. Price 70/- net per vol. or £ 9-9-0 per set of 3 Vols.

The II volume of Post Graduate surgery has, as has been expected, come up to the high standard of excellence of the I volume. It consists of eleven parts and covers nearly 2,000 pages. It begins with the section devoted to head, spinal column and salivary glands by Cecil P. G. Wakeley, the special features of which are the description of routine examination of head injuries, the illustrations of Frazier's operation of section of the sensory root of the Gasserian Ganglion and of operations for spinal cord tumours. The second part deals with the Surgery of the Neck by Sir W. I. Dec. Wheeler in which contains also the description of ligatures of the various arteries in this region.

McNeill Love contributes the section on Breast, wherein he describes a good method of closed drainage for mammary abscess. One feels that excision of the breast by the Diathermy, Knife, so often used by surgeons, when operating for malignant conditions of the breast ought to have been mentioned.

The next part exhaustively deals with Thorax and is written by Holmes Sellors and Sleigh Johnson. A very helpful chapter on post operative chest complications is included in this part. The part on Female Genital organs, covering nearly 500 pages of the book, is written by Lyle Carrison, S. Forsdike and Green Armytage and includes sections on Gynæcology, Gynæcological operations, the ovary and the subject of Sterility.

Ainsworth Daires is responsible for the sections devoted to diseases of the genito-urinary organs. It contains complete details of investigation of a patient with genito-urinary symptoms, many pylograms and cystoscopic views, as also illustrations of the various stages of the different types of operations for removal

of the prostate, all of which facilitate easy understanding of the subject.

The sympathetic nervous system has been ably handled by Laurence Abel, and adrenal Gland Surgery and Surgical Pathology by Broster and Vines respectively.

In the part devoted to Injection Therapy, injection treatments of Hernia, Hydrocele, Varicocele, Varicose veins and Varicose ulcers have been described. In connection with the treatment of chronic ulcers of the leg, Dickson Wright has described the use of elastoplast bandages for ulcers and the methods of skin grafting with skin seeds.

Hamilton Bailey writes on infections of the hand and St. John Buxton on Orthopædics. In conclusion, we can confidently assert that these two volumes, with their wealth of illustrations, their many brilliant authors, good print and beautiful paper are land marks on books of Surgery for advanced students and we eagerly look forward to the final volume of this great work to complete a standard reference book indispensable for practising surgeons.—P. G. R.

College of Dentistry, Karachi—Karachi is growing in importance, after being made the capital of a separate province and the recent opening of the new premises of the Laxmi Bai Patel Dental Hospital and the College of Dentistry in Hospital Road, Karachi, by H. E. Sir Lancelot Graham, K.C.S.I., K.C.I.E., I.C.S., Governor of Sind, marks the beginning of a new era in the history of Dentistry in India. Dr. M. K, Patel, D. D. S. (Penna, U.S.A.) Dr. Med, Dent. (Germany), F.I.C.D., the Principal of the College of Dentistry and after whose mother, the Hospital and College are named, has given the history of the College, which is full of hope for the future. It speaks volumes about his enterprise and public spirit and we wish him and his institutions all success. Dentistry is still in its infancy in India and in order that it may grow and flourish and 'fill a very wide gap in our system of medical relief,' more such Colleges and hospitals are required in India and we trust more philanthropists of the type of Dr. Patel will be forthcoming to accomplish this end.

Notes on May and Baker's Medical Specialities—Messrs. May & Baker Ltd. Dagenham, London, whose numerous products are well known to the Medical Profession, have brought out a beautiful and useful brochure, wherein concise details of their various specialities are given. The present booklet is the third edition, revised and enlarged, nicely printed and well-bound. It serve as good and useful guide for the busy Practitioner. We cannot single out any one speciality for special mention here, for all of them have proved their worth in their application for specific diseases. The addendum giving the therapeutic indications for these specialities arranged in alphabetical order, has made the task of reference easier still, and bespeaks the compiler's fore-thought and unsparing pains bestowed on its preparation. This booklet is sent free by Messrs. May & Baker (India) Ltd., 11, Clive Street, Calcutta to the members of the Medical Profession.

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CORRESPONDENCE

Dr. C. A. Henry, Medical Officer, King Edward Memorial Dispensary, Bandarchna, Narainpur P. O. Jashpur State writes to us under date 17th Sep. 1936 :—

I beg to invite your kind attention to an article on Medico-Legal Necropsy in August 1936 issue, by Capt. P Banerjee M.B., A.I.R.O. in which it is stated that 'the Police bring the inquest reports and empower the medical officer to hold an autopsy, but it is customary not to send the disposal order of the body after the autopsy'.

I beg to draw your kind attention to the above para and also Medical Jurisprudence by J.P. Modi Appendix I Page 3, Police regulation Para 4. It is stated, therein that after the post mortem examination is completed the Police will arrange for the disposal of the remains in the absence of relatives of the deceased. From the above it is clear that the medical officer who holds the Postmortem is not responsible in any way but it is the duty of the Police to arrange the burial or to hand over the corpse to their relatives for disposal.

[*The following is the reply we have received from the author to the above.*—Ed. " Antiseptic".]

I have read the letter of Dr. C. A. Henry of Narainpur with much interest and I thank him very much forthe communication. It is desirable that the body should be disposed off by the Police and it is the duty of the Police to arrange. Though this is the rule, that it is more violated than respected is my contention. My experience in the different stations of Bengal (except at Calcutta) is that the Police do not bring the disposal order with the body after the Post Mortem examination. What I wanted to point out is that we should insist on it otherwise there may arise some trouble somewhere in future. It is customary in Bengal at least that after the Post Mortem Examination the disposal order is given by the Police. By doing this the Surgeon incurs a good deal of burden on his shoulder should any question of exhumation or re-examination by some other examiner arises. This sort of exigency does not occur every day but it may happen and hence the pointed attention of the reader was drawn to this in the article referred to. I thank Dr. Henry over again for the communication.

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HEALTH
A JOURNAL DEVOTED TO HEALTHFUL LIVING

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