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CONTENTS.

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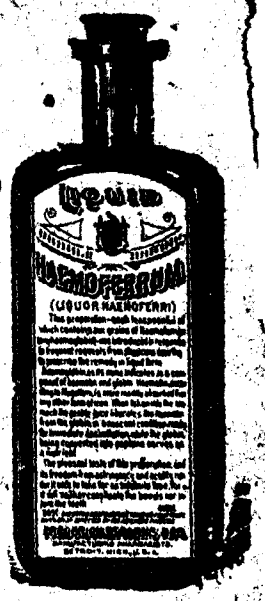

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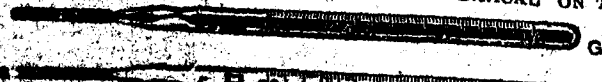

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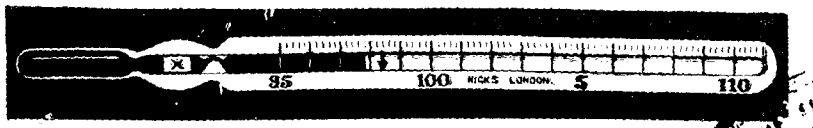

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ORIGINAL ARTICLES.

*"ELECTROLYTIC CHLOROGEN": SOME OF ITS USES

By

DR. D. F. MICHAEL, L.M.D., M.O., PUSA.

It is perhaps not generally known what an efficient member of the doctor's armamentarium Electrolytic Chlorogen has become. To those who are still unaware of its existence it would not be out of place to state that it is a hypochlorite solution of greater stability than preparations like Eusol, Dakin's solution, and other preparations of a like nature at present on the market. It contains from 2% to 2·5% of available Chlorine, and retains its strength and utility for all practical purposes for at least six weeks in the plains in the hot weather, and for a year or more in cold places like hill stations.

One of its most important properties is undoubtedly that of a disinfectant. Its scientific use as such for several years on the Pusa Estate has kept the inhabitants singularly free from Cholera, Enteric Fever and Dysentery. This enviable state of affairs—the immunity from water-borne and fly-borne diseases that Pusa enjoys-is due to the simple fact that every well in the place is treated once a week with clock-like regularity with "E. C." in a strength of 1·13 c.c. of the standard 2·5% solution per cubic foot of water.

During cholera epidemics of recent years, whenever the drinking water supplies in infected villages were so treated, the disease was checked with extraordinary rapidity and in no uncertain manner. The writer has had personal experience of its efficiency during the recent cholera epidemic in these parts. As a means of purifying drinking water, therefore, "E.C." undoubtedly has no equal.

* Specially contributed to the "Antiseptic."

As a means of disinfecting dwelling houses, etc., during outbreaks of infectious disease, "E.C." is invaluable. In a strength of 1 in 200, if thoroughly sprayed into every nook and corner of the building, the latter is rendered habitable in perfect safety once again as soon as it has become dry. This method of house disinfection will also be found less expensive in epidemics when compared with the cost of disinfecting with other antiseptics such as Carbolic Acid, Saponified Cresol, etc.

As a safe and speedy method for disinfecting the surgeon's hands and gloves at operations and in obstetric practice there is, I believe, nothing to compare with "E. C." Used as such in the required dilutions it does not irritate the most sensitive skins as carbolic acid for instance. Surgically clean hands will remain sterile if immersed from time to time during operations in a 10 % solution. An elaborate technique of hand scrubbing, etc., before operation is unnecessary if, after the nails and skin of the hands and arms are thoroughly scrubbed with the nail brush and soap in running water, the process is repeated merely with a solution of "E. C." In emergency operations under conditions far from ideal such as a surgeon may frequently encounter in private practice and on Field Service, the risks of sepsis will be greatly minimised by a liberal use of "E.C." in strengths of from 10% to 20%.

"E.C." will thoroughly disinfect instruments as well, but here a word of caution is necessary for practically the one and only disadvantage it possesses is in this respect, *viz.*, that it tends to tarnish instruments that are not heavily plated when they remain in contact with it for any length of time. Silk ligatures soaked for a few hours in a strong solution are rendered thoroughly safe, but, it is unsuitable for the sterilization of gut as the latter swells in an aqueous solution. In Pusa and in most if not all of the hospitals in Behar and Orissa "E. C." is used exclusively for practically all surgical purposes except of course for instruments and to such an extent that expenditure on account of other antiseptics such as iodine, carbolic acid, lysol, perchloride of mercury, etc. has been brought down to a negligible amount.

Being a powerful deodorant, "E. C." is far and away the most efficacious agent as such for latrines, urinals, cesspits, drains, cowsheds, stables, etc. It seems to act with remarkable rapidity and to do its work thoroughly. It appears not only to deodorise, but also to neutralise the products of decomposition. For these purposes strengths of from 1 in 200 to 1 in 50 will be found sufficient.

To pass on to some of its uses as a therapeutic agent. I would give first place to its use in surgery in combating septic conditions. The duration in treatment of a carbuncle, for instance, can be reduced by half

if, to begin with, the lesion is swabbed out with pure "E.C." (on the first day of treatment only), irrigated with a 20% solution, and then packed with gauze wrung out of the same. On applying the pure solution the raw tissues are found to temporarily assume a black colour, but no actual destruction of same takes place. A burning pain is set up which, however, is not unbearable and does not last very long, but it is preferable to use it in the pure state in open wounds only when the patient is under an anaesthetic. After 24 hours on removing the plugs of gauze from the carbuncle, the tenacious sloughs will be found to detach easily and the cavity to be much less foul than is usually the case with a carbuncle in so short a time. Douching should thenceforward be continued daily till all pus discharge ceases which invariably takes place within a week. After this the wound is treated in the ordinary way and the average duration will be found to be from a fortnight to three weeks.

In spreading cellulitis after providing for free drainage, in the case of the arm or leg, the limb should be kept immersed in a bath of "E. C." 15% to 20% as long as possible daily and dressed in the ordinary way using moist 10% to 20% "E. C." dressings.

In septic compound fractures, suppurating joints, deep seated abscesses, etc., if possible, the intermittent drop method of irrigation with "E. C." 10% or stronger should be employed. If this is not possible, thorough flushing out of the wound followed by packing with gauze wrung out of the same solution will be found next best.

In venereal sores, the penis, if kept immersed as long as possible daily in a 5% to 10% solution and the sore dressed with 10% to 20% "E. C.", results will prove very gratifying, while in septic conditions of the vagina and uterus, frequent douching with 10% solutions either cold or lukewarm very soon prove efficacious. I shall never forget the case of a woman suffering from the effects of retained products of conception. Fourteen days had elapsed since the abortion had occurred. She was lying in filthy surroundings, in a small dark ill-ventilated hut. Ignorance and the fetters of time-worn customs precluded the possibility of my having any intelligent assistance from the other women of the place, while the men were debarred from entering the hut. At my disposal were a few dressings and instruments and a bottle of pure "E. C."—and of course, well water in abundance. I made up my lotion with the latter and proceeded to attend to the patient. The condition of her person was in keeping with her surroundings while she was septic. I cleaned the parts and douched her as best I could, made a hand insertion and removed all that was possible from the uterus, douched the out again, put on some dressings, ordered some medicine to be taken

internally, gave her people a few instructions and left her to luck and fate amid scowls of frank dis-approval from most of the on-lookers. The patient made an uninterrupted recovery due in no small measure to "E. C." and its wonderful properties.

Again, in septic sore throats, stomatitis, pyorrhœa, ozæna, and various bacterial infections there is no better mouthwash or gargle. The strength usually employed is from 1% to 15%. In extremely foul smelling conditions such as cancrum oris and myiasis its deodorant effect is simply miraculous, while the gangrenous process in the tissues is in time arrested.

In irritation of the skin in Eczema, Scabies, Ringworm, Prurigo, Impetigo, prickly heat and various other skin troubles, it can be used in almost any strength with good results, while its application to mosquito bites and the bites of other insects in the pure state tends to check itching in a very short time.

As a prophylactic against sore throat, Pyorrhœa, Coryza, and Influenza, it can be used in perfect safety daily during the morning toilette as a mouthwash, gargle and nasal douche.

In my opinion it is worthy of trial in suitable dilutions by the intravenous route in general septicaemic conditions such as Plague, for no ill effects followed a few trials made by me while the results were very encouraging.

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*THE DIAGNOSIS OF LATENT OR CONCEALED TUBERCULOSIS AND ITS IMPORTANCE

BY

DR. L. A. RAMASWAMY IYER, S. A. S., NEGAPATAM.

Tuberculosis in its various aspects, is a disease responsible for a very large percentage of human mortality in India. Of the various species of tropical diseases which endanger human life to an alarming extent, which torment the physical and mental equilibrium of mankind to their entire contentment, and which baffle every method of treatment known to the medical world, tuberculosis is subordinate to none when the disease has developed itself into definite signs and symptoms. The prognosis in such cases is so ominous that even in the best of circumstances the treatment of the disease gives *little* satisfaction to the patient and less satisfaction to the doctor. Hence the paramount importance of diagnosis of early or concealed tuberculosis cannot be overestimated. And concealed tuberculosis which is one of the most common ailments of childhood and early adolescence is characterised by a well-defined group of clinical phenomenia, which, if

* Specially contributed to the "Antiseptic."

rightly understood, can be depended upon to establish a diagnosis and by timely precautionary measures prevent the further development of the disease which then becomes a scourge to humanity.

Deep-seated lymphatic glands, bones and serous membranes mostly take an important part in concealing for a time an active and obstructive tuberculosis. This latent nature of the disease may go on for a long time without pulmonary tuberculosis or general tubercular infection, but affords a golden opportunity for the medical man to combat with it easily and prevent further developments; hence the clinical importance at this stage for a skilful diagnosis in time when the disease is most amenable to treatment. The disease becomes incurable when developed into pulmonary, meningeal, acute miliary or other incurable form. Lymphatic system is the most common form of infection during child-hood, but only in a small minority of cases is pulmonary tuberculosis associated with it; and the latter is, as a rule, secondary and sequel to the former. Primary infection occurs, as a rule, in the tracheo-bronchial or mesenteric lymphatic glands, viz. in the deep-seated or hidden lymphatics. And it is therefore regarded as concealed tuberculosis and may remain for months or years with slight or no evidence of external manifestations. In such cases the destructive changes go on within to such an alarming extent that prevention of further developments becomes difficult.

Children growing in bad hygienic conditions, in ill-ventilated dark houses, with improper and irregular feeding have to be carefully watched. During my service in Mayavarm, Tanjore District, I had occasion to undertake treatment of young children and girls of the Christian community in the two Convents there. The inmates of these Convents like all others of the same order, are notoriously tuberculous communities. They are young girls between the ages of 5 and 20 who seek admission to these Convents mostly form poverty-stricken depressed class of society. And with all the efforts of the missionaries who are the custodians of these charitable institutions the sanitary conditions, feeding arrangements and the general rules of life are nothing but satisfactory. And the lives of majority of these girls before entering the Convent have been spent in unhygienic apartments, surrounded by tuberculosis, poverty and uncleanly habits.

The medical inspection of school-going children is, in our presidency, practically restricted to certain Municipal towns and Taluk Head Quarter institutions. The rural educational institutions which educate a large number of children and which are the feeders to the larger institutions are sadly neglected with the result that any tubercular tendency in these children is unnoticed and neglected and prevents any precautionary

timely measures being taken. Hence, in the interests of public health, and with a view to producing sturdy and healthy citizens, measures have to be taken by the authorities concerned to have every school-going child medically examined, whether in the metropolis or in the up-country institutions.

With the above remarks regarding general outlines of possible or probable concealed tubreculosis I shall enter into the detailed symptomatology as follows :—

(1) Hereditary tendency *viz.* family history of tuberculosis is an important clue to the diagnosis of concealed tuberculosis.

(2) Exposure to tuberculosis contagion especially in infancy and childhood as related above, such as mixing with tuberculous children in boarding schools, Convents and other asylums where no proper medical inspection exists.

(3) Intense anaemia without apparent cause is surely suggestive of concealed tuberculosis.

(4) Amenorrhoea, irregularity and even early appearance of menstrual functions may be evidence of concealed tuberculosis in young girls.

(5) Leucorrhoea, scanty or pale menstrual flow may be a symptom of concealed tuberculosis.

(6) Dyspnoea and side pains without definite cause may signify concealed tuberculosis without definite clinical evidence of pulmonary affection.

(7) Frequent attacks of cold and cough and proneness to the same under easy circumstances may be suggestive of concealed tuberculous mischief.

(8) Abnormal and defective physical developments according to age such as dwarfishness, pigeon-chest, various curvatures of spine, micro-hydro—or dolicocephalous are generally significant of concealed tuberculosis.

(9) Progressive failure of general health without sufficient cause for the same must suggest the disease.

(10) Neurotic diseases in children may be tuberculosis such as nervous irritability, hysteria and incontinence of urine. Children who get up at nights with a fright and wet their beds beyond a certain age should always be suspected for tuberculosis.

(11) Chronic dyspepsia, diarrhoea or constipation may be caused by concealed tuberculosis.

(12) Enlargement of external lymphatics accompanied by anaemia is an important sign of concealed tuberculosis. But superficial glandular enlargement when unaccompanied by other symptoms is of little value in

the diagnosis of deepseated glandular disease since destructive tuberculosis of the bronchial or mesenteric lymphatics may exist with little or no involvement of cervical or other external lymphatic glands or *vice versa*. The period of such infection is generally between six and twenty years of age when tuberculosis hides itself away in deepseated structures and slowly and stealthily proceeds with its work of destruction. The damage done is often irreparable before it openly announces its presence by the following signs and symptoms :—Caseation of lymphatics, cold abscesses, chronic eczema, rickets, chronic psoriasis, phlyctenular conjunctivitis, corneal ulcers, mastoid disease, chronic middle ear affection, amenorrhoea and inflammation of bones, joints etc. Children with adenoid growths and who breathe by their mouth during sleep have been observed to be notorious carriers of concealed tuberculosis.

But of all these in the latent type of disease pyrexia is the most important symptom. This is usually considerable, remittent, intermittent or inverse in type. And it is very important to carefully record the morning and evening temperatures for at least a fortnight. It is a strange fact too that tuberculous patients carry on their ordinary work with temperatures of 101° F 102° F as if they are quite healthy.

The early diagnosis of glandular tuberculosis in children is important for the following reasons:—Firstly it is curable. The medicinal, vaccine or serum and sanitinrium treatments so frequently advocated and administered in fully developed pulmonary tuberculosis with little or no success, can be tried with marked success in these early cases. Secondly, when entirely recovered from, it affords partial protection against pulmonary tuberculosis later in, life; by this observation I mean to say, that a child which has recovered from a glandular tuberculosis is not so likely to have pulmonary tuberculosis during early adolescence as his brothers and sisters who have either not had glandular tuberculosis or have not recovered from it in childhood.

*FACTORS THAT LESSEN RECURRENCE OF INGUINAL HERNIA; A NEW OPERATION

By

LEIGH F. WATSON, M. D., CHICAGO.

Recurrence following the inguinal hernia operation is most frequent. In cases of direct inguinal hernia, however, a small per cent. of recurrences develop after the most painstaking closure of a simple oblique inguinal hernia wound.

*Specially contributed to the "Antiseptic."

We have all had the unpleasant experience of seeing a recurrence follow operation for small oblique inguinal hernia ; and again we have been agreeably surprised to find a permanent cure in patients with large direct inguinal hernia, that had seemed most unfavourable.

The most frequent causes of recurrence are as follows: Failure to remove all of the sac, faulty methods of closure, double sacs, insufficient post-operative rest, poorly developed musculature, obesity, injury to blood vessels or nerves and the use of non-absorbable suture material.

A portion of the sac may be left through carelessness or incomplete dissection, or a dimple or funnel-shaped process may be left in the peritoneum when the sac is not ligated high enough. Sometimes there is an hour-glass constriction of the sac, and the lower portion of the constriction is mistaken for the true neck of the sac, which is actually located one or two inches higher up.

Faulty closure of the hernial opening may be due to several causes: Failure to make a correct diagnosis ; an attempt to make a standardized technic fit all cases ; neglect to make the cord as small as possible by dissecting off everything but the vas and blood vessels ; failure to close the internal ring tightly around the cord ; failure to unite firmly the internal oblique and conjoined tendon to Poupart's ligament ; and failure of the primary operation to repair wholly the original defect. Fatty masses attached to the sac or cord should be ligated as high as possible and removed, otherwise the inguinal canal cannot be closed tightly.

Double, saddle-bag or pantaloon sacs are the cause of recurrence more often than is generally supposed. These sacs may be left for one of the following reasons: in direct hernia the operator may overlook the oblique sac, which is nearly always present and should be removed ; in oblique hernia he may overlook a direct sac, which is sometimes present. Both oblique and direct hernias may have bilocular sacs, and unless both of these loculi are found and removed, the hernia will remain uncured.

The surest way to locate these double sacs is to do the operation under local anæsthesia, because, after the first sac is found, if there is another one, it will appear when the patient is directed to cough In every inguinal hernia operation the index finger should be passed through the ring, and the peritoneum carefully examined for weak spots in the abdominal wall or for beginning hernias.

Post-operative rest is usually neglected. The average hernia patient insists on getting up too soon after his operation, and does not take a sufficient amount of rest before returning to work. Patients who have

had operations for recurrent or direct hernias should avoid any kind of heavy work. Often they should be advised to change occupation.

Deficient muscular development favours recurrence, especially in direct hernia. It is sometimes advisable to use systematic exercises to develop the muscles before operation. Secondary weakness of the muscles and fascia, caused by pressure from the hernia, is an important factor favouring recurrency.

When the deep sutures are tied at the primary operation under tension, if they do not pull loose from Poupart's ligament they have a tendency to stretch and weaken the structures covering Hesselbach's triangle, thus favouring the occurrence of direct hernia.

The obese patient is more liable to recurrence than the thin subject, because the adipose tissue causes a weakening and thinning of the muscles; and the intra-abdominal tension, which is high before operation, increases as the patient takes on weight after operation. A gain in weight should be avoided for at least two years following operation for hernia.

The unnecessary cutting of blood vessels is to be avoided, as it interferes with the nutrition of the tissues during the process of repair. The division of the nerves is followed by atrophy and trophic disturbances in the muscles which predispose to a recurrence. The iliohypogastric and ilioinguinal nerves supply the muscles in the inguinal region. The preservation of the iliohypogastric nerve is especially important as it supplies the internal ring.

Recurrence is frequently due to the use of nonabsorbable sutures that irritate the tissues and cause suppuration or sinus formation in the wound. Silk, linen, silk-worm gut, and silver wire should never be used for the deep sutures. The only suture materials that should be used beneath the skin are catgut and kangaroo tendon.

Oblique inguinal hernias most frequently recur through the opening left for the cord ; occasionally they come through the deep suture line or a weak spot in the muscles or fascia.

The number of oblique inguinal hernias that recur following operation varies from 1 to 10 per cent. depending on the age of the patient and the choice of operation. The percentage of recurrence in direct hernia operations is 10 to 20 per cent. in the hands of the most experienced operators.

Recurrent hernias are almost of the direct variety, even when the original protrusion was oblique. The importance of making a wide dissection, and securing broad fascial flaps well beyond the scar tissue of the previous operation before attempt to deal with the sac, cannot be overemphasized.

Numerous operations have been devised for recurrent hernia. The Bassini and Andrews operations are the most generally used. When the hernia is large or direct, it is usually necessary to re-enforce the closure with a flap or muscle and fascia, or with a fascial transplant.

When recurrence follows the operation for oblique inguinal hernia, it almost always takes place at the internal ring, at the lower end of the incision over the pubic bone, or in the line of deep sutures. In suitable cases re-enforce these weak spots by a *lateral displacement of the cord.* The Bassini operation is followed up to the point where the cord is transplanted. The cord is made as small as possible by removing all of its coverings, leaving only the vas deferens and the spermatic vessels. The upper flap of aponeurosis is freed from the internal oblique as far as the outer border of the rectus.

The cord is placed on the internal oblique ½ to 1 inch internal to the deep suture line, the exact distance depending on the length of the cord, and retained in this position by one or two sutures. These sutures are inserted external to the cord, internal to the deep suture line, and they unite the inner surface of the aponeurosis to the internal oblique and conjoined tendon. The aponeurotic flaps are overlapped in the usual manner—I often suture the aponeurosis to the deep suture line as high as the lower edge of the internal ring.

This method of closure re-enforces the internal ring by changing the angle of the cord as it leaves the internal ring and by getting the cord away from the deep suture line; it places a string doubie breasted barrier of aponeurosis directly over the internal ring and the deep suture line; it permits firm union between the muscles and the aponeurosis along the deep suture line, so that the internal ring and the line of deep sutures, the usual points of recurrence, are doubly re-enforced.

There is no danger of getting the sutures tight enough to cause pressure on the cord, in spite of the increased length of the canal, because the floor of the canal is formed entirely by the internal oblique muscle and no pressure is exerted on the cord from the inner side.

This operation cannot be used when the spermatic cord is abnormally short, as in hernias associated with maldescended or undescended testes, or in re-current hernias when the aponeurosis of the external oblique is deficient or has been replaced with scar tissue. When the internal oblique is deficient, the re-enforcing sutures unite the aponeurosis to the cremaster and the transversalis muscles.

ASTHMATIC FITS IN CHILDREN *

By

DR. B. N. C. ROY, M.B., PATHOLOGICAL DEPARTMENT, CARMICHAEL MEDICAL COLLEGE, CALCUTTA.

In the April issue of the Antiseptic, Dr. Griffith of Somerville had reported two fatal cases of acute asthma in children. They remind me of a few similar ones that came under my observation.

1st Case :—A.B., male child, aged 2 years, healthy.

Condition :—Laboured breathing—long expiration 32 p.m., abdominal and thoracic muscles working, cervical muscles less; extreme restlessness; slightly cyanosed; temperature 98 F.

History :—Had similar attacks but less distressing, lasting for 3–4 days each time.

Physical Examination :—No fluttering or paralysis of vocal cords, no congestion or oedema of larynx; tonsils healthy. No crepitation—few rales and rhonchi, no sign of congestion, oedema or consolidation of lungs. Heart normal, second sound accentuated at base. Liver and spleen not palpable. Abdomen tumid.

Blood :—Leucocytosis-18,000. Poly-55%, Small-44 %. Large 1%.

Throat Swab :—Smear—few cocci and gram—bacilli; Culture—shy growth of staphylo albus.

Urine :—Could not be collected, though the child wetted the bed frequently.

Treatment:—Adrenalin Sol. drops under tongue and hypodermically—no effect. Suggested blood-letting but was not permitted. Olive oil and water enema was not satisfactory as it was diffieult to retain. 2% Peptone sol. 10 c.c. and Adrenalin Sol. m XX per rectum no effect. Oxygen inhalation.

The patient steadily grew worse and up to the end there was no marked temperature. The patient succumbed within eight hours.

* * * * *

2nd Case :—C. D., Mohomedan male child, aged 3 years, robust.

Condition:—Dyspnoea and disphagia; occasional suppressed cough or wretching; strongly resists any attempt at feeding; restless; not much of cyanosis.

History :—Occasionally suffers from similar attacks of iess severity.

Physical Examination:—Limbs somewhat rigid, pupils slightly dilated; Temp. 97 F°. Laboured breathing and prolonged expiration 36 p.m. No enlargement of submaxillary or cervical glands, no dribling of saliva.

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* Specially written for the "Antiseptic."

No abnormality in heart sounds. Pulse thready and running. Thorough laryngoscopic examination was not possible. Digital examination of throat-negative. Few small milky patches on the tongue. No dullness on sternum. Spleen and liver not palpable.

Blood :—Leuco.-12,600. Poly-57 %. Small-38 %. Large-3 % Eosino-2%.

Urine :—Very little was collected which showed no casts or albumen. Culture not possible.

Throat Swab :—No clue was found from smear, culture, and animal inoculation.

Treatment :—Found no indication for trachiotomy—as it was no fault of passage. Horse-serum 10 c.c. hypo—no effect ; Hot brandy 10 c.c. per bottom temporary improvement ; Musk-Ether hypo—also temporary effect Soamin gr. 1 hypo. repeated.

This case dragged on for two days but ultimately succumbed. (No attempt to relieve the bowels were made.)

* * * * *

3rd Case:—E. P., male child, age about 2 years, well built.

This case was a prototype of my case No. 2 reported above, the only difference being-dysphagia not marked. To summarize the main features—prolonged wheezy expiration 32 p.m., subnormal T°, restlessness, tumid abdomen, no sign of inflammation of lungs, no abnormality in heart, pulse thready and running 150 p. m.

I saw this case only once and have not had the opportunity of following the course. No blood or throat swab was examined, but I was informed later that the child died a few hours after.

* * * * *

4th Case:—G. H., male child, aged 1½ years, healthy and stout.

Condition:—Dyspnoea-wheezy expiration 40 p.m. Crying and restless ; abdomen flatulent and tender ; no change of colour.

History:—Had similar milder attacks before. I treated him for eczema few months back.

Physical Examination:—Lungs—no dullness anywhere—few rales and rhonchi, spleen slightly palpable, abdomen rigid and tender, heart sounds normal, pulse 140 p.m. Temp. 98. 8 F°, no enlargement of tonsils or adenoids. No obstruction in larynx or pharynx.

Blood:—Leuco.-14,250. Poly.-56%. small-37%, Large 4%, Eos. 3.%

Throat Swab :—Nothing important from smear and culture. Animal noculation-no sign of disease.

Urine :—Whitish colour, phosphates present ; no albumin or casts.

Treatment :—Glycerine suppository-bowels acted, divided doses of calomel every half hour-bowels freely moved. Peptone sol.—2 %15 c.c. & adrenalin sol. m. XV per bottom & hot brandy after few hours. Musk-Ether hypo. Ice-bag on head & hot-water.bags on sides & at the feet. Oxygen inhalation. A mixture containing Atropin, Strophanthin, Spt. Ammon Aromat and Spt. Nitric Ether every hour. Spoonfuls of hot water & no food.

After some 8 hours dyspnoea subsided. Temperature rose upto 101 F°, rales & rhonchi grew more pronounced. The child was gradually all right within 5 days.

My former experience made me sceptic about the prognosis of this case when I saw him first ; nor am I yet sure whether it will recur sooner or later and the course it will take at that time.

The striking similarity or peculiarity of all these cases was, as has been observed by Dr. Griffith, that all the patients were young children. Every case had a history of previous attacks of asthmatic fits but of less distressing nature. Sudden onset of laboured breathing, no obstruction in throat, no marked congestion of tonsils, uvula, larynx or pharynx, no swelling of submaxillary or cervical glands, no sign of congestion, oedema or consolidation of lungs, no abnormality in heart, urine normal, no clue was obtained from the throatswab.

These cases are to be differentiated from the common causes of dyspnoea-tonsillitis, diphtheria, syphilis, retropharyngeal abscess or tumour, acute oedema, acute bronchitis, acute pleurisy, pertussis, acute specific fevers, and tuberculosis. Absence of fever and want of any sign, symptom or history preclude all these.

This dyspnoea is also to be differentiated from the toxic types cholemic, uraemic, or acidosis. But in all these the dyspnoea is of respiratory type (both inspiration and expiration are affected,) sometimes cheyne-stokes. Although no casts or albumin were present in any of my cases, yet it is not of much value when urea and non-protein nitrogen of blood were not estimated.

In spite of the fact that moderate leucocytosis was present in all these, the uniform subnormal temperature speaks against inflammation, and in severe types of septicaemias consciousness is rarely maintained. This normal or moderate leuco, may be due to some chronic inflammatory condition of the lungs to which the former attacks were due.

In cases of Lymphatism (Status Lymphaticus) the dyspnoea is invariably accompanied with cyanosis and convulsions, some dullness over the sternum and palpable spleen.

There are certain abdominal conditions which also lead to a condition of collapse and fatal termination, but the wheezy expiratory dyspnoea is not found in any of these.

It resembles asthma in respects more than one, but the want of eosinophelia, cough or expectoration and the rapid fatal termination are things rarely met with in asthma.

The sudden onset on healthy and robust children of tender age, the course–the persistent stage of collapse, and the rapid fatal termination strongly suggest a similarity to an anaphylactic shock, the probable cause of which is an accumulation in the system of albuminous metabolic products.

It is hard for any theory to find general acceptance before it is backed by post mortem evidences, Urea and non-protein nitrogen estimation of blood and blood-culture findings. I have not had the opportunity of doing all these as it was not possible to take so much blood from a patient of such tender age and in such agony, in a private house.

After repeated failures it forcibly struck me that this condition of shock and collapse calls for an urgent and energetic treatment; the lines of which will be, as in most others, removing the cause and treating the effects.

Removing the Cause :—By elimination-glycerine suppository, olive oil and water enema, Divided doses of Calomel by mouth, and even if necessary drops of croton oil on the tongue, until the desired effect—free purgation—is obtained.

A combination of diuretics and diaphoretics having stimulating rather than the depressant action on the heart should be prescribed.

Treating the effect :—(Collapse and dyspnoea) by stimulation Musk-ether, Camphor-in-oil, Pituitrin or Caff. Sodi. Benzoas hypodermically.

Peptone solution and adrenalin per bottom.

Hot brandy per bottom.

Hot-water bags. (Drugs like morphine to be avoided.) The best form of inhalation is free air-doors and windows wide open, no crowd in the room and oxygen when available. Antispasmodic inhalations and fumes are useless.

I am happy to state that following the above line of treatment my fourth case did rally, and I expect the same sort of results in others in future.

CASES AND COMMENTS.

A CASE OF ENCEPHALITIS LETHARGICA

By

DR. M. N. VENKATARAMAN, MADURA.

It is said in books that Lethargic Encephalitis occurs in an epidemic form in various places. Last year I was able to follow up two cases in this place. The signs and symptoms were not so very characteristic as described in text books and moreover examination of cerebrospinal fluid could not be made in the limited scope of a private practitioner in the moffusil.

An young woman aged about 25 was very badly anæmic when seen three months after delivery and was having a course of from for about 10 days. Then without any apparent change in the general condition of the patient, she began to have very fine muscular tremors in both hands followed by violent muscular twitchings all over the body, with rolling of eyeballs and unconsciousness. She was having on an average about a dozen fits a day. She did not completely recover her conciousness and was in a state of lethargy—only responding to deep stimuli and violent shouting. In one of the attacks both the eyeballs got proptosed and one eye quinted, producing annoying diplopia which she was able to complain when roused with difficulty from the lethargic state. She was also complaining of violent headache. The temperature was normal. She got slightly better after heroic doses of Bromides, Iodides, Morphia and Luminal. The case was shown to leading medical men of this place—some suspected cerebral tumour for which the signs were not very characteristic but only in the later stages the idea of Lethargic Encephalitis was suggested and before any scientific treatment for the disease could be given the patient succumbed to it.

I had a chance of seeing another case similar to the above in which also the patient died in about a fortnight. In both cases P. M. could not be done and in the latter case when we wanted to remove cerebrospinal fluid the next day, the patient unfortunately died the previous night.

I am subject to correction about the diagnosis, but I cannot put back the lethargic state of the patient (simulating Tryphanasomiasis) with the attendant cerebral symptoms without any apparent cause.

A CASE OF SPASMODIC ECTROPION

By

DR. M. N. VENKATARAMAN, MADURA.

A child aged about 2½ years was brought with both the eyes apparently normal, without the slightest congestion whatsoever. Whenever the child cried or strained the right upper lid alone got everted and came back to normal

when remaining quiet. The child had an abscess in the right temporal region which burst itself leaving a small sinus leading for about 1 inch towards the eyeball—after this the present complaint. In spite of local treatment for about 10 days the condition of the eye remained the same. The patient was not brought when we wanted to slit up the sinus and find out the connection between the sinus and Ectropion of lid-fearing operation. Under the present circumstances it is impossible to explain how the Ectropion was produced, and to say whether the sinus had any connection with exertion of lid or it was only an independent affection.

A CASE OF VAGINAL AND VULVAL HAEMATOMA OF BOTH SIDES

By

Miss R. G. Veeranna, Zenana Hospital, Rhotak, the Punjab.

A Muhamadan woman, butcher's class, aged about 28 years, gave birth to a fullterm male child on 19-3-24 at 7 P. M.

An hour or two later I was called to see her as a "big swelling" had appeared on her private parts. Her husband and relatives thought that she had got plague, as just then plague was raging in Rohtak.

On arriving I found the patient looking very pale, cold, and suffering from symptoms of Internal Haemorrhage.

History.—Previous health good. Two hours ago she had given birth to her 5th child, labour was not difficult (the child was a little below the average size.) Soon after her confinement when she got into her bed the swelling appeared, and quickly reached its present size.

On examination :—I found a large Haematoma (size of a foetal head) of the right labia majora which was pressing on the urethra and causing suppression of urine.

All the urgent symptoms were relieved, and making her as comfortable as circumstances permitted, her condition was explained to her husband and he was advised to bring her into the hospital, as further treatment could not be given at home.

On 22-3-24.—That is 4 days after the confinment, the patient was brought to the hospital in rather a bad condition, the Haematoma was a little bigger than before, and it was also noticed now that she had another swelling (size of an hen's egg) on the *left* labia majora and a temperature of 102°.

On 25-3-24.—I decided to operate as the temperature rose over 102° in spite of strict antiseptic managment since her admission, and also the Haematoma was not likely to get absorbed quickly.

Operation :—An incision was made between the vaginal mucous membrane and left vulva skin on the right side, the Haematoma was easily separated from the surrounding tissues with the handle of the scalpel and fingers, and the entire mass removed. There was sharp bleeding from the lower deep part of the cavity, which was easily controlled. The upper part of the wound was stitched but the lower was tightly pached for a couple of days with Iodoform gauze and left to heal by granulations. The Haematoma on the left-side was not touched. Patient made a good recovery, temperature fell to normal in 48 hours and never rose again, during her stay in the hospital, and on 21-4-24 patient left the hospital, the wound completely healed and the left Haematoma of the size of a pigeon's egg only visible in the vagina. Patient has since been seen several times, as she is still suffering from anæmia and is taking a tonic. My excuse for sending notes of this case is, that it seems very rare. I have now been in practice more than 20 years and this is the first time I have had a case of Haematoma after labour, which I considered very interesting.

POST ANAESTHESIA DUMBNESS

By

M. N. Venkatraman L. M. P., 59, Kaka Tope St., Madura.

Mr.————Aiyar, a Palghat Brahmin, aged about 25, was operated on for Haemorrhoids in the Govt. Hospital, Madura, under chloroform. He could not articulate ever since the operation. I saw him about 7 days after the operation, completely dumb. I could not watch him since he had gone to his native place, Palghat. I am informed by one medical man here that there was a similar case here—who got back his voice after some time. Probably the loss of voice is due to the complete falling back and retraction of the root of the tongue during the deep anaesthesia produced for the operation.

APHORISMS

By

Theodore Brand M. D. C. M.

(Continued from the last issue.)

In all forms of puerperal infection the acceleration of the pulse-rate is in direct proportion to the amount of toxic products absorbed into the circulation, and to virulence of the infective organisms, and, if carefully

observed, forms the most reliable source of information we possess of the gravity of the disease.

In toxæmia the respirations may reach 30–40 per minute in the absence of any pulmonary lesion.

The occurrence of a sudden attack of intolerable agony in the abdomen associated with tense rigidity of all the abdominal muscles indicates that there is an acute lesion which requires immediate surgical intervention. These two signs and these alone are an urgent warrant for the case to be treated at once by operation.

In cases of suspected malingering, when the patient declares that pressure upon a supposedly tender point causes great suffering, we may control his statement by measuring the blood-pressure at the time. Severe pain always causes a notable rise in the blood-pressure.

Thoracic or abdominal pain increased or produced by exercise and promptly relieved by rest is almost always due to angina.

If pain be not the inaugural symptom in a case of acute abdominal illness the possibility of the appendix being at fault may be definitely excluded.

In all cases of abdominal pain, especially in children, avoid aperients.

The absence of cough by no means excludes pneumonia.

In suspecting a slight degree of jaundice, we should examine especially the peripheral portions of the sclera, which show a yellowish tinge long before there is any coloration around the iris. It is only in the more pronounced degrees of jaundice that the yellow colour actually meets the iris.

The commonest cause of pain in the left axilla is flatulence.

When hæmoptysis occurs as the first symptom of pulmonary tuberculosis, physical signs are almost always absent on examination.

Diagnostic inferences from the condition of glands in the neighbourhood of doubtful new growths are of value only when the results of examination are positive.

Subacute pain in both feet, if the patient is not flat-footed, is frequently due to gout.

A negative sputum examination should never be considered as evidence against the presence of pulmonary tuberculosis.

A tuberculin reaction is significant only when it is negative.

Never forget that a large prepatellar bursa may be the seat of tubercle, gumma, or septic infection.

Never forget that amenorrhœa, dysmenorrhœa, leucorrhœa, endocervicitis, and overitis, as well as menorrhagia, may be due to movable kidney.

An alarming condition of dyspnœa may result from the excessive use of tobacco.

Sudden increase in the pallor of a child's face during an attack of rheumatic fever is indicative of the onset of pericarditis.

Never forget that pallor may be present in the absence of any blood deterioration.

Pallor accompanied by a "lemon complexion" may often occur in the absence of pernicious anæmia.

In fractures of the bones of the forearm it should not be forgotten that the parallel position of the bones *i.e.*, complete supination—is the position which is likely to give the most satisfactory results (Helferich).

A paroxysmal cough, following the symptoms of an ordinary pneumonia, is pathognomonic of the onset of pleural effusion.

In all obscure cases of intermittent febrile temperature, the possibility of gall stones should be considered.

In cases of dyspnœa, never forget that the *origo mali* may be in the kidney.

Multiple ulcers of the face, whose characteristics are rapid growth and serpiginous outline, are syphilitic.

In every case of vomiting, never forget the possibility of the existence of strangulated hernia.

Tenderness of one testicle, accompanying severe abdominal pain, is pathognomonic of renal colic.

The anæmia which is so often found at the onset of phthisis is universally associated with loss of flesh, and may be thus differentiated from that of chlorosis.

Young adults who suffer from adenoid and dental caries often show all the symptoms of early phthisis *e.g.*, cough, expectoration, night sweats, anæmia, etc.

Not infrequently persons suffering from pulmonary tuberculosis die almost suddenly of tubercular meningitis, indicated clinically by headache and mental confusion of only a few hours' duration.

Epilepsy commencing after the age of thirty in nine cases out of ten is due to syphilis (Fournier).

An anal fissure may induce prostatorrhœa, thus stimulating a gonorrhœal affection (Suehla).

Paroxysmal abdominal pain found in a patient above forty years of age, and most marked after exertion or emotion, suggests intestinal arteriosclerosis.

A prolonged and unaccountable attack of constipation in an adult is not infrequently an early manifestation of locomotor ataxia.

In a child with pyrexia retraction of the head is by no means always indicative of meningitis.

Pyrexia due to tuberculous disease of the lungs may be present for several weeks before any physical signs reveal themselves.

Hysteria can counterfeit organic disease to such an extent that almost the only thing which can be positively excluded in a female suffering from the complaint is an enlarged prostate (Abrams).

The appendix is the most frequent but least recognised cause of chronic dyspepsia (Macewan).

If a child, suffering from capillary bronchitis, shows a temperature of 103·5° F., broncho-pneumonia can be positively declared to have developed, in spite of the absence of marked physical signs.

Never forget that "rheumatism" occurring below the knee very often means flat-foot.

Diagnosis of tertian malaria in patients whose symptoms resist quinine more than three days is almost invariably wrong.

Bronchial asthma beginning after forty usually spells heart or kidney disease.

Epilepsy beginning after forty usually means dementia paralytica or cerebral arteriosclerosis.

Pus in, or near, the liver is often mistaken for serous or purulent pleurisy, for it produces identical signs in the right chest posteriorly.

Rupture of the tendo Achillis does not prevent walking.

A NUMBER OF PRACTICAL SUGGESTIONS OR THERAPEUTIC NOTES

BY

RAO BAHADUR THAKUR RAM DHARI SINHA, MEDICAL PRACTITIONER, &c.,
MOTIHARI, P. O. (CHAMPARAN, B. & O.)

(Continued from issue.)

21. Nux vomica is a valuable remedy in passive congestion of the liver, spleen or portal system, characterized by tenderness or fulness in the hepatic region with coated tongue and constipation.

22. Where the patient has difficulty of breathing from some fault of the central nervous system, I give 2 or 3 minims of acid phosphoric Dil. 3 or 4 times a day, largely diluted.

23. The internal use of Tinct of Hydrastis Cannadensis in 5 or 10 drops doses every 3 or 4 hours will cause nasal polypi to contract, shrivel up and be thrown off. Tinct Thuja in 2 or 3 drops may be combined.

24. Bronchial hæmorrhage, epistaxis, bleeding gums, hematemesis, melena, hematuria, metorrhagia and haemorrhages in general are generally very well controlled by the use of Ergot.

25. In the course of my 30 years' practice I have found that the best remedy to relieve false pains is phosphate of potash in doses of 15 grains, repeated in a few hours if necessary. Small doses (5 grains thrice daily) should be given daily for a month before confinement.

26. In order to promote perspiration and expectoration I have found asclepias tuberosa (pleurisy-root) to be a very good remedy, especially where there is a tendency to moisture and where the pleura is involved, as in pleuro-pneumonia.

27. Where motion and cold increase the pain in a joint, and where quiet and heat alleviate I give Bryonia in minute doses, under opposite conditions; where heat and quiet aggravate and where motion and cold relieve I give rhus toxidendron.

28. The general properties of Thuja are stimulant, irritant and astringent; also aromatic, diuretic and emmenagogue. It dilates the blood vessels and lowers the body temperature, when applied, locally. Thuja (tincture) exercises a peculiar influence upon abnormal growths and tissue generations, especially those of a epithelial character. In the male, it is useful in spermatorrhœa and sexual neurasthenia.

29. Phytolocca decandra has given satisfaction in the treatment of chronic cases of rheumatism, especially where the glands of the body are enlarged. It should be given in moderately large doses three or four times a day and persisted for some time.

30. The inhalation of vahone of spirit camphor relieves acute cold in the head. If 10 drops of spirit of camphor is taken with half an ounce of tepid water at the beginning of a general cold, it will completely break it up. Of course bowels should be moved.

THE USE OF COPPER IN AYURVEDA IN THE LIGHT OF MODERN RESEARCHES

BY

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SYNONYMS.

Sans.—*Tamra, Aunduvara, Unduvara, Sulva, Ravipriya, Mlechamukha and Surjapriyak.*

Names in Different Languages—Beng:—*Tama*; Hindi—*Tambá*; Assamese, *Tam.*

Maharashtra—*Tambe;* Gujarati—*Trambo;* Tamil—*Sembu, Seppu;* Telugu—*Ragi.*

Persian—*Mis;* *Arabic*—*Nuhas*; Latin—*Cuprum.*

CHARACTERS.

ATOMIC WEIGHT,—63·6.

CHARACTERS.—Copper is a brilliant metal of a peculiar red colour, widely distributed and never used as such in Ayurvedic medicine, but usually as Sulphide (bhasma) or Sulphate (Tuttha.)

CHARACTER OF PURE COPPER.—Pure copper has a brilliant reddish colour; and this variety is only used in the preparation of Ayurvedic medicines.

Impure copper is whitish or of a blackish colour and is mixed with impurities and breaks on being hammered.

IMPURITIES—iron, lead.

EXTRACTION OF COPPER ACCORDING TO AYURVEDA.

Extraction of copper has been described by Nagarjuna in *Rasaratnakara* (Chapter I, Verse 25 to 30) and also in *Rasaratnasamuchyaya*).

(I) First Method:

"Take blue vitriol and one-fourth its weight of borax and soak this mixture in the oil of pongamia glabra seeds for one day. Then place it in a covered crucible and heat in the charcoal fire. By this process an essence, of the beautiful appearance of occinella insect, is obtained from it. ("Rasaratnasamuchyaya, Bk. 2, 133 to 134.)

(2) Second Method:—

"When enclosed in a crucible with borax and lemon juice and strongly heated, it (copper sulphate) yields an essence in the shape of copper." (Rasaratnasamuchyaya, Book 2, 135.)

COPPER SULPHIDE (TAMRA BHASMA.)

Method of preparation according to Ayurveda.

To prepare Tamra Bhasma (Copper sulphide) take thin plates of copper as can be pierced by a pin. Purify them by boiling three hours in cow's urine. Then reduce the plates to powder by smearing them with a paste of sulphur and lemon juice, beating them into a mass. This mass is placed inside a covered crucible and exposed to heat with kanjika or fermented rice or paddy gruel and prepare into a ball; indroduce the ball inside the tuber of ola (Amorphophallus Campanulatus) as in a crucible and roast in fire; when cool take out the ball and powder and you have the sulphide of copper ready for use. This last process is called Amritikarana or purification, which renders the copper innocuous and free from its toxic effect such as purging and vomiting.

Characters:

Tamra bhasma is a dark coloured powder, somewhat gritty to the feel.

It is contained in several medicines for

(a) Gulma—

Gulmakalanal Rasa (Rasendrasara Sangraha)

(b) Heart Disease—

Hridarnava Rasa (Ibid)

Suryavati Rasa (Rasaratnavali)

(c) Ague, remittent and relapsing fevers with enlarged spleen:

Mahamrityunjaya Lauha (Ibid)

Sitabhanji Rasa (Rasapradip)

Swachchanda Bhairaba Rasa

Tamareswar Batika

(d) Skin Diseases—(Rasendrasarasangraha)

Tamreswara (Ibid)

(e) Phthisis—

Tamra Parpati.

"Sulphur, copper and pyrites are pounded together with mercury and then roasted in a closed crucible. The product thus obtained is to be given with honey." (Vrinda ch. 1)

Dose—As an alternative—2 to 4 grains.

As emetic 24 grains.

Physiological Action—

Internal:

Alimentary Canals:—Taken internally a full dose of prepared copper acts as an emetic by its local action. Small doses of the drug are astringent.

Copper salts are antiseptic and are highly poisonous to the lower forms of plant life, having very few undesirable effects on the higher forms of animal life. So they are good aniseptic (internal) in diarrhœa, etc. in which they are used by the Ayurvedic Physicians The fact that copper is antiseptic was known to the ancient Hindus, who preserved Ganges water in copper vessels (Tamarapatra).

Remote effects:—

Copper is absorbed from the stomach, intestines and mucous membranes and stored up in the liver, small amount being found also in the spleen and kidneys. It is excreted by the liver, kidneys and the salivary and intestinal glands.

Metabolism—If taken for a long time, copper salts cause reduction in body weight. This is supported by modern researches.

Therapeutics.

Dr. Gers. (in Med. Press 1910) has shown that colloidal copper increases activity of cell metabolism.

Externally:—Tamra Bhasma is recommended in Ayurveda for local application in:—

1. Piles.
2. Leprosy.
3. Skin diseases.
4. Ozœna.

Modern researches have shown colloidal to be useful in cancer. (Herschell, Interstate Medical Journal, Dec. 1912 and Jan., 1913.) It is said to diminish pains and produce marked improvement (Loeb, ibid).

Internally—Alimentary Canal—In small doses (grs. 2 to 4).

Prepared copper is valuable for diarrhœa and even in cholera.

Modern researches also support this:—

"As a therapeutic agent, copper is not appreciated at its true worth as the most efficient remedy at our disposal for the treatment of a whole group of diseases, some of which occasionally give us much concern. Copper owes its medical desirability to a remarkable selective action. It is highly poisonous to lower forms of plant life and has very few undesirable effects on the higher forms of other plant or animal life.

The effect of 1/24 grs. of copper sulphocarbolate on choleraic diseases is marvellous: all of the serious symptoms abate in a few hours. When using the copper nothing is used to control the diarrhœa directly unless it seems to be too debilitating. Then a little camphorated tincture of opium is added and perhaps some cinnamon. The writer has prescribed copper over 900 times in all forms of cholera and diarrhœa with uniform success and satifaction. Its greatest usefulness is in the prevention of all these diseases, the most important of which is typhoid fever. (C. Wifekofl Cummins in Journ. of Med. Soc. of N. J, June, 1912).

(b) It is useful in flatulent swelling of intestines (Gulma)—According to Rasendrasarasangraha, prepared copper in 2 grains doses rubbed with ginger juice and enclosed in betel leaf is useful in 'gulma.' A preparation known as *Gulma Kalanala Rasa* is recommended in this disease. It is given in 8 grains doses on an empty stomach mixed with honey and decoction of chebulic myrabolans.

(c) Intestinal worms—Prepared copper is an antiseptic and is useful in intestinal worms (Rajanighantu).

(d) Chronic acid dyspepsia—Prepared copper is useful as an alterative and antiseptic in acid dyspepsia and is recommended in Rajanighantu.

(e) Emetic—Prepared copper is emetic in large doses (Susruta).

In poisoning—Chakradatta recommends prepared copper with sugar or honey to cause vomiting. It should be given in doses of about 24 grains. (It may be used as an emetic, but on account of its irritating action, the stomach should be promptly washed out if the drug does not produce vomiting.)

(a) Respiration—It is used as an emetic to expel excessive mucous from respiratory tract. Prepared copper is useful in Bronchitis (as a *Shlesmahar.*

(b) It is also useful as an emetic in asthmatic fits caused by over-eating. Sarangadhar recommends a preparation of copper named Suryavati Rasa (vide Rasaratnavali.)

(c) Phthisis—Sarangadhara and Rajanighantu recommend it in this disease. Nirghantu Ratnakar (Ch. 2) recommends Tamraparpati in ½ to 2 grs. doses.

In modern times Luton has reported favourably on the use of copper (Prov. Med., Dec. 1912.)

(d) Spleen and Liver.

Prepared copper is recommended in Ayurveda in fever with enlarged spleen and liver.

After ingestion of copper it is found in the liver and also in the spleen and probably act there on the germs of malaria and kala-azar, as copper is an antiseptic and has a marked distinctive action on many bacteria.

(e) Blood.

Prepared copper is recommended in anæmia *(Pandu)* and chlorosis.

(f) Skin.—prepared copper has been recommended for all sorts of skin diseases and even for leprosy.

COPPER SULPHATE.

Synonyms.—

Sans:—Sasyaka (Rasarnava Tantra,) Tuttha: English—Blue vitriol Blue stone; Latin Cupric sulphate: Beng.—Tutia.

Source:—Prepared by roasting copper pyrites, dissolving the roasted mass in water and evaporating the solution to obtain the crystals of the sulphate. Copper sulphate was known in India from a very remote period as a salt of copper, for in Bhavaprokash we find "blue vitriol is indeed a semi-metal of copper as it is derived from copper."

Purification:—Copper sulphate is purified for internal use by being rubbed with honey and ghee and exposed to heat in a crucible; it is then soaked for three days in whey and dried. Copper sulphate thus prepared is said not to produce vomiting or any toxic effects.

Characters:—Deep blue crystals of the colour of the throat of the peacock (Rasaratnasamuchyaya 3, 138); transparent; odourless; Taste—nauseous, metallic taste; Soloubility:—1 in 3·5 of water; Solution is acid; Impurity—iron.

Incompatibilities—Alkalies; lime water; mineral salts (except sulphate) and most vegetable astringents.

Dose:—As an astringent—1/5 to *2* grains.

As an emetic——4 grains.

It is contained in medicines for—

(1) Bowel disease—

Grahanikapata Rasa

(2) Puerperal disease—

Garbhabilasa Rasa or Sutikabindu (Rasendrasara sangraha)

(3) Fever with enlarged spleen—

Jwarankusa (Bhavaprokas)

Chaturthakari (Bhaisa'yatantra)

Action—Copper sulphate acts as a powerful astringent and antiseptic when applied locally to a mucous membrane. But when applied to an ulcer it acts as a mild caustic. Obstinate indolent ulcers will often yield to it.

Therapeutics:

External:—(1) Copper sulphate is applied to sinuses and fistula-in-ano with the object of stimulating and healing them.

Chakradatta recommends copper ointment for foul ulcers. Obstinate indolent ulcers will often yield to it.

(2) In prickly heat—10 grs. of copper sulphate in 1 ounce of rose water often gives relief.

(2) In ringworm—

R/

Copper sulphate—20 grs.

Powdered galls—1 dr.

Calomel —1 oz.

Mix and rub well into the affected parts.

(4) In eye diseases—Chakradatta recommends a solution of copper sulphate to be poured into the eye in opacity of the cornea. A ½ per cent solution may be used in eye diseases like conjunctivitis and ophthalmia with copious discharge.

R/

Copper sulphate—2 grs.

Alum —2 grs.

Water —ad 1 oz.

Mix.

To be used as a lotion for conjunctivitis.

Copper sulphate crystals may be applied to granular lids.

(5) In hæmorrhage from nose—it is used as a styptic: copper sulphate gr. 4 in 1 oz. of water is useful as a nasal douche even when alum fails.

(6) If there is excessive bleeding from wound due to leech bite, it is sometimes useful even when alum fails.

(7) In leucorrhœa and gonorrhœa—Copper Sulphate may be used a an astringent and antiseptic vaginal or urethral injection.

Internal—

Gastro intestinal diseases—

(a) In ulceration of mouth—Copper sulphate 3 grs. in a little honey may be applied to the ulcers.

(b) Chronic diarrhœa and dysentery—Internally copper sulphate is useful as an astringent in chronic diarrhœa and is used as a constituent of medicines for this purpose (e. g., Grahanikapat Rasa.)

It is also useful in cases of bowel complaints and indigestion during pregnancy or during puerperium (in sutika or puerperal diarrhœa) Garbha. vilas Rasa or Sutikavindu is recommended in Rasendrasara Sangraha.

In cases of diarrhœa in advanced stages of phthisis the following combination is useful:—

Opium
Copper sulphate powder } aa 6 grs.
Honey ... ... qs

Mix. Divide into 12 pills.

In cases of diarrhœa in children:—

Copper sulphate grs. 2½

Aqua ptychotis ad. oz. 2

Dose—one tea-spoonful thrice daily.

(1) Emetic in poisoning. It is used to empty the stomach completely. Copper sulphate 4 grs. dissolved in hot water is given every few minutes till vomiting occurs.

(2) In respiratory diseases—copper sulphate is used as an emetic to empty the respiratory tract of mucus.

In group of children :

R/ Copper sulphate grs. 5.

Water ... oz. 1.

Dose—1 tea-spoonful till vomiting is produced.

(3) Spleen—Copper sulphate enters into the composition of several medicines for remittent fever with enlargement of spleen, e. g., Jwarankusa (in Bhavaprokash) and in Chaturthakiri, (Bhalsajyatantra).

The most effective medicinal preparations containing copper in Ayurveda for intermittent fever (bisamajwar) with enlargement of spleen and liver and even kala-azar are Jayamangal Rasa, Mahamrityunjya Lauha and Putapaka-bisamajwarantaka Lauha.

TOXICOLOGY.

Acute Poisoning from use of unprepared copper :

Symptoms—In toxic doses, salts of copper are violent gastrointestinal irritant. Acute poisoning is very rare.

Treatment—Antidote—Potassium ferrocyanide (a modern drug) should be given at once followed by demulcents, such as milk and ghee or infusion of Isaphgul. To relieve pain, apply counter-irritant over abdomen and give opium.

Chronic poisoning.—Copper may be taken in very small quantities for a long time without producing any ill-effects. But although not common, chronic poisoning by this drug sometimes occurs.

Symptoms.—Gastrointestinal : (a) colic and diarrhœa ; vomiting ; loss of appetite.

(b) Green lines may be seen along the upper border of the teeth : but this sign is not mentioned by Ayurveda writers.

(c) Pharyngeal and laryngeal catarrh.

(d) Anæmia and wasting.

(*e*) Profuse perspiration.

(*f*) Nervous symptoms—(weakness ; vague pains ; headache ; tremor) giddiness and fainting.

TREATMENT :—Daily evacuation of bowels by saline purgatives. Large quantities of milk and ghee should be drunk. Give also freshly made infusion of Isaphgul.

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IMPACTED STONE IN THE URETHRA

BY

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B. S., Diver, aged 50, complained of obstruction at the end of his penis and consequent inability to pass water since noon of 20th June, 1923. He attended at about 5 P. M. the same day and said that since morning his stream of urine was not straight and felt something passing out soon after; but from noon there was complete blockage of his urinary passage.

On examination the glans penis was seen to be swollen to the size of a small hen's egg and black in colour. A hard India rubber ball-like swelling could be palpated and just inside the meatal orifice, small rough stone-like projection felt. A click could be felt with a probe put in the orifice, which, however, it could not enter ; neither could a grooved director. Evidently a big stone of the size of a marble was impacted in the Navicular Fossa of the meatus and obstructed it completely. A little nick was made at the meatus with scissors and a grooved director passed round the stone and force was used to shift it but with no avail. The grooved director was bent out of shape. A little cocaine 2% was now applied and a large slit was made posteriorly into the urethra and the stone was removed with great difficulty and manipulation with another stronger director. When removed it weighed 26 grains, was oblong measuring 5-8 in × ½ in × 3-8 in. with mulberry nodules well marked at one end. Evidently it was an Oxalate stone and had passed out from the bladder in the effort at micturition down the urethra which is very dilatable in its entire course

except at the Navicular fossa and the mouth of the meatus as this case shows. On further cross questioning it was made out that some years ago he had passed similar but smaller stones without obstruction and passage of some blood. He was a big well-made man but inclined to be corpulent.

A small oiled rubber tubing was put in the meatus and the mouth of the meatus stitched up. Recovery was uneventful.

INTRAVENOUS INJECTIONS OF CALCIUM CHLORIDE IN GONORRHŒAL EPIDIDYMITIS

By

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In the Therapeutic Gazette of March 15, 1924, an article on the above subject is described by Alin E. Cirp, M.D.Ph.D., San Francisco, wherein he describes the magic effect produced in cases of gonorrhœal epididymitis by injections of Calcium Chloride. A summary of his article is herein given. Besides this disease it is given in paralysis agitans, tetany, epilepsy, chorea, chronic ulcerative to aemias and slow coagulation hæmorrhages.

The conclusions arrived at were that it materially increased phagocytosis and had a marked effect in reducing inflammation of tissues.

In gonorrheal epididymitis usually only about 2 injections are necessary and at most about 5. It is given every third day. The dose given intravenously is 10 c.c. of a 10% solution of Calcium Chloride, except that in the 1st injection 5 c.c. are only given. Of course, the use of distilled water, the sterilization of the solution and the usual other precautions are utilized or observed. In addition Urotropin and acid Sodium Phosphate 1·30 grms.

The article goes on to describe a number of cases which were cured. It also states that the patient usually experiences a sensation of warmth in the mouth, followed by a feeling of heat generally over the body. This sensation lasts for several seconds and is usually followed by a sedative effect. It is advisable to warn the patient about this before giving the injection. The pain in the cases of gonorrhœal epididymitis disappeared within a couple of hours. The swelling disappears after 1 or 2 days and the inudate was absorbed completely a few days after.

A case of gonorrheal epidydimitis in the West Hospital, Rajkot, was treated by this method. The following are the notes :—

A Hindu adult, labourer, contracted Gonorrhœa about the first week of April 1924, and was admitted on 3—5—24. He had besides the epidydimitis, a gonorrhœal discharge. For a week, alkaline and the usual anti-philogistic remedies were tried, with very little benefit. On the 10th May 1924 he was given 5 c. c. of 10% calcium chloride solution intravenously

The pain subsided within a few hours and the swelling began to reduce gradually. 10 c.c. Calcium Chloride injection was given on the 15th and on the 17th he was discharged, the notes of this day being no pain, no swelling, no discharge from the urethra.

The article does not describe if the injections have any effect on the urethral discharge, but presumably from the above case they seem to have some benefit.

Empirically it was thought to try the drug in a case of gonorrhœal arthritis of the left knee. In this case a Hindu adult merchant contracted Gonorrhœa some years ago, had a gleet on admission and arthritis of the left knee resulting in ankylosis. Parke Davis' Phylacogen was tried for some time with little benefit. Calcium Chloride injections were then tried and three have been given and though the beneficial effects are not so marked as in the epidydimitis case, yet the patient states he feels the swelling of the joints less and there is less stiffness of it. He is at present still in hospital.

The use of the drug—, which is a cheap remedy compared to vaccines —by medical men and their observations would be very interesting. Its use in the other gonorrhœal complications would be worth knowing.

A third case in which 4 injections were given was that of a policeman suffering from tubercular epidydimitis of both sides. There has been reduction of the inflammation of the right side, but not much change on the left. The beneficial effects are not so marked as in gonorrhœal epidydimitis.

A CASE OF HAEMOPHILIA

By

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A Hindu child, aged 5 years, was admitted into the West Hospital with swellings of both the ankle-joints. The case at first was thought to be acute rheumatism, but there was no fever. The father stated that the child suffered often from swellings of the joints. All of a sudden the big joints would become painful and swollen. This trouble would last for three days. Then the pains and swelling would gradually disappear in a fortnight's time. Almost all the joints were affected by turns. Several times there would be subcutaneous haemorrhages. There was one at present at the right side of the waist. This gradually disappeared after admission. The joints on examination are found free except the ankle-joints where the movements are somewhat impaired, though the swelling is gradually disappearing. There is history of excessive bleeding even from a scratch. The child's maternal uncles are said to suffer the same way as also his elder brother. His mother and sisters do not experience this trouble.

The Antiseptic

JULY, 1924.

THE LEE COMMISSION REPORT ON MEDICAL SERVICES.

We have read, with considerable dismay and disappointment, the report published by the Lee Commission on the Public Services. As already forestalled in these columns, the Commission has saddled the poor Indian tax-payer, with an annual burden of one and a quarter crores of rupees, in the shape of increased emoluments and allowances to the Services. The Indian Members of the Commission were silent signatories to the Report and have doubtless reaped their rewards from the Government for this piece of obligation on their part. The Commission was extremely solicitous about the Medical Services and allotted a separate chapter for the consideration of their prospects and future role in official life. Perhaps, the only point of agreement in the whole report between the Commission and Indian public opinion was the proposal to abolish the I. M. S. That the I.M.S. had done excellent service in the past and had contributed materially to the advancement of Western Medical Science in India, none could gainsay. But the I. M. S., being purely military-ridden, has become of late unsuited to the needs and requirements of the civil population. With the advent of the Reforms, the medical needs of the civil population are the care of a minister in charge of the transfered departments, whose direction and interference are practically resented, if not actually disobeyed, by most, if not all, of the members of the Service. Besides, it was thought unwise and even uneconomical that two separate services,—the I. M. S., and the R.A.M.C., should be maintained side by side for attendance on the troops stationed in India. Considering all these circumstances, the Commission has made the following recommendations:—(*a*) That while all concessions granted to other all India Services, should be extended to the existing members of the Indian Medical Service, in civil employ, no attempt should be made to perpetuate that Service as at present constituted."

(*b*) "That contrary to the recommendation of the Berney-Lovett Committee that the Indian Medical Service should be developed into a new 'Indian Medical Corps' which should absorb the Royal Medical Corps in India, the medical needs of both the British and Indian armies in India should be provided for in future, by the 'Royal Army Medical Corps' (India), which should absorb the Indian Medical Service."

The Commission stops there so far as its recommendations with regard to the Army Medical Department are concerned and does not attempt to discuss about the strength, status etc. of the R. A. M. C. (India), whether it is to be controlled by the Indian Government or the British War Office, and whether Indians can gain admission into it etc., as they are all outside the scope and terms of its enquiry. The Commission, however, suggests that the R.A.M.C. (India) should provide the necessary nucleus of British Medical Officers which is regarded as vital for the needs and contentment of British civil servants in India. We leave these questions for the Assembly to thrash out at the time of the discussion of the Report.

The abolition of the I.M.S., or rather their absorption into the R. A. M. C. (India) raises the important question of providing a distinct Medical Department on the civil side and this the Commission proposes to meet by the constitution of a separate Civil Medical Department, for each province. This is what the Commission recommends in this respect :—"A civil medical service should be constituted in each province and recruited for the local Government by the Public Services Commission on the basis of a competitive examination both in England and in India. The standard for this examination should be fixed by the Public Services Commission in consultation with the Local Governments, the Director-General, Indian Medical Service (or the corresponding officer of the Government of India) and the Medical Adviser to the Secretary of State in England." The rates of pay and other conditions of service should be fixed by Local Governments in consultation with the Public Service Commission. It should be part of the terms of contract that every officer of the civil medical service, should be liable for service with the Royal Medical Army Corps (India) in the event of a war involving a general mobilisation.

To meet the medical needs of British officers in Civil Services and their families, the Commission proposes that a minimum number of British officers should be maintained in the Civil Medical Service. These minima should be prescribed for each Province by the Secre-

tary of State on whom, in the last resort, shoud rest the responsibility for their maintenance. Of this British element one-half of the number required for the military reserve, whichever is larger, should be reserved for British officers, to be seconded from the R.A.M.C. (India) or, if necessary, by special additional recruitment for this purpose. The following is a summary of the recommendations made by the Commission regarding medical attendance to British officers in civil employ by medical officers of their own race :—

(*a*) "Districts of a Province should be grouped and a British Medical Officer posted to one station in each group within easy reach of each district."

(*b*) "In stations where there is no British medical officer travelling allowance for the officer and his family should be granted to the nearest station where there is such an officer. Alternatively if more convenient, the travelling allowances of the medical officer, should be paid by Government to enable him to visit the patient."

(*c*) "In serious cases it should be open to the doctor first consulted to give a certificate authorising the patient to travel to the nearest station where adequate treatment can be given and the certificate should qualify the patient for travelling allowances."

(*d*) "The services of military medical officers where no other medical officers are available should be at the disposal of the civilian officers and their families upon payment of normal fees."

(*e*) "Officers if treated in hospital should not be liable for medical, surgical or nursing charges. Normal fees shoud be chargeable for their wives and families. Free medical attendance for the wives and families of the officers should not be provided."

These are extraordinary and extravagant proposals and we very much doubt, if in practical working, it would be possible to carry them out, without stirring feelings of jealousy and animosity between the European and Indian members of the profession and at the same time, adversely affecting the interests of the British civilian-patient in times of sudden illness necessitating immediate medical aid. Time is the best judge to decide the wisdom or the unwisdom of this course and we, therefore, defer further comments on this for the time being.

Lastly, with reference to medical education the Commission recommends as follows :—"With regard to the professorial appointments in Government colleges and hospitals we draw attention to the specific recommendations made by the Islington Commission in paragraph (XXX) at page 268 of their Report. A distinction is there drawn between clinical chairs which should be reserved for so long as fit person is available, for officers of a civil medical service however recruited and the scientific chairs which should be thrown open to all candidates. We are disposed to agree with these recommendations subject to the substitution of Public Service Commission for the recruiting committee referred to at page 268 in paragraph (XXXIV) of the Islington Commission's Report."

The present method of appointments to professorial chairs is most unsatisfactory and the sooner, it is abolished and replaced by a more efficient system, the better. We are prepared to pay any price to gain this end and we wish it to be clearly understood that the pick of the profession ought to be chosen and, if need be, to be specially recruited, so that the best possible instruction may be made available to the students in Medicine.

In giving effect to the proposals of the Commission, the chief aim of the Hon. the Minister ought to be the rapid Indianisation of the Services. He should also look to the enlargement of the scheme of appointing Hon. Physicians and Surgeons and thus help the speedy formation and development of an independent medical profession. The present half-hearted and haphazard method of appointing these Honorary Physicians and Surgeons gives rise to grave doubts as to the success of the scheme. The plea of "no funds" for extensive medical relief will disappear if this scheme is pushed through in right earnest and as the Hon. the Minister would henceforth be free from obstacles hitherto placed in his way by an unwilling and uncontrollable set of officials, it is hoped, he would set to work unhampered with, by such hindrances in future and effect salutory and economical reforms in the Medical Department under his charge.

CURRENT TOPICS.

MEDICINE.

Aetiology and Treatment of Impetigo Contagiosa.—D. T. Smith & E. L. Burky. John Hopk. Hosp. Build.—Material taken from unbroken vesicles of nine cases of impetigo contagiosa on culture contained haemolytic staphylococci in 3 cases and haemolytic streptococci in 6 cases (4 strains of strepto pyogenus and 2 strains of strepto in frequens) Material from one case of chicken pox was bacteriologically negative.

These organisms isolated from impetigo contagiosa on animal inoculation were found to be of low virulence and were probably only secondary invaders. Impetigo contagiosa is possibly caused by an unknown specific virus though inoculation on rabbit's cornea and shaved skin after Levaditti's method to determine presence of dermotropic virus was negative. Painting the skin with 5% Gentian violet in 10% alcohol and covering with bland ointment was found to cure cases with both secondary invasions in 3 to 4 days.

Danish Treatment of Scabies.— (J. R. A. M.C., April 1924) Lombelt confirms the remarkable therapeutic efficacy of the Danish treatment of scabies which consist of the external application of our ointment containing sulphides and poly-sulphides. The ointment is prepared as follows. I Kilo Sulphur sublimed is dissolved with gentle heat in 2 Kilos 5% aqueous solution K O.H. and 375 grammes of this solution is titrated with a mixture of 225 grammes each of vaseline and water mixed cold. To this is added oz. (O.H.) $_2$ prepared by treating 28 grammes oz. S.O. $_4$ with 40 grammes 20% solution Na OH. The ointment is finally made up to 1000 grammes with liquid parafin and 5 grammes of Benzaldehyde added to neutralize the H_2 S smell. The patient after a hot bath smears the whole body with the ointment and gets into bed clothes; after 24 hours he removes his clothes and takes another bath when treatment is complete. Mild dermatitis may be caused which however amends rapidly to treatment. The ointment is not to be rubbed into the skin. This treatment is very rapid taking only 24 hours to cure the infection.

Medical Treatment of Cataract.—Inglis Taylor Lancet 5-4-24.—Baldal assuming that lenticular cataract resulted from dehydration or sclerosis of the lens used iodine in alkaline solution as collyrium and later on as ocular baths with some success. Later on Dor demonstrated that cataract resulted from hydration of the lens, the hydration being due to the fact that the blood contained hydrating ferments such as are present in the blood serum of rabbits after napthelene ingestion and in the serum of diabetics, in both of which conditions cataract is frequent. Dor therefore added the dehydrating action of calcium salts to the liquifying and other action of iodine in the form of baths. Chavin embodied Dor's treatment in the form of an ointment called by him calcic-alkaline iodide ointment and the author has used this ointment for treatment. The ointment when properly prepared is quite painless ; the author obtained his supply through Rouse and Co., Chanish Wigmore St., London, and has treated over 20 cases. The treatment gives good results only in early cases. It is not to be used in advanced cases. In suitable cases treated perseveringly the author reports obtaining full vision in 5 cases and various degrees of improvement in others.

Non-Specific Training of Anti-body Production.—J. B. Path. Bact. April 1924.—Khanolkar found that previous inoculation with typhocolon group organisms as B. Gaertner, coli, paratyphoid B. pyocyaneus markedly increased the capacity of the organism to produce agglutins to B. Gaertner on subsequent inoculation with B. Gaertner. Inoculation with yeast staphylococci, ricin and horse serum had not that effect. Injection of sodium ciniminate and nucleinate which caused leucocytosis increased agglutin formation though non-antigenic.

Demonstration of Leishmania in Paraffin Sections.—I. M. G. February 1924.—M. N. De reports that by fixing and dehydrating blocks of tissue containing Leishmania Donovani through repeated changes of acetone, parafin section may be prepared which on staining show the parasite quite clearly.

Growth-Producing Vitamin Synthesized by Acid-Fast Bautto.—J. Path. Bact. April 1924.—Damon found that addition of 7·5% of dessicated B. Timothy, Smegmatis or Mocleri to diet deficient in growth-producing vitamin was sufficient to induce normal growth in young albino rats.

Longevity of Bilbarzin in Human Body.—(Christopherson, Lancet 12-4-24.) British soldiers who were infected in the Boer War (1902) and had returned to England and had no chance of reinfection were still passing ova in their urine in 1920. A well-known zoologist who contracted Bilharria infection in 1878 was still passing ova in his urine 28 years afterwards. The cercaria the larval form of setustoma hæmatobium has only a maximum longevity of 18 hours, but once it pierces the human skin it is capable of living at least 28 years. *S. R.*

Intramuscular Injection of Pituitrin in Asphyxia Pallida Neonatorum.—(B. M. J. CORMACK 29-3-24.)—In two cases of asphyxia pallida neonatorum in which a feeble heart action was detected, but hot bath, artificial respiration for 20 minutes etc. failed, injection of 1/3c.c. pituitrin had the immediate effect of restoring circulation and commencing respiration. In his opinion asphyxia pallida neonatorum is a condition akin to surgical shock, and pituitrin by raising blood pressure and contracting the arteries forced a better supply of blood through the lungs simultanously stimulating the respiratory muscles to act.

Infantile Hypertropic Pyloric Stenosis or Pylorospasm.—(Arch Pediatrics, March 1924, Saner).—Breast fed infants are more liable to the condition. Ibrahim found 131 of 169 cases were breast fed at onset of symptoms and explains this predominance by low-acid combining power of breast milk and strong sucking power of the predisposed sucking infant. Schultz and Piser found that vomiting ceased when breast milk was given by gavage or bottle and concluded that breast nursing reflexly activated gastric motility and induced vomiting. Usually there is marked excess of gastric HCl and Freund considers this excess the exciting cause of pylorospasm. Gastric pepsin content and protein digestion are normal and there are no signs of indigestion and appetite is good. Vomiting is the marked and constant symptom and may occur after the child has merely sucked a few drops, or hours later and exceeds in quantity the amount ingested. Vomit is free from bile and may be blood streaked There is appreciable diminution of quantity of fæces and urine and loss of body weight. Gastric hyperperistaltic waves may be seen passing from left to right but may be absent even in severe cases, Some cases have severe intensely painful spastic contracture of the whole stomach which is pressed against anterior abdominal wall clearly defined in relief. The hypertropied pylorus varies in its palpability with time being most palpable after a meal during projectile vomiting or after kneading the stomach, and Wernsted argues for the variable palpability that the condition is a spasm and not a simple stenosis and that hypertrophy is secondary to spasm. The differential diagnosis is from congenital pyloric stenosis, obstruction due to bands, kinks due to short messentery etc. As for medical treatment, anhydraemia should be counteracted by nutrient enemas, Murphy's drip and hyperdermoclysis. Feeding with thick cereal paste (either cornmeal musk, farina-paste, rice flour) has become a standard measure of recognized value. Duodenal catheterization recommended by Hess is difficult on account of pyloric spasm but in some cases repeated catheterization has been followed by permanent cure. Atropine given by mouth hypodermic or rectum is often successful. It is best administered half an hour before food. Czerny given 2 to 3 drops (increased to 5 if required) 3 or 4 times a day of 1in 1000 Atropine talphas solution; but in some children large quantities of atropine may cause anuria. Knopfelmacher and Meyerhofer introduced papaverin hydrochloride as it reduces tone of smooth muscle (one or two teaspoonful of 1 in 1000 solution three times a day before meal). They report that such doses cause no toxic symptoms though some infants become drowsy. Alkalies should be given if there is hyperchloridia. In a few cases all medicinal treatment may fail when Straus's modification of Ramstedt's operation should be done.—*S. R.*

THERAPEUTICS.

Strong Salicylic Applications in Skin Diseases.–Sir Archdall Reid (*Clinical Journ.* p. 618.)—To cure a microbial skin disease, we must cure quickly, for, if we fail, we tend to breed a race of organisms resistant to the remedy. It is a common experience to find a remedy, useful at first, gradually becoming useless. Therefore when we find our remedy losing value, we should change our treatment, and again act resolutely.

During the last few years the writer has used salicylic acid in great strength. He began with himself. He had an unnamed disease between the toes— thickened skin with weeping and sometimes bleeding cracks, and intense itching. He suffered for years, failed with all sorts of treatments, and was really ill from loss of sleep. At length he wetted strips of lint, rubbed salicylic acid plentifully on their surfaces, and wove them between the toes. The effect was magical. Within a few days he removed slabs of dead skin, and found smooth healthy skin beneath. The cracks healed and the tormenting itching ceased. For a year or so he had patches of recurrence. Apparently he had not removed all the disease. But these patches yielded quickly to the same treatment.

He next dissolved salicylic acid in collodium in the greatest possible strength—about one drachm by weight to eight drachms of collodium by measure. Application of this preparation to his healthy skin produced no ill effects. It peels off after a few days, taking with it an exceedingly thin layer of epidermis. It is useful in many dry dermatoses. It had amazing results in chilblain. Patients to whom winter was a season of suffering, now declare it has no terrors. The only rational explanation of this result is that chilblain makes a favourable nidus for bacteria, to which the persistence of the condition is due.

Next he made an ointment of equal parts by weight of salicylic acid and vaseline and applied it on lint to his healthy skin. The effect was more drastic than the collodium preparation, but not unduly severe. He never succeeded in removing the entire epidermis. A few days after cessation of treatment nothing was seen but reddening, and later some rapidly fading pigmentation. Repeated and continuous application produced no other result. Obviously the epidermis grew faster than he could remove it. He concluded that the salicylic preparation killed a layer of epidermis which protected the subjacent tissues and prevented absorption. He used this preparation cautiously in cases of dermatitis (eczema), beginning with small areas and gradually passing to larger areas. Now he applies it to disease of any extent—papular, scaly and acute weeping eczema. In almost all cases the results were rapid and excellent. In a few days it is possible to cure cases that have persisted or years. No great discomfort is experienced in the dry dermatoses. In

the acute weeping types much pain may be felt at first. But it lessens day by day, and in 4 or 5 days is by no means severe. He has never seen much inflammation result, and never had a trace of salicylic acid poisoning. Obviously, here again, a layer of tissue is killed and absorption prevented. Apparently it is only when salicylic acid is used in insufficient strength that absorption, inflammation, and poisoning result. The treatment is excellent, indeed decisive, in most dermatoses which involve primarily the epidermis (not including its pockets in the corium).

ILLUSTRATIVE CASES.

Girl of 16. Acute vesicular weeping, dermatitis of left cheek and neck. Marked improvement after 4 days. A fortnight later little signs of past disease and treatment.

Young woman. Very acute dermatitis of left side of face and neck, and both arms and hands which were swathed with bandages. Recurrent case of many years' standing. Many treatments. Great pain on first day of treatment, less on second, still less on third, on fourth little pain. In a week small traces of disease. Treatment continued on patches for about 2 months. Complete recovery ; but doubtless there will be recurrences, which can be dealt with as they arise.

Middle-aged man, baker. Acute dermatitis of both forearms and hands (baker's itch). Rapid improvement. Prepared to return to work in a fortnight. Then developed dermatitis on both legs, so acute as to cause œdema. Returned to work within a month. Small recurrences ever since which have been quickly cured.

Middle-aged woman. Dermatitis of both forearms and legs from middle of thighs to ankles, papular on arms, scaly on legs. Eight years' standing. Many treatments. Rapid improvement and recovery in 2 months.

Girl of 16. Weeping dermatitis of both breasts of 3 years' duration. Many treatments. Recovery in a month.

All these cases were exhibited before the Royal Soc. of Med. Dr. Victor Blake, who is in charge of the Portsmouth School Clinique, also exhibited some cases in which he had tried the treatment. In acute dermatitis, eczema, etc., he had remarkable results. A child, aged 6, had had trouble since her second year. All kinds of treatment had been tried. Four days after commencing the treatment the condition was well. In two other cases the eczema healed in 2 or 3 days. When the surface was raw he felt some compunction about applying this strong treatment, but did so, and in 4 days the condition had cleared up, and there had not been any recurrence. Having many ringworm cases to deal with, he had given up treating them by drugs, and relied on X-rays. But, under salicylic treatment, he had several cases of rapid improvement. There seemed microscopically

to be a marked degeneration in the spores. A child was absolutely cured in a month. Equal parts by weight of vaseline and salicylic acid were used, and the efficacy of the ointment was much greater than that of all the ointments which he had tried for ringworm.

In ringworm the writer seems to have got cures in some children with fine fair hair, but as yet is not certain. He is sure the treatment fails with coarse hair, the roots of which are situated deeper in the corium. This failure is one more proof of lack of absorption. Ringworm of the body yields quickly to the salicylic ointment, as does also scabies. Resolute and continued treatment of acne gives good results.

He tried treatment on many cases of lupus. In lupus erythematosus the results seem excellent. It appears to have cured one or two cases, though slowly. But sufficient time has not elapsed to be sure. In lupus vulgaris he got rapid improvement ; but when treatment ceased the disease recurred. Evidently the acid did not reach the deeper tubercles. When improvement by means of this salicylic ointment ceased, he changed to strong resorcin plasters. After that the number of tubercles was so reduced that he was able to attack them individually with punctures loaded with acid nitrate of mercury. As far as he can judge, he got absolute cures.

In seborrhœa sicca much milder treatment appears to suffice. Strict cleanliness is essential ; it is not realised how dirty are many heads. The whole head should be included in the morning ablution with soap and water, which, of course, is difficult for females. It should then be dried with a towel, and again wetted by dipping the hair-brushes in a saturated solution of boracic acid, which should be allowed to dry of itself. Fairly quick relief should follow, and the dandruff and itching cease. Some months after, when cure seems assured, the boracic lotion may be discontinued, though its use does no harm ; but recurrence is probable if the head be left unwashed.—*The Medical Review.*

Small Doses of Pituitrin in Labour.—Since the introduction of pituitrin in obstetrics more than 12 years ago, there have been great divergencies of opinion as to the stage of labour in which it should be given, and as to the risks entailed. They are supposed to be contraction of the internal os, rupture of the uterus, atony of the uterus after expulsion of the infant, and asphyxia of the infant. The dose of pituitrin usually given is 0·5 c.c., but in certain cases this dosage is apt to provoke violent contractions of a stormy character. On this account investigations have been conducted at the writer's hospital for the past 21 months with a dosage of only 0·2 c.c. In this period 144 women were given this dose, and 20 were given both 0·2 and 0·5 c.c. These small doses acted equally well whether labour was premature or at term, and in primiparæ and multiparæ. But the effect of the drug was somewhat better in young than in elderly women. Though the results were good in cases of primary uterine inertia, they were better in secondary inertia. When labour was complicated by fever a small dose of pituitrin was effective only in about 50 per cent. Among the 28 infants born dead, or showing some morbid condition, there was not one case in which injury to the infant could be traced to the pituitrin. There were 40 cases of post-partum atony of the uterus, but in none could the pituitrin be held responsible therefor. It would seem that there is no

foundation for the fear that pituitrin should give rise to post-partum atony of the uterus. These investigations indicate that the action of 0·2 c.c of pituitrin is equal to that of 0·5 c.c.; when the smaller dose has little or no effect, the larger dose is not likely to be any more successful. It is safe to repeat the small dose frequently, and if the action of the first injection is satisfactory, its repetition may be relied on also to give satisfaction. In no case were ill effects in mother or child, such as tetanic contractions of the uterus or post-partum atony, traced to the injection of 0·2 c.c.—*Medical Review.*

CORRESPONDENCE.

THE MORE REMARKABLE FEATURES OF THE LEE REPORT FROM A PURELY MEDICAL POINT OF VIEW

By

DR. AMBADI KRISHNA MENON, 2, MARSHALL'S ROAD, EGMORE.

(1) Proposal that the medical needs of both the British and Indian Armies in India should be provided for, in future, by the Royal Army Medical Corps (India) which should absorb the Indian Medical Service;

(2) Constituting a Civil Medical Service in each province;

(3) Recognition of the principle "white patient, white doctor";

(4) Suggestion to group districts in the various provinces and to post a European doctor to a station in each group within easy reach of all parts of the particular group;

(5) Government, *i.e.*, the Indian tax-payer, to foot the bill on account of expenses incurred in transit &c., whether Mahomed goes to the mountain or mountain to Mahomed, *i. e.*, whether the European doctor in the group goes to a patient or the patient to the doctor.

Of these No. (1) has to be discussed with questions such as whether the Indian Army is for India primarily, whether the Indian Army is to be controlled by the Indian Government or by the British War Office and whether the R. A. M. C. (India) is to be a branch of the British R. A. M. C. which does not admit Indians. It may, therefore, be better to postpone it for consideration at greater length on another occasion.

Civil Medical Service.—This is to be a Provincial Service which is to have in it a minimum British element to provide the necessary nucleus of British Medical Officers which the Commission regarded as vital to the needs and contentment of British Civil Servants in India. This minimum is to be determined by the Secretary of State for India in consultation with the Government of India and the Local Governments concerned, with due consideration to the possibility and scope of grouping in accordance with (4) above. One-half of this British element or a number not less than that of British Medical Officers from civil employ needed for the Regular Military Reserve, is to be reserved for British Officers to be seconded from the Royal Army Medical Corps (India.) Incidentally, one may observe that this special stress on British Officers to be seconded suggests that there will be Indian Officers as well in the proposed R. A. M. C. (India). This regular Military Reserve is assmued to be 122, distributed between the various provinces. All officers of the Civil Medical Service will be liable for military service in the event of a war involving general mobilisation.

We have now, on the Civil side in the various provinces, 420 I. M. S. officers forming a War Reserve. At least, that is the argument usually advanced to justify the maintenance on the civil side of such a large number of primarily Military officers. Of these 420, Madras is accommodating 50 of whom but 8 are Indians. It is reasonable to expect that with the reduction of the War Reserve (be it called Regular or irregular) to 122 our load under this head will be proportionately reduced to about 15. On a reasonable grouping of districts and making special provision for the Europeans in the City and even providing for an extravagant leave reserve, which now obtains in the Indian Medical Service, of 27 1/2%, 15 British doctors will be found to be ample for the needs and contentment—if they are prepared to be contented—of the British Civil Servants. And, if we are bound to have British doctors, it ought to be a matter of indifference to us whether they are seconded from the R.A.M.C. (India) or otherwise recruited.

My own view is that it be made clear to these British doctors and those who are anxious to have them that we are agreeable to accommodate these 15 doctors even on the extravagant terms of remuneration and compensation which they have been clamouring for and which the Commission has thought fit to recommend on the distinct understanding that this 15 shall be our maximum and that we are not going to be bothered with any revision or re-arrangement if the British Doctors' and patients' scheme ultimately proves unsatisfactory. I should think that, though unsound in principle and rather expensive, it will be a good solution of the very unsatisfactory situation obtaining now.

At present, each I.M.S. Officer on the civil side costs roughly Rs. 1000 more than an Indian doctor holding a similar position. The reduction of these to 15 will enable us to effect a saving of about Rs. 3 lakhs a year. This 3 lakhs can be considerably increased by the introduction of a satisfactory system of honorary doctors in our larger hospitals. Such will be a more satisfactory process of retrenchment than cutting down the already not too extravagant diets of under-fed patients in Government Hospitals.

Another direction in which we can improve the situation is in the opening it affords of securing candidates for the places instead of finding berths for unsuitable men. It is notorious that we have too many cuneiform men occupying square and round holes, particularly in the field of medical education. No price will be too much at which to purchase freedom to select and continue in professorial appointments right sort of men.

Apart from the fact of Europeans being admitted to be of a superior order for the mere reason of being Europeans and given favoured treatment, Devolution Rule 12 of the Government of India Act (1919) provides that "A Local Government shall employ such number of Indian Medical Service Officers in such appointments and on such terms and conditions as may be prescribed by the Secretary of State for India". Add to it instruction to Governors of Provinces to see that no I. M. S. Officer is adversely affected financially by being transferred from one station to another, and there is every reason to feel relieved at the new situation created by the Lee Recommendations. If, as I can cite glaring instances, a wrong class of Officer finds himself the tenant, even against his own ease and peace of mind, of a comparatively lucrative sinecure, he cannot be shifted to an appoint-

ment which will better fit him and be, besides, to the best interests of all concerned unless the new appointment is at least equally lucrative which, as every one knows, would depend, in the case of a doctor, on various factors.

BOOK REVIEWS.

ELEMENTARY BACTERIOLOGY FOR NURSES.

By G. Norman Meachen, M. D. M., S, (Lond.), M.R.C. P. and C.Illustrated, 2nd Edition. 92 Pages. The Scientific Press Ltd., 28 and 29 Southampton Street, Strand W. C2. London 3s.

This small book is intended to give some idea about Bacteriology for nurses. As Science advances a little knowledge in Bacteriology is very essential to nurses also. So this little book supplies all the necessary information enough for nurses. Most of the articles, as the author says, are reprints which have appeared in the pages of "Nursing Mirror". We recommend the book to every nurse. Its language is simple, avoiding as much of technical words as possible.

THE BACTERIOPHAGE.

By F. D'Herelle of Pasteur Institute. Translation by George H. Smith, Ph.D. 287 pages. Williams and Wilkins Co., Baltimore, U. S. A., 1922. Price $ 4·5. Rs 18.

This useful book contains wholly a new idea of Therapy in Bacterial infection and an entirely new theoretical consideration of immunity. The book is divided into two parts. The first part contains one chapter on "Bacteriolysis" and another deals with "Bacteriophage" and the third chapter deals with "Virulence of the Bacteriophage", the fourth with "The Bacteriophagous Ultramicrobe" and the fifth with the "The Bacteriophagous Antiserum" and the sixth is devoted entirely to "The Nature of the Bacteriophage". The second part deals with the Role of the Bacteriophage in Immunity. The first chapter in this part deals with the Bactertophage in disease, the second deals with the Bacteriophage in the healthy Individual, the third with Immunization by means of the Bacteriophage and last chapter contains "The Bacteriophage and Immunity and summary and conclusions. The book contains a fund of information which is very essential and useful for every student of Bacteriology. The author has taken a good deal of trouble and pain in bringing out this book.

BACTERIOLOGY.

By H. W. Conn. Ph. D., and Harold J. Conn P.H.D. 440 Pages with a number of illustrations. Williams and Wilkins Co 1923. Baltimore Prices 4·5. Rs. 18

This book is a study of micro-organisms and their relation to human welfare. The learned author, in the book, discusses the history of Bacteriology, the Nature of Micro-organisms and their significance in connection with Pathology, Hygiene, Agriculture and Industries. The subject is dealt with under the following headings :—

(1) History of Bacteriology (2) Micro-organisms and their activities (3) Micro-organism in the Dairy Industry (4) Micro-organisms in relation to the Fertility of the Soil (5) Bacteria in relation to miscellaneous industries (6) Micro-organisms as causes of disease (7) Bacteriology of Water and Sewage (8) Bacteriology of Sewage etc. etc. The book is very well written and contains fund of information very useful for every student of Biology and Bacteriology. The appendix contains very instructive information.

THE OLD DOCTOR.

By Frank G. Layton, M..RC.S., L.R.C.P., published by Cornish Brothers Ltd., Publishers to the University 39, New Street, Birmingham. Price 4 sh. 6 d. net. 170 pages.

This tiny little book unfolds the secrets of the Medical Profession—their troubles and tribulations and their struggle for existence. The budding general practitioner has to contend against great many odds. The ignorance and poverty of the masses who form the bulk of the clientele, the unfair and unequal competition among the members of the profession, including a number of quacks and less scrupulous men who care more for money than for morality, the low standard of fees which are seldom paid, and above all, the existence of slums and insanitary dwellings which harbour disease-germs of various kinds to an alarming extent, are according to the author, the chief obtacles in the way of the Doctor's success in life. The message which the author intends to convey to the medical world is thus graphically put into the mouth of "the old doctor"—"Purely and holily, I will keep guard over my life and my art." We congratulate the author on his bold and lucid exposition of some of the ugly and loathsome habits of the profession, and we are of opinion that medical men will greatly profit by a close study of the book.

THE ROCKFELLER FOUNDATION—A REVIEW FOR 1922 WITH A SUMMARY FOR THE FIRST DECADE.

By George E. Vincent, President of the Foundation-Published in New York 1923.

This report publishes a review of the work done by the Rockfeller Foundation for 1922 and also gives a summary for the first decade of its existence. The Foundation has done splendid work in the field of medical education and since its creation in 1913 has had direct relations with perhaps one quarter of all the medical schools of the world—a no mean achievement, considering the disturbed world conditions and the resultant economic crisis consequent on the war which commenced shortly after its birth. The Public Health activities were no less prominent in the programme of work laid down and conducted by this Institution. They include campaigns for the relief and control of Hookworm Disease, the eradication of yellow fever and aid to anti-tuberculosis work, etc. We wish the Foundation a glorious future and a happy career of useful and extensive humanitarian work.

THE AMBULATORY TREATMENT OF FRACTURES AND DISEASED JOINTS.

By Carel A. Hoefftcke, with an introduction by Frank Romer, M.R.C.S., L.R.C.P. William Heinemann (Medical Books) Ltd., London, 1923. 273 pages. Profusely illustrated. 17sh. 6d.

The main principle in the ambulatory treatment is to take the weight of the body of the affected limb, and in addition to produce extension between the surfaces of the condyles in joint disease, or in case of a fracture to keep the fragments in apposition, and prevent shortening of the limb.

This extension was formerly obtained by keeping the patients in bed with weight extension, with the almost inevitable result of atrophy of the limb, stiffness in the joints, lowering of the patient's resistance through inactivity, and retardation of the blood supply by the necessary recumbent posture. The value of Hoefftcke's splint

in the ambulatory treatment of fractures of the long bones of the lower limbs has been well known and appreciated. This book deals in detail about the ambulatory treatment of fractures and diseased joints by Hoeffteke's methods. During the war the surgical treatment of wounds in joints underwent a rapidly progressive change, and the results obtained by Willems, the distinguished Belgian Surgeon, by spontaneous mobilisation of the joints, enabled those suffering from suppurating joints to move these freely within a few days of the receipt of the injury. Hoeffteke's splint is essentially designed and built for this purpose and the book deals in detail as to how to use it and the methods of using splint in the treatment of fractures and the diseased joints. Sir Arbuthnot Lane, Consulting Surgeon, Guy's Hospital, has approved of this method of treatment. The book is profusely illustrated giving a number of specimens of successfully treated cases before and after. A number of X-Ray photographs are also given, which will aid the readers in understanding the subject thoroughly. No surgeon, in this country, should be without possessing this useful book. The advantages afforded by this forcible separation of diseased articular surfaces from one another combined with free movement are best shown by the use of really efficient extension of apparatus for the leg which does not interfere with the functioning of the diseased joint. This is effected by the apparatus which Mr. Hoeffteke has devised.

BAILLIERE'S POPULAR ATLAS OF THE ANATOMY AND PHYSIOLOGY OF THE MALE HUMAN BODY WITH A DESCRIPTIVE TEST.

Bailliere Tindall and Cox, 8, Henrietta Street, Covent Gardens, W. C.-2, London. Price s. 6. II Edition.

This useful atlas of human body and its different parts with a descriptive text by Hubert E. J. Biss, M.A., M.D., Cantab., is very instructive and useful. The descriptive plates are divided into :

(1) Bones ; (2) Muscles and Articulations ; (3) the Viscera ; (4) the Vascular system ; (5) Nervous system ; (6) Respiratory organs ; (7) Urinary and Genital organs; and (8) Prominences and Motor Points of Nerves and Muscles. This atlas is very useful for beginners who commence the study of Anatomy and Physiology and it is of special value for students who prepare for University examinations, also for all those who go for L. T. Examinations. We strongly recommend this atlas to teachers and students of Anatomy and Physiology.

A MANUAL OF PSYCHOTHERAPY.

By Henry Yellowlees, O.B.E., M.D., D.P.M. (London 247 pages A & C Black Ltd., 4, 5 & 6, Soho Square, London W-1. Price s. 10/6.

Psychotherapy does not form part of the curriculum for medical students in any of the medical institutions in India, though it must soon become a recognised part of the medical curriculum. This book is intended for practitioners and also for students who are quite new to the subject. The subject has been dealt with throughout from a practical point of view. It cannot be too strongly insisted that Psychotherapy is a special department of medicine which demands, as do all other specialities, a certain type of mind, a special interest and a prolonged period of study and training, before it can be wisely and efficiently practised. The subject, in this book, is dealt under three separate heads. Section (1) deals with the principles of Psychotherapy ; Section (2) deals with the methods of Psychotherapy ; and Section (3) deals with the scope of Psychotherapy. The last chapter gives a number of interesting illustrative cases. The subject is very thoroughly dealt with and the book will be of immense use for general practitioners.

TALKS ON PSYCHOTHERAPY.

By William Brown, M.A., M.D., etc., University of London Press Ltd., 17, Warwick Square, E. C.-4 London, 1923. 96 pages 2s. 6d.

In this book an attempt is made to sum up all the present day position in Psychotherapy. The three lectures that were delivered by the author in the University of London (King's College) is published in the form of this booklet. It contains very instructive information.

THE ELEMENTS OF PUBLIC HEALTH ADMINISTRATION.

By G. S. Luckett, A.B., M.D., and H. F. Gray, B.S., M.S., Gr. P. H. 46 pages. P. Blackiston's Sons & Co. 1012, Walnut Street, Philadelphia. 3 Dollars.

This very useful book is intended to furnish a background of the general principles in an elementary text book on public health administrative methods in a simple and condensed form that could be used as a ready reference by the practising physician who has no time to go through large works. The book is a record of experiences gained by the author in a variety of fields, from the Atlantic to the Pacific coasts. This book is intended for those who are engaged in the administration of public health. So, it will be of immense use for the Health Officers and the Sanitary Inspectors of this Presidency whose business it is to preach knowledge of Health and Sanitation. The book is written in a very easy style, avoiding as much technical words as possible. The first part deals with Public Health administrative measures, the second part deals with the preventible diseases, the third part with very useful instruction such as plan of County Health Work, Instructions to Public Health Nurses, a course of Instruction for Midwives, Forms, etc., etc. This is specially useful for Maternity and Child-Welfare Centres as a ready reference book.

HAEMATOLOGY IN GENERAL PRACTICE.

By A. K. Gordon, M.B., B.C., B.A. Prices s. 5. 100 Pages Bailliere Tindall & Cox, 8, Henrietta St., Covent Gorden W. C., 2 London. 1923.

This little book is sure to serve as a guide to the General Practitioner who is anxious to utilise the light which a rough examination of a stained bloodfilm may throw on the diagnosis and prognosis of certain diseases. As a rule, he has no time to make a thorough examination of blood. For such of them this gives a rough idea as to what to do in case of emergency. Though this volume is not intended to replace the text-books on Haematology, it gives in a concised manner all about "Haematology." The book contains a number of illustrations very useful for beginners. We recommend the book to every medical student and junior practitioner.

HODGKIN'S DISEASE.

By R. A. Bennett, M.D., London, M.R.C.P. 56 pages. Price 2s. John Wright and Sons, Ltd., Bristol, Simpkin, Marshall Hamilton Kent and Co., Ltd., London 1923.

This small book deals with a rare disease called "Hodgkin's Disease" whose pathology, diagnosis and treatment were in vogue for very large number of years. In this present book the author deals with the definition, symptoms, pathology, diagnosis, etiology and treatment of the disases in a concise manner. As for the treatment, X-Ray 606 Arseno Benzol have influence on the disease. Outside X-Rays the treatment is only symptomatic. Fever is one of the disabling and distressing symptoms of the disease, and the usual antipyretics reduce it only for an hour, lose their effect, and have, moreover, a depressing result that should be avoided. The method of reducing the temperature by the author's methods is as follows :

Half a drachm of pure creasote is slowly rubbed into the skin of the axilla, and the dose is repeated on subsequent occasions in the other axilla, and in the right and left groin, in turn. The effect of such application is intended to induce a mild and long continued sweat in the course of which the temperature falls to normal. This treatment was used with great success in a case where the daily temperature for many weeks had reached 104° to 105° ; from the day it was first practised the fever was under control and in the course of 4 weeks subsided entirely. The remedy is, of course, empirical, but it never seems to do any harm, and it can safely be recommended. The book is very useful and instructive.

BACTERIOLOGICAL CHART.

Published by Dr. P. Banerjee, M.B., 7, Barik Lane, Amherst Street, P. O. Calcutta, Second Edition. Price As 5.

This useful chart gives the general characteristics of the different bacilli, their shape and size, capsule, spore, flagella, motility, other morphological characters, temperature, etc. The other portion of it gives Bacterial peculiarities of Agar, Potatoes, Broth, Gelatin, Milk and Ferments in a concise manner. At one glance, students can understand all about bacillus. It is therefore useful for examination going students in Bacteriology. The author is to be congratulated on his having brought out this useful chart. Its price is As. 5.

MINOR SURGERY INCLUDING BANDAGING.

By H. R. Wharton, M.D., 9th Edition 450 illustrations, 647 Pages S. 40·00 Lia and Febiger. Philadelphia and New York, 1922.

The mere fact of this book having reached its ninth edition is a clear indication of its usefulness both for medical students and busy general practitioners. The subject is dealt under seven parts, *viz.*, Bandage, Minor Surgery, Asepsis and Antisepsis, Fractures, Dislocations, Operations and Ligation of Arteries. The book is profusely illustrated and the illustrations are very clear and are sure to be of great use for students. So far as the book on Minor Surgery and Bandage is concerned, we have yet to see a book which is so nice and thoroughly written as the present book under review. As the book indicates, major operative procedures have been excluded We must make special mention on Bandage and Minor Surgery. It is full of information. The chapter on Fractures and Dislocations is also very clear and instructive. No student of Surgery should be without a copy of this book in his study room.

SYMPTOMS OF VISCERAL DISEASES.

By Francis Marion Pottenger, A.M., M.D., L.L.D., F.A.C.P., Second Edition, 86 Best Illustrations and 10 color plates S. 5·50. 387 Pages. C. V. Mosby Company, St. Louis, 1923.

In this book the author has attempted to interpret so far as may be possible in terms of visceral neurology, symptoms which are found in the everyday clinical observation of visceral disease. It is a study of visceral disease from the standpoint of the patients. It also shows how pathological changes in one organ affect other organs and the organism as a whole, through the medium of the visceral nerves. The monograph is arranged in three parts :—

PART I.—The Relationship between the Vegetative Nervous System and the Symptoms of Visceral Disease ;

PART II.—Innervation of Important Viscera, with a Clinical Study of the more common Viscerogenic Reflexes ;

PART III.—The Vegetative Nervous System. A natural order would be to consider the vegetative nervous system first, since it is the basis of the study. Owing to the fact, however, that its consideration must necessarily be somewhat technical, it seemed best to place the more practical subjects first. Parts I and II, therefore, which contain the practical application of the principles of Visceral Neurology to Clinical medicine, including many of the original discussions, are placed first, while a review of the vegetative nervous system will be found in Part III. The book contains 86 very instructive illustrations with 10 colored plates. These illustrations are very useful and very impressive. Though the book is intended more for the Specialist, it is not out of place to mention here, that it will be best fitted to be in the hands of a general practitioner. The learned author must be congratulated on the production of this useful book.

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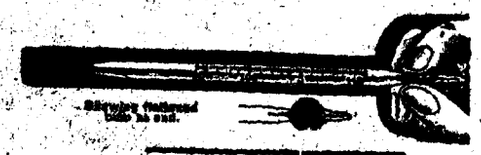

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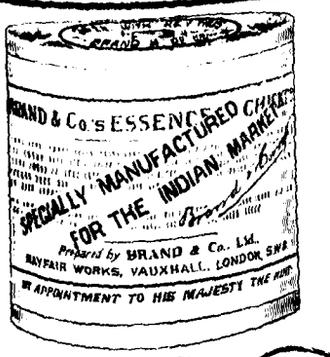

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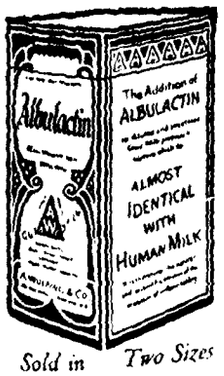

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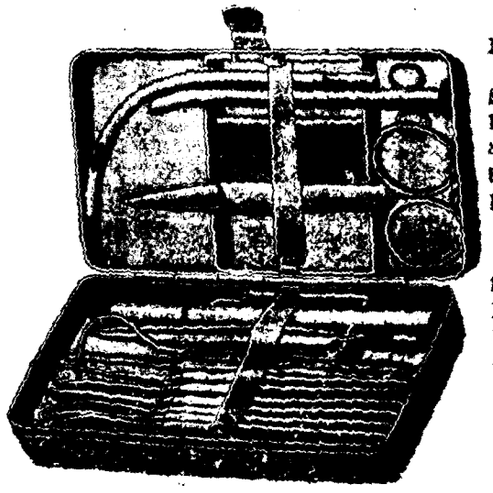

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The Antiseptic

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ORIGINAL ARTICLES.

*USE OF BIFOCALS IN THE YOUNG.

By

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When a person's power of accommodation is so reduced that, with the necessary correction in case of emetropes and without glasses in case of emetropes, he cannot focus his sight comfortably for a comfortable near distance and needs a special pair of lenses for near work alone. These when framed with the lenses correcting the ametropia or with plane glasses in case of emetropia, form the Bifocals. The contingency arises in Presbyopia in certain cases of high degrees of myopia and in aphakia. In the first class of cases the age of persons wearing these is about 40 or over; in the second class of cases it is rarely less than about 30 or more and in the last class though a separate pair is required for near work the lenses are so thick that usually two separate pairs of specs are advised—the only exception being the cases where the aphakia has been effected for High Myopia.

Again the lenses for near work will in every case without exception be of stronger focussing power than those needed for distance and are placed below the latter.

I was therefore surprised on my arrival in Madras to see so many young men in the town wearing bifocal lenses—by young I mean boys of 18 and 20 years. At first I thought it was the work of Opticians. But later I discovered that some of these young men had consulted eye specialists of some sort or another.

Out of many such cases that honoured me by consulting me I shall mention only three here.

* Specially contributed to the Antiseptic.

I. K. R. a boy of 22 from Trichinopoly District came to me on 12—11—23. He wore a bifocal with

$$\text{Dist. } R = \frac{-3{\cdot}5}{-1{\cdot}0\ \downarrow} \quad (= -3{\cdot}5$$

$$\text{Near } R = \frac{-1{\cdot}0}{-1{\cdot}0\ \downarrow} \quad (= -1$$

I did his retinoscopy &c. and prescribed—

$$R = \frac{-3{\cdot}5}{-1{\cdot}0\ \downarrow 80^{\circ}} \quad (= -4$$

for constant wear. His distant V = 6/6 and near V = ji. No complaint of discomfort was ever made.

II. S. P. 18 years old, a student of the Government Medical College came to me on 4—3—24. He wore bifocals with—4·0 Sph. for distance and —2·0 Sph. for near work.

After retinoscopy &c. I prescribed him—

$$R = \frac{-4{\cdot}5}{-0{\cdot}5\ \downarrow 60^{\circ}} \qquad (= \frac{-3{\cdot}5}{-0{\cdot}5\ \downarrow 90^{\circ}}$$

for constant wear. He got 6/6 and jii with them. The latter could not reach ji because he had already weakened his ciliary muscle by the bifocals. But now with my glasses which will give some exercise to the ciliary muscle I am sure he will recover its power in due time.

But these cases are nothing to the student I came across on the 23rd of last month and which is the immediate cause of this childish article.

III. K. N. a Malabar Brahmin of 26 years, a politician in the making came to my rooms with a friend of mine who himself is a sort of an eye specialist. My friend told me that Mr. K. N. was using convex lenses for distance and plane for reading and asked me as to what condition of refraction this was. I confessed I could not concieve of a condition where such a prescription would be needed and explained to him my reasons. I also added that judging the gentleman's age to be about 25 I would say that he did not need bifocals at all and that evidently he had been to an optician for having his eyes tested. The budding politician remarked that it was a doctor that prescribed the glasses and asserted that whatever be my theories (my rooms are not crowded with patients and I have been only about 3 years in Madras and very few have an idea of what sort of work I had done in England and how long in practice about glasses) his pair was giving him entire satisfaction. As his glasses were a doctor's work I apologised for my comments and would have left the matter there; but at the request of my friend I took the politician to my consulting rooms.

His bifocals contained + 1·5 spheres with small cylinders for distance and 0 0 for near work. After Retinoscopy &c. he was prescribed R. + 1·5 Sph. & L + 2·0 Sph. He got 6/6 with these. On making him read the near types he said he could not read the smaller prints: presumably because he knew they were the glasses with which he read the distant types and because he was a politician that would not be beaten by a medical man. After a little manœuvering of lenses it was proved to him that he read ji best in the R + 1·5 Sph. 2 L + 2·0 Sph. i.e., the same with which he saw best in the distance.

His own pair of spectacles was then given to him and he was asked to read the prints with them. After a little argumentation he agreed that he could not read so well with the lower parts of the bifocals as with the upper parts.

Before he left my consulting rooms he put on a wise look and said to me 'now that I think of it, I remember that while reading with my glasses I used to tilt my face and read through the upper glasses only. I seldom used the lower ones'.

After a fortnight or so I heard from him that he was finding the new pair of spectacles far more comfortable than the previous one and that he was now looking straight at people when talking to them instead of tilting his face like before to see through the upper set of lenses.

The principles of prescribing glasses are given in every eye book and are well-known. But for the convenience of general practitioners in the moffusil who being far away from eye specialists have to attend the minor eye needs of their patients themselves and who have no time to see text books, I shall sum up here a few pros and cons about bifocals.

A.—In Hypermetropia there is no need whatsoever for bifocals. The correcting lens for the distance will be the best for near work also When Presbyopia sets in, which is about the age of 40 a stronger lens will be needed for the latter and a bifocal may be prescribed.

B.—In pure Presbyopia a bifocal with plane lens above and the Presbyopic lens below will prove more convenient in most cases than simple Presbyopic lenses.

C.—In Myopes when the defect is corrected in childhood and glasses worn constantly the same lenses hold good both for distant and near work. The muscles of accommodation in these cases get their normal exercise and retain their normal function.

In neglected cases when the patient goes to a doctor only at a later age, the accommodation muscles not having had their normal work are much weakened and for near work he finds it more comfortable to have

lenses weaker than those that correct his Myopia. Hence in most cases tested by Opticians who depend on purely subjective methods of examination an under—correction is prescribed for near work. The disadvantages of this are that no effort of accommodation being required the ciliary muscles atrophy and as the degree of convergence depends upon the amount of accommodation requisitioned each time, the convergence and the converging muscles—the internal recti also get weakened. This renders it difficult or impossible for the two eyes to fix simultaneously on near objects and makes one eye gradually deficient in sight and leads under certain circumstances to divergent squints.

Whenever therefore one comes across a myope of under 30 years, one should always insist on his wearing the same set of lenses both for distant and near work. After a little perseverence he usually recovers his power of accommodation. One point must be emphasised to him namely, that he must wear glasses constantly and not just when he pleases. For, if left to him he will very likely prefer to read his books without glasses or at least he would find it just as convenient to read books without them as with them and therefore when doing some lazy reading as in bed, would avoid use of glasses.

After 25 or 30, in cases not used to wearing a correction constantly, it is generally difficult if not impossible, to make the party wear the same correction for distance as well as for near work, owing to the irreparable loss of power of accommodation, and one has to give a weaker lens for near work which is certainly more convenient in the form of bifocals.

One great exception has to be made. When the myopia is of such a degree that the correcting lense for distance reduces the size of reading prints to such small dimensions, that the patient has to hold the book too near to be good for his convergence—over-effect at convergence is a great factor in the causation of malignant myopia—then weaker lenses must be prescribed for near work.

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* NEW METHODS OF CURTAILING EXPERIMENTS ON ANIMALS FOR TUBERCULOSIS.

By

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Although the question of experimental guineapig tuberculosis really belongs entirely to that field of experimental medicine, which is chiefly theoretically interesting, it is nevertheless thought very highly of practically, on account of its great importance for the primary diagnosis of kidney

[Specially contributed to the Antiseptic.]

tuberculosis. Modern urologists have indeed the tendency to set up the diagnosis of kidney tuberculosis grounded solely on the kystoskopical condition, without any established evidence of tubercle bacillus. But these endeavours must at present be accepted with the very greatest caution, for they may easily lead to diagnostic boundlessness especially in cases, which are by no means rare, where the bladder is for the moment absolutely unaffected and a verification of its condition by the kystoskops therefore not possible. Many attempts have been made to shorten the time needed for the * animal experiment, which usually requires at least 5 weeks, for this is far too long for the surgeons, on account of the necessity, especially in cases of onesided kidney tuberculosis, for an early operation. If, in accordance with the modern view, one regards tubercle infection as a bitter struggle between the tubercle bacillus forcing itself into the organism and the body, which resists the infection, then there are two possibilities of shortening the conflict in the bacillus favour. One must intervene in such a manner, that either the tubercle bacillus is strengthened in its attack or that the body is weakened in its defence. All reports in literature of attempts to curtail animal experiments must be understood in this way. The first mentioned method has been much more frequently tried. Oppenheimer and Arloing injected the infectious substance in as large doses and in as many different places as possible (subcutaneous, intrapleural, intraperitoneal.) Calmette tried to infect the same animal several times and Mertz proposition of crushing the nascent glands also comes under this heading. The second possibility shortening the experiment by injuring the body's means of defence has been much less often tried. Maragliano for instance gave the animal adrenalin before the infection, in order to make it more susceptible to the infection, but hitherto all experiments in this line have not led to any recognised success.

My own train of thought was as follows: the mechanism of defence in a body, whether human or animal, depends chiefly upon the existence and working capability of the white blood-cells, It is they principally, who take up the fight against the entrance of any source of disease into the body. One could therefore expect, if it became possible to permanently keep down this portion of the body defence at the entrance of the infection, that the tubercle bacillus would be able to subdue the organism in a much shorter space of time, under these favourable conditions. In experiments on animals various paths lie open, either to set up leukopenia respectively to make them a leukocyt. The experiments of Lippmann and Plesch must be recalled, who injected intracardial Thorium X for this purpose. Benzol too, which before the era of Rontgen rays, played a great part in the treatment of Leukamosis, comes in question. My own experience shows however, that if Benzol is to bring about the desired effect, the medication per os is

the only one that comes in question. Even this leads in time to difficulties in guineapigs. Injections of it under the skin take no effect and intraperitoneal injection is fatal, even in the smallest doses.

I myself resorted to Rontgen rays to bring about leukopenie. It is a well known, that these are a strong poison for the leukocyts. But before speaking about the results of my experiments in detail, I must make some preliminary statements. The choice of the guineapigs used simultaneously for control of the experiment, is a matter of the very greatest importance in forming an opinion of the result. The animals ought to come from the same litter, or at least be of the same weight and as nearly as possible of the same age. French authors also (for instance Debre) have again and again emphasized the fact, that animals of different ages and different weights show entirely different powers of resistance in fighting against the tuberculosis and that therefore a comparison of experimental results on the different animals is quite impossible under such conditions. How is it best possible, I then asked myself to obtain a clear idea objectively of the progress of the contest between germ and organism going on in the animal's body? Various methods came under consideration. One proposition is to note the animal's temperature and weight regularly and hereby observe the fluctuations and deteriorations in their condition more quickly, than is possible by the eye alone. But as a matter of fact, I found by experience, that these measurements are practically of no value. Guineapigs often show a rise in temperature up to over 38° C without disease being the cause, that small increases of temperature are, to begin with, pathologically not absolutely reliable. The weight too cannot be unlimitedly taken into account. It is well-known, that shortly before death, animals are heavier than before infected with tuberculosis, which is probably due to ascites having set in during the course of the illness. Lastly the formation of blood can also be taken just as little into consideration in judging the process of infection, as extended experiments on perfectly normal guineapigs have shown, that even when the total of white cells has remained unchanged their percentage composition of the different forms of the white blood cells (polynuclear leukocytes, lymphocytes, eosinophil) may be quite different. So the last resource left to observe the progress of the infection is to count the white cells daily at precisely the same hour. One word over the numbers with normal guineapigs. The average of 20 animals gave the number of 16700 leukocytes and this number found by me corresponds with other literary accounts. On the other hand there is no confirmity of opinion over the normal formation of blood in guineapigs. This is probably due to the difficulty there is in distinguishing the monocytes and lymphocytes in these animals The only thing, that can be positively asserted, is that there are very few

polynuclear leukocytes in comparison to what the human blood contains only 15–30%.

My own conclusions are founded on studies on more than 100 guineapigs and each experiment consisted of a series of 3–4 animals, one as good as the other. Of these one was only infected (=1 animal) one treated only with Rontgen rays (Ro.—animal) and the others were both radiated and infected (=Ro +I. – animal). The animals were put into small boxes for the radiation, which made it possible to keep them in the full light of the radiating bulb during the whole period of treatment with Rontgen rays. I used Coolidge tubes. Generally the animals were given 3/4 of the erythema doses for human beings (German measuring). In the following sketch, I will describe the process of one of these experiments with positive result.

After the radiation the number of the white blood cells in the *Ro. – animal* decreased noticeably. They remained for 2 – 3 weeks at numbers between 4 – 6000 and then little by little regained their former number. If the radiation be properly carried out and the animal is otherwise healthy, there ought not to be any permanent injury left behind.

The *I. – animal* generally shows, as effect of the shock, a slight temporary sinking of the leukocytes curve, after the infection, which soon gives place to the hyperleukocytosis in connection with the fight against the invading tubercle bacillus. On the other hand the state of things with the *Ro. + I. – animals* is quite different. With them, exactly as in the case of Ro. – animals, the white cells decrease considerably after the radiation, but then comes the infection as well and the consequence is a further diminishing of the white blood cells. From this one sees, that the whole fighting mechanism has given way. The animals themselves too in contrast to the radiated and the infected ones, make an ailing impression. They sit squated in a corner of their shed and do not clean themselves properly. Finally they lose their somewhat longish shape and look like swollen sick birds with their ruffled hair. In the most favourable cases death comes in about 8 days after the infection, leaving positive post mortem proof of the tuberculosis. If the I. – *animal* be killed at this same time, there is no sign of tuberculosis to be found.

Of course, a biological procedure of this kind, may be the source of many mistakes. It may be considered a great inconvenience, that under all circumstances a guineapig, which has only been radiated, must be included in the experiment as a control: but this is absolutely necessary, for this animal must prove by its survival, that the Rontgen dose given was not permanently harmful to a healthy animal.

A second real source of misleading lies in the fact, that this guineapig experiment is only a biological and not a test experiment and that even

when carried out in the hitherto usual manner, it is not always crowned with success and that also in exceptional cases the guineapig does not always fall ill, despite the infectious matter being reliable tubercle bacillus. In the course of my experiments I myself have often been convinced in quite remarkable manner, that under precisely the same conditions, one animal falls ill and another does not. In animals as in human beings the power of fighting against infection is very greatly dependent upon dispositional and constitutional influences.

A further cause of failure is as follows; it is no quite exceptional case, that after the process of infection has been carried out according to the above description the Ro. + I.—animals perished remarkably rapidly in 5—6 days. According to the whole form of the experiment—infection with diluted sputum containing tubercle bacillus—the animals must have died from tuberculosis. Injury from too large a dose of Rontgen was out of the question, as the Ro.—animals were quite well, and yet not the slightest sign of tuberculosis could be found pathologically anatomically in these Ro. + I. animals, which had died so quickly. The spleen was even astonishingly small. Neither microsopic nor histological tuberculosis proof lead to the end in view and bacteriological examinations, such as have been proposed on many sides (Korbsch, Rochaix, Petrof) leave one in the lurch in the same way. Just from the comparison of the Ro.—animals and the I.—animals (normal condition, no acute, dangerous symptoms) with the Ro. + I. animals (rapid decay) is one given the firm conviction, that the latter have succumbed to the potency of the two-fold mischief done by the radiation and the infection. And here, up to now, bacteriology and respectively the sceince of immune biology fail to give us any help, for hitherto they have not been able to place any method in our hands, by which, in such cases, we are able to bring proof, that death has been caused by tuberculosis. That this is no easy task must be acknowledged for even with manifest tuberculosis in a guinea-pig, it may be found extremely difficult to bring proof of tubercle bacillus. This is the experience of every body, who has gone deeply into experimental guineapig tuberculosis. As a rule, it has been my aim when infecting animals to follow as far as possible the conditions of practical animal experiments, especially with regard to the quantity of infecting matter used. At the beginning especially the trials were made with very much diluted sputum or urine containing tubercle bacillus; towards the last I preferred to use exudations of the pleura. The technic of infection, which I found to answer best, was the injection both intra-peritoneally and subcutan eously in the neighbourhood of the mamma. In the male animals this spot has the advantage of being considerably less hairy, so that it is easier to observe any changes that take place at the spot of injection. It is always a question

when sputum or urine containing tubercle bacillus is used, whether the mixed infection is of consequence to the result of the experiment. I have at various times therefore treated a portion of the infectious matter with antiformin before the injection and have injected the other half without any preliminary antiformin treatment and found that this antiformin treatment had no perceptible effect on the result of the experiment.

From the results of the researches up to now it follows:—speaking quite generally that it is possible to curtail experiments on animals by a combination of radiation and infection. In about 50% of the series it was possible to produce absolute evidence of tuberculosis in a shorter time than the usual period of at least 5 weeks. The time, which this earlier proof took was again divided into two parts, the one-half taking 8-10 days after the infection and the other half up to 20 days, Quite unbiassed one may say as follows:—the difference between the I.—animals and the Ro. + I.—animals is, in any case, very striking. The latter die of their own accord, make an unmistakable ailing impression before their death and the postmortem proved tuberculosis as distinct. The I.-animals on the other hand are at the same time seemingly well and have to be killed in quite healthy condition, if the autopsic result is to be compared with that of the Ro. + I—animals. And with them tuberculosis is mostly non-existent or exceedingly difficult to prove. In far the greatest proportion of the individual experiments it often happens, that the control animals (i.e., the guineapigs, which have been infected but not radiated) of the Ro. + I.—animals, who have died off about ten days before, if allowed to live make six weeks later a perfectly healthy impression and if then killed, it is generally extremely difficult to find any reliable traces of tubercular disease in them. The case of a tuberculosis of the pleura as particularly remarkable in which—to some extent—classic animal experiment was carried out without a previous radiation and which ended with a negative result, while an animal, which has been infected at the same time, but radiated beforehand showed tuberculosis exceedingly distinctly after only 18 days.

It may safely be asserted, that the systematic counting of the white cells in an infected animal procures the examiner an unusually exact picture of the defensive mechanism of the organism. Although hitherto this has been principally a question of interesting practical scientific problems, the above described method may be called upon to take part in far more important theoretical question. As is known, many investigators of tuberculosis are of opinion, that a tubercle bacillamia exists even in the early stages of lung tuberculosis. These writers hold, that the tubrcle bacillus is much more frequently to be found in the blood of the tuberculous patients, than we were disposed up to.

now to admit. Especially Libermeister and Austrian learned men have expressed this opinion. My method of modifying animal experiments, which gives positive results with the smallest quantity of infection may well be called upon to settle this question. Experiments in this direction have indeed, to a certain degree, been brought to a conclusion. It has been thereby shown, that with very few exceptions, animals stand the injection of comparatively large quantities of blood (subcutanious and intra-peritoneal 15 ccm together) without any visible momentary injury. The blood was injected immediately after it had been taken from the vein of the patient, without any sort of preparation beforehand. The blood of clinically varied patients was used, from those, who were seriously ill and from those, who were slightly ill, from people with high fever and from others, who were free of fever, but so far, it has not been possible to find proof of tuberculosis in a single one of the animals infected in this manner. All the animals without exception got over the first shock, which varied in severity and showed no signs of illness. Judging by experimental results, I must therefore, at present, reject the hypothesis of the regular existence of tubercle bacillamia in different stages of lung tubercle.

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*"SOME ASPECTS OF SURGERY IN INDIA."

By

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(Continued from Page 626 of 1923.)

Throat, Ear, Nose :—Work done in special clinics is very little ; there are few clinics ; observations are more personal and independent.

Otomycosis is frequent in India ;

Adenoids is uncommon in India (Niblock).

In England removal of Tonsils and Adenoids is more common than any other operation. G. T. Birdwood (I. M, G., March 1922) "Indians themselves do not so frequently suffer from enlarged Tonsils, though I have occasionally been called upon to operate on them. Removal of Tonsils and Adenoids is frequently called for in the large towns of India where European and Anglo-Indian communities are met with."

The disease is met with frequently : both the parents and the doctors are to blame.

There were only 18 cases of operation on enlarged Tonsils of which 2 are Anglo-Indians, 2 cases recurred ; there was one case of Gumma of Tonsils ; only 4 cases of Adenoids.

*Specially contributed to the Antiseptic.

There was one case of Gumma of Larynx in a male aged 65 died 54 days after high Tracheotomy of oedema of lungs.

Is Sinusitis more common here than in cold climates ?

Rhino Sporidiam Kineyali is found in cases of nasal polypus as in other situations in this Presidency and in Bengal.

Myiasis of Ear, Nose, Frontal and Ethmoidal Sinuses and Rectum is very commonly seen in this country all over in poor dirty class of people.

Suppuration in Ear is very common and they are not properly treated : there is no definite campaign of work against prevention of deafness. One case of otitis media died of meningitis.

Diseases of the chest :—There were 8 cases of Empyema Thoracis 6 right and 2 left; one died ; there was one case of abscess of Lung. Very little is known about tumours of Lungs, chest wall and mediastinum as systematic post-mortem examination could not be done.

Periostitis and osteomylitis :—Niblock writes "The bones that are most affected in Madras are the lower end of the Femur, either end of the Tibia, the lower more than the upper, the upper end of the Humerus and the Lower Jaw."

Osteo—mylitis in this series.

		Caries.		*Periostitis.*	
Tibia	19	Rib	7	Fibula	2
Humerus	15	Phalanx	8	Radius	2
Femur	14	Jaw	14	Tibia	3
Lower Jaw	17	Clavicle	1	Femur	4
Rib	2	Oscalcis	5	Humerus	1
Os calcis	1	Metatarsal	1		
Fibula	1	Tarsus	3		
Phalanges	2	Metacarpal	2		
		Zygoma	1		

There was one case of osteoporosis of Skull. Skull was X-Rayed—Sphenoidal air cells apparently enlarged. No enlargement of pituitary fossa ; Humeral epiphyseal line about ¼" in depth—osteoporosis in shaft very marked, also marked in right clavicle with apparently greenstick fracture in the middle."

Fractures :—268 ; There is no peculiarity in the classification of the bones, sites and sex in the matter of treatment, except for fracture of patella. No open method is generally done. There are no sets of cases where the results have been studied and published after treatment in this country. In the villages, potters and bone setters flourish and dry gangrene is commonly met with during their treatment.

Diseases of the Spine:—There were 5 cases of fracture dislocation of the Spine; all of them died; Laminectomy is an operation which is done in very rare instances in this country. I have seen two cases in which patients were able to move about freely under treatment on conservative lines.

Tuberculous disease of the Spine:—There is no proper place in India for giving suitable treatment to these cases except in General Hospitals. Albee's operation is occasionally practised. The majority of these cases died in two or three years.

Head injuries and diseases:—Rogers I.M.G. August 1913—"0.6% out of 4800 post-mortems were gummata of the Brain; Cerebral abscess was met with thrice in 4800 medical cases, one was secondary to middle ear disease, one was apparently broken down gumma in the Brain—a gumma being also present in the Liver, the remaining one, being the softening of a localised hæmorrhage."

No cases of abscess of Brain (clinically) were met with in this series I have seen one case of Temporo-sphenoidal abscess after middle Ear disease (died).

Middle meningeal hæmorrhage was not met with in this series. There is only one series of record of treatment of "depressed fractures of Skull" by Major Duer in the Supplement of I. M. G. of 1914 in Burma.

The late complications of Scalp and head injuries are only a guess to the ordinary practitioner. He has no facts published in this country to guide him; with the passing of Workmen's Compensation Acts, Jacksonian Epilepsy, Traumatic insanity and mental defects will assume some importance and their relative incidence will have to be worked out.

A case of Jacksonian Epilepsy:—In military practice. Age 25, was admitted with Epiletic fits of Jacksonian type. Slightest provocation would send him into a fit which occurred every 5 minutes. Later right side of his body became paralytic. Wassermann was returned positive—and a first dose of salvarsan checked his fits within six hours of injection. Fits became more and more infrequent and within a month after 3 injections of salvarsan his paralysis disappeared and he started going about the wards.

There was one case of cerebral tumour in a female aged about 45. Rt eye blind; Left eye sees something. Decompression operation was done and the symptoms were relieved.

There were 9 cases of concussion of Brain. There were 2 deaths; no post-mortem examination was held. There were 3 cases of fracture of Base of Skull and 5 of Vault; 6 died;—

(1) Fracture of base of Skull and fracture dislocation of spine—male aged 45. Pain and irregularity in the spinous processes of 1st Thoracic vertebrae; complete paralysis of both the lower limbs; also upper extremity. Died a few hours after admission.

(2) Fracture vault of Skull—male 75, 3½ hours duration; Trephined under CH cl. 3. Depressed fragments removed; discharged moribund.

(3) Fracture base of skull with multiple injuries; patient died 24 hours after admission.

(4) Fracture of Skull—Rt parietal bone—about 4" above the upper eyelid—Brain matter escaping from the wound. Patient never recovered consciousness: Trephined; broken pieces of bone and clots removed; died after 48 hours.

(5) Fracture of base of Skull—male. 25 died a few hours after accident.

(6) Fracture of base of Skull—70, F. discharged moribund.

(7) Fracture base of skull—with fracture lower third of tibia and fibula. Died unconscious 5½ hours after admission; admitted, 1 hour after accident.

(8) Compound fracture of Vault of Skull; injury to the anterior lobe of the brain—Male aged 60—discharged moribund.

(9) Compound depressed fracture—Skull—Vault—male aged 25—duration 3 months; received a blow on head with an axe. A partly healed wound on right side of head over parietal bone. Probe lead down to cariess bone. Paralysis of left arm; sensation impaired whole limb and left half of thorax.

Ophthalmascopic examination—no diplopia or optic neuritis operation—Trephining over Rt. parietal eminence. Long spicule of bone removed. Much thickening of durameter found. Has now quite recovered the use of arm; sensation normal; wound almost healed. Discharged cured.

There are some surgical cases peculiar to the tropics—such as Elephantiasis, Cancer, Tumours, Hydrocele, Hæmatocele, Hernias, Liver abscess, Stricture of the Urethra, Stone in the bladder, cataract, Hæmorrhoids, oriental sores, ruptured spleen, Bilharzia infection, infective granuloma, etc., etc. Our present day text books are very meagre in surgery of warm climates. Surgeons, practising or employed in the tropics, are very conservative to enlighten their students in this special branch of surgery. Owing to the crawming up of the subject just to pass the degree, student has neither the inclination nor the taste to learn more of this special branch which is likely to bring him a lucrative name in surgical practice. So much so that while every branch of medical science has been undergoing transformation, it is a pity that surgical cases of the warm climates should find a stasis.

As it is compulsory for a field surgeon to undergo a course in military surgery, and Health Officers, a course in D.T. M. & H, so don't you think it reasonable for a surgeon practicising or employed in the tropics or for a student from the tropics a course in tropical Surgery.

(10) A case of compression of brain:—Died same day—post-mortem examination. Fissured puncture of occipital bone with laceration of frontal lobe of the brain and sub-dural hæmorrhage.

(11) Female aged 60. Died 2 days after admission-p. m. Fracture of the anterior fossa of the base of the skull.

(12) Male child aged 6-p. m. Fracture of both middle fossæ and Rt posterior fossa—No injury to orbital cavity; Fracture of the 3rd, 4th and 5th ribs in the Rt axillary line.

(13) Compound fracture of skull—Female—Trephined—Cured.

(14) Compound comminuted fracture frontal bone 25-m—death 2 days after Trephining.

I have seen only one case of Acromegaly in an Indian not in this series but in military practice. The notes of the case are as follows.

Name. Bedloo. D/Br. Age 31. T. Service 3 years. 'D' Force.

Disease. Acromegaly, duration 1 year. F.S. 10 months

Admission on 24—8—19. Patient in Hospital Treatment since 5—7—19. General weakness and Frontal headache for 1 year. Malar Bones prominent, mandible elongated, general enlargement of the face—lips thick Hands flat and spade-like, fingers flat and thickened no clubbing. Trophic change of skin of Abdomen, feet and toes thick and flat. Bony hypertrophy of ribs and cartilages. Typical acromegellic look.

	Treatment.
The medicines except Aspirin not available Ry Mist Tonic Zi P. S.	R Tab. Pituitary gland gr. II Twica daily. R Extr. Thyriods Sicum grs. III. B. .... = Aspirin gr. XV. B. D.

14-7-19 (61. Ind. Stry. Hosp). Xray report". Sella Turcice large.

Measurement.		Badloo.	Dimension.
	Occipito Frontal.	8½".	8½".
	Sella Turcica.	2½ C.M.	1¾ C. M.

16-7-19 Urine. No Sugar.

21-7-19 (21 *I. G. H*). Left Hemicrania and impaired Vision left eye.

Exam:—Moderate enlargement of jaw. Hands and feet spade-like. Increased subcutaneous fat in the trunk. Scaly dry condition of skin over abdomen and Rt. elbow. Thyroid gland slightly enlarged, appears to be some impairment of vision left eye.

24-7-19 (8. *I. G. H.*) Complaint of weakness and severe unilateral headache of one month's duration.

Exam.:—Patient typically acromegelic. Dull heavy expression. Mouth constantly open. Tongue too big for his month teeth of lower jaw separated. Hands and feet markedly enlarged. Trophic changes of nails of left hand. Trophic changes of skin of abdomen and legs and arms.

Eye complaint:—Bitemporal Hemianepia. Sight of left eye very poor, being insufficient to distinguish fingers at 2 feet distance. Optic atrophy?

Tabloid Thyroid Gr. II. R. S.

24-7-1919. Blood for Wassermann Positive (28-7-1919.) History of sore on penis 5 years ago;

25-7-1919. No sugar in urine; no complaint of polyuria;

28-7-1919. X-Ray plate gives no definite information on Sella Turcica; irregularity in the skull bone; suggestive of gummatous changes;

2-8-1919. Second X-Ray shows a large Sella Turcica;

5-8-1919. Still complains of slight headache;

7-8-1919. Complains of occasional very severe headache. I lost sight of the patient at this stage.

Diseases of joints in this series.			*Joints affected.*		
Arthritis	...	24	Knee	...	33
Ankylosis	...	12	Elbow	...	10
Cicatricial contraction	...	4	Wrist	...	1
Gon. Fibrositis	...	1	Ankle	...	12
Bursitis	...	7	Hips	...	3
Tumour	...	1	Foot	...	1
Osteo arthritis	...	3			
Synovitis	...	8			

The ravages of Gonorrhoea on joints could be noticed by a superficial observer as could be seen by a number of ankylosed joints in faulty position in the out-patients and villages. They come too late for treatment and will not tolerate the usual methods of treatments; occasional excisions and very rarely arthroplasty is done.

Suppurative arthritis of the knee always prove fatal if early amputation is not done. It looks as if the Indian is not able to stand an acute joint suppuration. Conservative operations even done in the very early stages have not been quite successful.

Injuries of joints in this series as in-patients only:—

			Joints affected.		
Sprain	...	8	Knee	—	29
Contusion	...	49	Hip	—	7
Dislocation	...	16	Shoulder	—	6
Acute Synovitis	..	21	Ankle	—	7
			Lower Jaw	—	1
			Elbow	—	3
			Wrist	—	2
			Clavicle	—	2

Diseases of Rectum and Anus.

DISEASES OF RECTUM AND ANUS.

	Ischio-Retal abscess.	Fistula in ano.	Cancer Rectum.	Piles.	Anal abscess.	Polypus	Fissure.	Ulcer.	Stricture.	Prolapse.	Submucous Abscess.
	M.F.Mc.Pc.	M.F.Mc.Pc.	M.F.Mc.Pc.	M.F.Mc.Pc.	M.F.Mc.Pc.	M.F.Ch.	M F.	M.F.Ch.	M.F.Ch.	M.F.Ch.	M.F.Ch.
No.	13 1	76 4	2 1	109 21	21 3	2 1	28 13	2 3	1 2 1	8 5 9	6
Cd.	12 1	1		24 6	21 3	1 1	7 1			1	6
Rd.		63 4	2	84 15		1	21 12	1 3		7 5 9	
Ow.		12	1						1 2 1		
Died.	1	1		1				1			
	Sepsis	after operation		6 days after operation							

Why should there be such disproportion in sex distribution ? Males 267, Females 52, Children 11

Proctitis is commonly seen in women due to Gonorrhoea and treated in the Venereal wards. Ulceration of Rectum :—I do not think the incidence as shown above represents the correct figure: it is extremely common; the causes and details have not been studied properly as many of the cases do not remain long to undergo treatment. Colostomy is disliked by all the patients; even the one or two patients who realise the advantages of colostomy as a matter of treatment get disgusted at their state; Tuberculous ulceration of the rectum is extremely common in both sexes: amoebic dysenteric ulceration of rectum was met with in 1 male; Syphilitic ulceration of rectum was met with in 2 females; one case of ulceration of Rectum in male after recurrent dysentery. Section report "Chronic inflammatory; no evidence of malignancy" ulceration due to infective granuloma is also met with.

Cancer of the Rectum according to Niblock "is rare in India"—more common in men after middle age". More cases are met with than those shown above in the table. Many cases come at a time when they are inoperable. They are poor surgical risks.

On account of the number of cases ulceration of the Rectum, Stricture of the Rectum is very commonly seen; how these cases terminate cannot be ascertained; no case of intestinal obstruction due to these conditions has been met with; propably they die of some intercurrent illness.

Stricture of the Rectum according to Niblock "is most common at the junction of the anal canal with the rectum; may also be found 2 or 3 inches higher; it may also be found at the junction of pelvic colon and the rectum. In India it is commonly low down." Lockhart Mummery in medical Annual 1921 writes on non-malignant stricture of the Rectum, "The commonest cause of stricture of the rectum is stated in almost all cases to be due to syphilis. Of late years this has been denied by almost all modern proctologists, and it is now generally agreed that by far the commonest cause is sepsis. Indeed many proctologists now maintain that syphilis is an exceedingly rare cause. In the entire records of St. Mark's Hospital for Diseases of the Rectum there are only two undoubted cases of syphilitic stricture of the Rectum, so that at any rate in England it would appear to be a rare etiological factor. On the other hand it is generally agreed amongst surgeons who have practised amongst the Negro population of America and among the natives in India, that syphilitic stricture amongst these races is common." I do not know the literature about Indian cases. A good many of the cases give a positive Wassermann even in cases where clinically the ulceration is tuberculous. There is no case in this series where pathological examination is done.

As regards the value of colostomy, a few days ago I saw a case of stricture of rectum on whom a colostomy was done in an ordinary villager 21 years ago by Col. Maitland I. M. S. He is in good health. A case of cancer of Rectum lived nearly 3 years after colostomy only.

Disease of the Bladder. Stone in the Bladder is not common in the Southern part of this presidency; in Rice growing and eating India it is rarely met with; Keegan, Freyer and many others have studied and have recorded all details.

Only the causation has still not been fully worked out. Ectopia Vesica was seen twice in this series.

Tumours of the bladder seem to be rare; not diagnosed in this series.

Bilharzia haematobia was not met with; it is seen in this country only in imported cases.

Enlarged Prostate :—Capt. E. O. Thurston (I. M. G. Feb. 1909), "Freyer first brought his operation in 1902 to public notice; only 38 cases were published up to February 1909:

Geographical distribution—" in Punjab common; it also appears to be common in Western India and United Provinces; 4 cases from Kashmere; no cases have been found coming from Madras, Assam and Burma; appeared to be rare in Calcutta; commoner in South Behar."

The fault is the cases are not reported on in this country. Enlarged prostate seems to be quite common; probably many cases are not operated on.

Major T, H. Symons in G. H. Report 1910 "only one case of Enucleation of the Prostate; it is not often that a suitable case is met with in a native " why ?

Lt. Col. Thompson wrote in similar strain from Secunderabad. There were 11 cases in 3 years in this hospital and 4 were operated; one was of the hard fibrous variety. The fact that Indians do not live up to the same age period as Europeans has also to be taken into consideration.

Age group in this series :—

50—1

55—2

60—1

65—3

70—1

75—1

Not known 2

K. M. Walker writes in B. M. J. February 25, 1922 on old age enlargement of the prostate. "No clinical relationship can be established between enlargement of the prostate and urinary infections whether gonococcal or otherwise. As will be subsequently shown, enlargement is particularly rare in the very races that suffer most from venereal disease.

Racial distribution :—It is to be borne in mind that enlargement is a disease of old age, and that where old men are rare enlargement also will be rare.

India—Fairly common, but less than in England; 30 in 1000 of male outpatients.

Condition definitely commoner in Muhamadans than in Hindus. Found more amongst the well-to-do than the hospital class; onset of symptoms earlier than in England. Very rare in Japan, Egypt and South Africa. The conclusions drawn by him are as follows :—

That enlargement of the prostate is a condition having definite distribution that is anthropological than geographical in character common in the caucasian race both in Europe and America; less frequen in semitic stock, Arabs and in India. Extremely rare in Mongols and Negroes.

Enlargement has nothing to do with sexual excesses, masturbation previous attacks of gonorrhœa,

Enlargement generally is commoner amongst meat-eaters and those leading the sedentary lives of cities than amongst vegetarians and spare eaters.

Oct. 1910—I. M. G. Lt. Col. H. Smith "The large adenomatous prostate so commonly seen in white men we so seldom see in the native of the Punjab and it does not exist in the native of the Punjab. The usual prostate which I see in old men is a small hard prostate, in many cases Schirrhuis cancer of the Prostate, and I adopt the Perineal route.

"Acute inflammation of the Prostate" is a disease of under 50 years of age as a rule. I have seen a case as young as 14 years of age. I see on an average from 6 to 8 cases of prostatic abscess.

There were two cases of gumma of Testis and one of sarcoma in this race; no operations were done for undescended testicle :

Lt. Col. F. P. Connor, I. M. G. June 1922 records malignant disease of 3 cases of retained Testis and says that the malignant disease of the Testis is rare in Bengal although the number of scrotal conditions should favour a new growth; can it be that Lymphatic obstruction is inimical to the new growth? These facts also favour the view that in malignant disease the testis is as a rule embryonic in origin.

Hydrocele (120 in this series).

The cause for the frequency of this condition has not yet been worked out.

Orchitis.—Filaria is an important cause in this country; gradually hydrocele occurs; but how the other cases terminate is not known.

Epithelioma :—of the scrotum was seen only in one case; said to be common in Kashmir.

Elephantiasis of Scrotum :—27 cases in this series; This is an important Tropical Surgical operation; has been fully studied by Sir H. Charles and Col. Maitland. Recurrences are still common and the method of prevention of recurrences would have to be studied. The end results of the operation as regards the married condition of the patients have not been noticed. Generally in recurrences I have seen that there is no difference from the previous condition of the scrotum but in an young man 2 years after operation it was noticed that the median raphe remained as it was and there were two swellings on either side of it with a hydrocele and elephantoid condition of the skin.

In I.M.G. Oct. 1910—Major R. Bird, I. M. S. records *Septic phlebitis of the Spermatic Cord*" This is a rare condition cases of which have been observed from time to time in Calcutta. So far as is known it has not been described in India although a somewhat simliar condition has been noted in Europe (funiculitis Castellani). It is

apparently purely streptococcal in origin, but the path of local infection has not yet been traced. There is no history of external wound either scrotal or remote. It is distinguished by its sudden invasion the rapid development of septicaemia, and its rapid termination if not promptly and effectively treated. After operation the temperature falls rapidly and the patient is convalescent in a week. If the point has been left beyond the 4th day, still more if beyond the sixth day, the prognosis is very grave despite operation.

Epithelioma of the penis:—Very common; (See Tumours section). Recurrences very common after partial amputation, which is never done. Even after complete extirpation, 4 years after there was recurrence in the glands and the patient died.

In I. M. G. Sept 1909 Lt. Col. D.G. Crawford writes, "I have never before seen nor even heard of Elephantiasis Scroti and Epithelioma of the Penis co-existing in one patient. Such a case was reported by Lt Col. Calvert in I. M. G. May 1905."

Stricture of the Urethra and Sequalae.—There were 11 cases of extravasation of urine; 4 died on the same day after admission.

Stricture of the urethra.—There were 29 cases without any fistula; 4 cases died in hospital. The usual treatment is rapid dilatation; except one or two who occasionally come back they do not keep up after treatment. Prevention of stricture is not well understood and practised.

What is the average expectation of life in these men? What is the prognosis if they have any complications as V. D. H. or diabetes?

As kidney function test cannot be carried out in bad cases of stricture, unexpected complications may ensue. A man aged 22 on whom excision of stricture was done for traumatic stricture developed uraemia. What age is considered as the margin of safety?

Perineal fistulae:—There were 27 cases; 2 died in hospital. One patient had nearly 45 fistulae and has been leading a miserable existence for 6 years.

There were 5 cases of rupture of urethra.

Stricture of urethra in this country has got its own special peculiarities.

Roberts in Jan. I, 1920, I.M.G.-Stricture of urethra-Roberts considers that in India the type of stricture with which the Surgeon has to deal is more extensive and difficult to treat than that seen in Europe or America. Intermittent dilatation is unsuitable to these cases and could not be carried out as it may be impossible to pass an instrument through the stricture. Roberts advocates cutting down on a staff in the urethra in front of the

stricture and feeling for the stricture lumen with a fine lachrymal probe. It is no help to hold the edges of the cut urethra apart with sutures, or to try and see the opening of the stricture. The roof of the urethra is the best guide.

Having passed the fine probe through the stricture, the latter is incised with a fine tenotomy knife in 3 directions. A catheter is passed in, bladder emptied, but it is not necessary to leave the catheter in. The wound is allowed to granulate. The author considers Wheelhouse's operation disappointing, and states that the passage of a gorget through the stricture means tearing and traumatism in every direction.

I.M.G. June 1910, Gabbet.—"The cases of strictures we get in this country with so many scrotal and perineal fistulae are unknown in Europe. Most of these cases require external urethrotomy. Wheelhouse method is by far the best and safest operation. But one often meets with cases where the urethra from the meatus down to the spongy portion is obliterated, and in such cases there is no chance of passing the wheel house's end to divide the stricture. In such cases I always make the usual incision in the perineum and expose the urethra as it curves under the pubic arch through the opening in the triangular ligament. You can always roll it between your finger and pubic arch. Having defined the urethra, a longitudinal incision is made into it as far as the muscular portion. A female catheter is passed into the bladder through this opening and is retained three or four days after which it is removed and the wound allowed to granulate. Once a week a bougie is passed to keep the canal patent. In cases where the urethra from the meatus down to the spongy portion is closed up, there is no chance of passing the sound afterwards to keep the canal patent. In such cases the best procedure is to dissect out the urethra, to divide it across and to stitch the proximal end to the skin in the perineum as one does in the Pearce Gould's amputation of the penis for malignant disease.

I.M.G. 1908 June—P. C. Gabbet "In 23 cases the urethra was opened in the perineum generally for old standing strictures with urinary fistulæ. The dictum of European Surgeons that a genuine impassable stricture is rarely met with does certainly not apply to India. In several cases the urethra has been found almost entirely occluded from the meatus downwards and the patient has for years passed all his urine by multiple fistulæ so that the perineum resembles a watering pot and is converted into a mass of scar tissue.

It is the wisest policy to make the perineal opening a permanent one. Notes on the treatment of stricture of urethra and of perineal fistulæ:—P.C. Gabbet Mayor Oct. 1910—I.M.G. It is very doubtful whether a urethra

of which the lumen has become narrowed by inflammatory thickening extending beyond the mucous membrane can ever become free from the tendency to more or less gradual recontraction of its lumen, even excision of a stricture must leave a scar. I have seen a urinary fistula form in the perineum of a patient who had been told that he was cured by internal urethrotomy five years previously, and had noticed no symptoms of recurrent stricture during that long period.

It is no wonder that so many patients are met with whose perineums are converted into watering pots and their urethras have become either impassable or if a sound can be passed the passage is like that of a bullock cart over a bad country road—so bad that it is often difficult to say whether or not there is really a road at all. The most efficient way of dealing with such cases is to make a permanent opening in the perineum. If no 12 sound reveals the existence of an organic stricture, put the patient on your list for the operation.

A long incision should be made splitting the scrotum if necessary until the healthy urethra in front of the stricture is thoroughly exposed. An attempt should then be made to trace and dissect the urethra for some distance from out the rigid scar tissue through which it runs in the perineum. It is a great help if this can be done before opening the urethra in front of the stricture. The urethra is often dragged quite away from the middle line and in that part of its course is really only a cord imbedded in scar tissue.

I have never found much use in the hook of the wheelhouse's staff. Cock's puncture should never be required—it was only an operation of urgency and is better replaced by suprapubic tapping. I have never found any use for a Syme's staff."

Roundworms in Surgery.—Causes intestinal obstruction; is found in an appendix; migrates into the larynx.

Col. F. Powell Connor I.M.S. records 3 cases of inflammatory conditions due to *calcified remains of guineaworm*. "One of the cases was mistaken for arthritis of the left knee joint; a radiogram of the knee had been taken and a note written on the apparent rarefaction of the ends of the bones forming the joint." Then he remarks "defect in compact tissue is a common feature in the long bones of many non-muscular types of Indians." (I. M. G. April 1918).

Why *pyorrhoea alveolaris* is so common and dental caries rare amongst Indians?

Aneurysm:—Incidence—There was one case of false aneurysm in a man aged 60; there were only two or three cases of aneurysm of abdomina

aorta in the medical ward and no one died of aneurysm of thoracic aorta in the period of 3 years.

I have seen 2 or 3 cases of aneursysm of the arch of the aorta amongst Indians, one of the innominate artery in a Chinaman, one of the common femoral and one of Bronchial amongst Indian Soldiers and followers in the course of 3½ years.

I. M. G. April 1910,

37 years p. m. records showed only 30 cases of aneurysms among 5,900 subjects including Surgical p. ms. making ·5%. The incidence among Europeans as compared with natives of India was 2·2% and ·36% respectively and the disease was twice as frequent among Muhamadans as among Hindus. *Age incidence.* In Europeans most commonly met with between 31 and 50 years and are equally frequent above and below the age of 40. In natives on the other hand the maximum prevalence is between 21 and 40 years, only 6 out of 27 cases having been over 40 years.

Sex.—All were in men except two, both being exceptions and in Muhamadan women.

Classifications.—

Ascending aorta	38.	Transverse	24.
Descending arch	16.	Thoracic aorta	9.
Abdominal	18.	Innominate	9.
Other arteries	11.		

Total 125.

Conditions influencing the prevalence of aneurysms in India.

1. *Strains.* Natives of India do not over-exert themselves and carry out even manual labour in a leisurely manner.

2. *Syphilis* is very common but its effect in a marked prevalence of aneurysm is not seen.

3. *Atheroma.* 4/5 of the aneurysms in natives occurring at an age not exceeding 40 and atheroma not becoming common until over 40 indicates that it is not the senile form of atheroma which is associated with the formation of aneurysms in Calcutta. On the other hand syphilis is most prevalent at the aneurysm age. This is an agreement with the general experience that local arterial dilatation is associated with earlier syphilitic disease of the blood vessels and syphilis is the great cause of aneurysm in Tropical India. The rarity of natives as compared with Europeans cannot be explained.

4. *Low blood pressure* in natives of India. Average for Bengali students is between 83 and 115. Slightly higher in meat eating Muhamadans but somewhat higher in the working class of natives but considerably below the average of Europeans who eat large amount of animal food. This could explain the low prevalence in natives as compared with Euro-

peans in India in spite of early arterial degeneration and frequent syphilitic taint.

Preliminary study of the etiology of osteomalacia in the City of Bombay:—H. S. Hutchison and P. T. Patel (Glasgow Medical Journal, April 1921.) A considerable amount of osteomalacia is found in India and the disease is not uncommon in Bombay. According to Dr. Agnes Scott, the majority of cases occur in the North of India and its geographical distribution follows in the main the alluvial tracts, with the exception of the Gangetic delta and certain areas in the Madras Presidency, but she suggests that this distribution may be due to other causes such as diet and the purdah system. She states that osteomalacia is not found in areas where rice is the staple food (with the exception of Kashmir) and points out that purdah is more strictly observed in Northern India. *Deformities* are not properly studied in this country.

Rickets is seen commonly; all text books say it is rare in India; it may not be as common as in England;

"ON RICKETS"

99th Annual Meeting of B. M. A., Glasgow, July 1922.

"Section of diseases of children"—L. Findlay, B. M. J., November 4, 1922.

(1) Rickets follows the special geographical distribution of industrialism. It is a disease, too, which is never found in races living under natural conditions, but which may become exceedingly rife among these same people when they adopt the habits of civilized men, as is evidenced in the case of the West African Negro in New York and other American cities.

(2) The disease presents a marked seasonal incidence with tendency towards spontaneous recovery during summer months.

(3) Broadly it is a disease of the poor at least in Europe and America. Dr. Hutchison has recently shown that in India, contrary to what prevails here, rickets is a disease of the wealth. Findlay employs always X-Rays for diagnosis and finds "a very definite and severe degree of deficient calcification at the growing ends of the long bones."

It is also interesting that Hutchison found in Nasik dental caries to be exceedingly and equally rare in both the rich and poor of Nasik and the surrounding districts of India in spite of the relatively poor fat diet.

Rickets is practically unknown in Japan where the diet is notoriously deficient in fat and that Keratomalacia is common in the summer months and that this improves under addition of fat to diet. The absence of rickets in marasmus and cocliar disease, both chronic conditions in which absorption

is probably deficient, may be accounted for by the relatively slow rate of growth in these conditions. A certain rate of growth of rickets is essential for the development of rickets.

Hutchison's recent observations in India lend considerable support to the idea that confinement is a factor of primary importance. The complete absence of rickets in Iceland, where for four months of the year the sun never shines, is also difficult of explanation of absence of sunlight theory.

"*Diseases of Nerves*"

Trigeminal Neuralgia:—There is no analysis and study of Indian cases on record.

Neuroraphy is rarely done; was widely adopted in military practice.

Treatment of Anterior Poliomyelitis is generally on old lines; teachings of Robert Jones has not yet become widely adopted. Much preventible deformity is seen.

"*Anæsthetics.*"

Anæsthetic in India is ordinarily synonymous with C.H. cl 3. The subject is not well taught and practised; no scientific work is done on this subject. This art is in its infancy in India. It is believed that C.H. cl. 3 is the best anæsthetic for a tropical country. Correct statistics are not published There is not a single journal of society for anæsthetics. J. B. H. Holroyd. Cap. R. Amc February 1919 I. M. G. "It is quite easy to induce anæsthesia with ether and to keep the patient under in India as in England."

Why C.H. cl 3 holds the field exclusively in India?—D.J. Harris R. Amc. "There is a general belief in England that C.H. cl 3 is the only anæsthetic that can be administered on an open mask in India. This was put to the test in the 34 G.H. Deolali in 1916 and it was found that ether given by the open method acted almost as well as it does in England; but possibly a little more had to be administered especially, if a preliminary dose of morphia ¼ gr. and atrophine 1/100 gr. had not been administered before the anæsthesia is commenced. Temperature in the shade of Deolali goes up to 104 to 106 in the hot weather. It is quite probable that at temperature of 110 to 116 the administration of open ether might present insuperable difficulties; but this should not be made an excuse for the complete abolition of ether from the operating theatre during the cold season."

Dr. Wanles of Miraj has been using ether for all abdominal operations for 15 years. (May 1914—I. M. G.) We have been using open Ether and other anæsthetics without any trouble here. The portion on abdominal Surgery was published in the Madras Medical Journal for June, August, October: I have to thank Major W. C. Gray for permission to publish the notes.

CASES AND COMMENTS.

AMERICAN LETTER

By

EDWARD SWALLOW.

A man who can read the editorial in April's number of the "Antiseptic", entitled " Need of Medical Reconstruction in Madras" without an intense feeling of sadness can only be very ignorant and selfish or be so lost to all human sympathies with other members of his race as to be almost a monstrosity.

The all too brief picture given of 300 millions of human beings in these so-called enlightened days, suffering from lack of proper medical care and attention. Adequate facilities for a general system of education to these teeming millions may learn how to take care of themselves, and, what is more important still, to be brought to a proper realization of the untold blessings that an up-to-date medical science can confer upon a nation. When one reads of the lack of these things among the enormous population of India one is inclined to ask himself whether, after all that has been claimed for the humanitarianism, the all-embracing beneficience of the science of medicine, that there must be a large amount of selfishness and a narrow-minded spirit still governing the minds of those scientists in every civilized nation who head the medical profession in their several countries. Otherwise, such knowledge as set forth in this article might well start an earnest movement on the part of English, American, French and German medical men having for its object the betterment of medical relief conditions in India. Here indeed is something really great to accomplish, the uplift physically, morally and intellectually of countless numbers of human beings, brothers and sisters, every one of them of ourselves however greater our knowledge. Here, indeed is unbounded scope for the finest medical knowledge and experience to render immeasurable benefits upon a great nation.

It is not enough to merely exist, to live under conditions only a little removed from vegetable or animal life. Human existence calls for much more than what the physical senses alone can confer upon it. The spiritual nature of man wherever he may be found urges him with more or less insistence to try and find out something of the wonders he sees around him, some clue and reason as to his origin, and the why and wherefore of his existence. Given the proper facilities to acquire knowledge the child of the uncultivated parent stands nearly as good a chance to become a medical man or other scientific calling, as the child of highly educated persons. We see this every day over here in the United States and if the ordinary inhabitant of India had the means of giving his children the proper kind of education along the lines that obtain in this

progressive country, the 300 millions of her people would undoubtedly supply plenty of native doctors, nurses, pharmacists etc., so as to insure an efficient medical relief force of their own.

Here, in the United States, according to recent statistics, we have 6,830 hospitals having a total capacity of 755,722 beds which are occupied on the average by 553,133 patients. The number of internes are said to be 4,021 ; and resident physicians 3,912, making a grand total of 7,933 physicians engaged in our hospitals taking care of our sick people. In addition to this we possess 1,964 nurse training schools. All this work has not been accomplished even in this fortunate country in a few years. It takes much time and effort. The individual has to be educated so he may appreciate these things and also help to produce them. " The knowledge of one generation should make the next one wiser " only applies to an entire nation where every facility is available for all alike to learn as much as possible of knowledge and wisdom possessed by each succeeding generation. Ignorance is handed down just as well as scientific truths. The knowledge of the few should be given to all.

One of the biggest advertisements ever given to a " new cure " was recently given by the President of the United States. For some few months past, chlorine gas has been more or less before the public has been tried out in cases of influenza colds of the common variety known as "cold in the head." Experiments carried out in Government army stables where some 50 horses were infected with influenza proved very successful in rapidly curing the greater number of horses treated with chlorine gas inhalations. It is safe to assume that the treatment of common influenza colds by inhalations of chlorine gas had been well tried out upon human beings and a safe method of administering this irritating gas discovered as only a short time ago the President having contracted a cold of this sort, submitted to the chlorine gas inhalation treatment and the result was heralded in the lay press as being fairly successful in preventing bronchial complications. Now, the Health Commissioner of New York City, Dr. Frank J. Monaghan, announces that a clinic will be installed in the upper part of the city where persons suffering from colds will be able to walk in and take the treatment of dilute chlorine gas for the purpose of relief and cure.

As is well known, chloride gas is intensely irritating to mucous membranes, and air containing even a small proportion of it affects the eyes, nose, fauces, larynx, bronchi and lungs. It is also a fact that it acts more energetically upon the deeper than upon the upper respiratory passages. It has been found that even one volume of chlorine gas in one million parts of air causes a certain amount of irritation. It is stated that the " chlorine gas cure " will be in the form of one ounce of chlorine mixed with 60,000 (sixty thousand) cubic feet of air. In this proportion the chlorine

is stated to be barely detected by the patient, but is said to have a powerful bactericidal effect, killing germs without harming the sensitive membranes. The chief purpose of this clinic will be to conduct a research study to prove the claims made for this method of preventing actue respiratory infections. "The mortality from the acute respiratory infections causes such a large proportion of the total deaths from various forms of pneumonia and influenza, that any method of treatment which will prevent the initial catarrhal attacks from developing into the more grave forms of infection will be welcomed as a life-saving means.

If the preliminary study of this treatment is satisfactory a number of gas chambers will be installed in various parts of New York City.

Mention of chlorine brings to mind the fact that Carrel-Dakin Solution, the efficient antiseptic introduced duing the World War, has been included in the revised edition of the United States Pharmacopœia under the title of "Liquor Sodæ Chlorinatae Dilutus," this being the formula given for preparing same:

Chlorinated Lime.....20 Gms.
Exsiccated Sodium Phosphate 20 Gms.
Water, a sufficiency to make 100 cc.

Triturate the chlorinated lime with 400 cc. of water gradually added, until a uniform mixture results. Dissolve the exsicated sodium phosphate in 400 cc. of water, heated to 50 deg. Centigrade, and add this solution to the mixture of chlorintated lime. Shake the mixture thoroughly and allow to stand for 15 minutes. Transfer the mixture to a filter, returning the first portions of filtrate until it runs through clear, and when no more liquid drains from the filter, wash the precipitate with sufficient water to make the product measure 1000 cc. The solution should conform to the following requirements: Add about 0·02 Gm. of powdered phenolphthalein to 20 cc. of Diluted solution of chlorinated soda. No red color develops on agitation (excessive alkalinity). Forcefully add about 0·5 c.c. of phenolphthalein T. B. to 5 cc. of the solution contained in a test tube. A red color should form and soon disappear (if there is no red flash, the alkalinity is too low).

SOME OBSERVATIONS ON STRIÆ DISTENSÆ.

By

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Striæ distensæ, which are also called striæ atrophicæ although there is no histological evidence of a true atrophic condition, have been reported at various times in medical literature. These cutaneous changes were first observed on the extremities by Ascherson in 1835, and between 1856

and 1863 Reuss, Roser, and Forster reported cases in association with typhus, typhlitis, and dysentery. Kobner states that in 1867 Auerbach told him of a case of a 15-year-old boy with striæ on the thorax. This appears to be the first recorded case in this situation. Since then the striæ have also been noticed in other parts of the body and many and diverse views as to their origin have been adduced.

The condition is generally stated to be rather rare, and the figures of observers who have had the opportunity of examining a large number of cases certainly tend to confirm this. Thus Kaiser, referring to typhus, says among 1932 patients suffering from this disease he found 25 with striæ over the patella. Again, Warnecke found 12 patients with striæ distensæ on the thorax among 2,000 male cases of pulmonary tuberculosis, while among 4,000 women and girls with the same disease not a single case was observed. Kai Hammer also found 12 cases—10 males and 2 females —among 5,800 patients treated at Boserup Sanatorium. It is, however, probable that these changes are not so rare as is commonly supposed—the fact that their onset is insidious and painless probably accounting for the fact that they seldom attract attention. In the course of the last six months I have seen ten cases of striæ distensæ of the thorax associated with various diseases, and in considering these I hope to disprove some of the theories put forward regarding the causation of the condition, and confirm and amplify others, emphasising the point that they are neither a separate clinical entity nor in any way the manifestation of one disease, but are merely the result of the association of certain clinical conditions occurring in the course of many diseases.

Position and Appearance of Striæ.

Striæ distensæ have been reported in association with typhoid, typhus, colitis, scarlet fever, mumps, rheumatic fever, cerebro-spinal fever, pleurisy, pneumonia, pulmonary tuberculosis, intestinal tuberculosis, malignant disease of the pleura and peritoneum, septicaemia, and as a result of trauma. In addition to these I have also observed them in cases of infective endocarditis, nephritis, and in one patient with an abscess of the liver. Striæ may be found in the neighbourhood of the anterior axillary fold, over the breasts, abdomen, buttocks, thighs, and above the patellæ. There is some evidence that they may occur in these situations in quite healthy individuals, but when associated with disease the postero-lateral portion of the thorax, about the level of the eighth to twelfth dorsal vertebræ, appears to be the commonest situation. The skin changes may be unilateral or bilateral; in the latter case they are usually more marked on one or other side.

When they first occur the striæ are purplish in colour and appear as a series of irregular livid streaks, in which, in a few instances, small haemor-

hages are seen. The colour gradually changes to a duskymauve and after some months fades altogether, taking on the pearly-white appearance of scar tissue. The striæ are depressed below the level of the surrounding skin, as can easily be felt by running the finger across them, but some, in the later stages, of which Case 7 was an instance, take on a keloid appearance and are raised in the form of wheals. The lines are as a rule rather irregular in outline and vary from ½ in. to 8 in. in length with an average width of about ⅛ in., although in one of my cases a recently formed striæ was ⅜ in. in width. On the back these lines are horizontal, while on the front of the abdomen they are vertical, tending to run obliquely outwards and downwards as they occur nearer the flanks. On the thighs and over the axillæ they are also more or less vertical, but are horizontal when found above the patellæ; that is, in all situations the long axis of the striæ is perpendicular to the direction in which the maximum tension which seems to have caused them is exerted. In the majority of cases the onset is insidious, and the striæ are not noticed by the patients until their attention is directed to them by the doctor or nurse.

Sir Dyce Duckworth reported a case with striæ distensæ over the outer side of one thigh in which there was a marked degree of hyperæsthesia in the affected area. One of my patients, Case 7, also complained of soreness around some of the newly-formed striæ, but none of the other patients had noticed the presence of their striæ. Freund and Craven Moore have reported cases in which there was some blunting of sensation over the striæ, but in the vast majority of cases no sensory changes are found.

The striæ appear to occur only in young adults, the ages of my ten cases being within the narrow limits of 15 to 18 with one exception, who was aged 24. The age period of practically all the cases to which I have referred in the literature also lay between 12 and 22, 80 per cent. of these being between 15 and 20. One of Warnecke's patients was aged 49 but had been ill for 26 years, and there was no note as to when the striæ had first appeared. This restricted age-incidence alone ought surely to throw some light on the ætiology of striæ distensæ. There seems to be some difference of opinion regarding the sex-incidence. Cramer, Warnecke, and Hammer have found a great preponderance among the male sex, while Schultz and Riecke report the reverse. In my ten cases the sexes are equally divided.

The following is a brief history, together with a short description of the striæ distensæ found in ten cases:—

CASE 1.—Female, aged 18, well nourished, with fairly advanced tuberculosis of both lungs of one year's duration. Confined to bed since May, 1922. Irregular evening rise of temperature throughout. Well-defined purple striæ distensæ in lower dorsal region on both sides—more marked on right. These were first noticed in January 1923, but had probably been there some time. A few striæ actually over the vertebræ. Always lies on her back. Lost 12 lb. in last nine months.

CASE 2.—Female, aged 16, emaciated, with extensive tuberculous disease of left lung and early disease right side, three months' duration. Evening temperature of 101° to 102° F. A few recently formed striæ on postero-lateral portion of right side in lower dorsal region. Lies on right side.

CASE 3.—Male aged 17, *fairly well nourished, with extensive tuberculous* disease of right lung, of *14 months' duration. Artificial pneumothorax* induced on right side, July, 1922, followed two and a half months later by plural effusion. Pyrexia during first few months which later disappeared, except for an occasional rise. Well-defined striæ *distensæ on* both sides of back from ninth dorsal to first sacral vertebræ (see photograph). These appeared early in September before pleural effusion appeared. Usually lies on his back, occasionally on his right side. Gained 2 lb. in eight months.

CASE 4.—Male, aged 17, poor nutrition, rather toxic, and myoidemal present. Tuberculous infilteration of both upper lobes and also larynx, six weeks' duration. Average evening temperature 99.6° F. Faintly marked striæ over right lower ribs in lower dorsal postero-lateral region. A few also over posterior folds of axillæ. Always lies on right side. Gained 11 lb. in last six weeks.

CASE 5.—Male, aged 15, poor nutrition, with pleural effusions of left side, which gradually resolved over period of three months. Irregular evening temperature for first month. A few purplish striæ in lower dorsal region left side. Lies on left side. Gained 19 lb. in three months.

CASE 6.—Male, aged 15, with advanced rheumatic endocarditis. Ascites and œdema of legs on admission which rapidly disappeared. Large liver and spleen. Confined to bed three months. Slight pyrexia occasionally. Striæ distensæ of recent origin noticed in right lower dorsal region in February, 1923 *i.e.*, three months after admission. Usually lies on back, but frequently on right side.

CASE 7.—Female, aged 18, rather fat, with morbus cordis of rheumatic origin, auricular fibrillation, and recent infective endocarditis. In hospital for six months in 1921, when striæ developed in right lower dorsal region. By 1923 these had become very deep pearly-white scars running more or less parallel with the lower dorsal ribs. Below these on the right flank were very prominent raised striæ passing obliquely upwards and forwards from the posterior part of the iliac crest towards the abdomen, ending in the nipple line. These

were almost keloid in appearance, and were called striæ hypertrophicæ. In the left lower dorsal region and over the delto-pectoral triangles and the front of the abdomen were more recent scars of a livid hue. These were transverse over the back and more or less vertical over the arms and middle of abdomen, becoming more oblique as they approached the flanks. The liver was enlarged and tender, and there was some ascites. Two days before death patient complained of a well marked, tender, recently formed stria present in each iliac fossa. During her previous illness in 1921, patient stated she used to lie on her right side; recently she remained almost entirely on her back.

CASE 8.—Female, aged 15, with mitral stenosis following two attacks of rheumatic fever. Confined to bed entirely for two months, and then got up gradually. Pyrexia for first fortnight. Striae distensæ in lower dorsal region on both sides and in mid-line of back appeared about two months after admission to hospital. Always lies on back. Gained 6 lb. in four months.

CASE 9.—Male, aged 21, with parenchymatous nephritis of three months' duration, associated with œdema of thighs and lumbar region. Recently formed purplish striæ in lower dorsal region on both sides and also on thighs. Irregular evening temperature throughout illness. Always lies on back.

CASE 10.—Female, aged 24, with large liver abscess, secondary to small localised appendix abscess. Consolidation of right lower lobe. Very large liver. Duration of illness two months. Marked Pyrexia and toxic symptoms throughout. Very marked lineæ distensæ over lower dorsal region almost entirely on right side, noticed about six weeks after onset. Lies on back.

Ætiology.

It appears that in some cases the striæ occur as a direct result of distension from within, caused by subcutaneous œdema, or pleural and peritoneal effusions. I have recently seen striæ over the dorsum of both feet in a girl aged 12 suffering from pronounced cardiac œdema, and con clude that a simple distension of a badly nourished skin was the cause of their appearance. The striæ on the thighs of Case 9 were probably produced in the same way.

They are, however, often found in the absence of any sort of effusion, and can then be classified according to the anatomical position which they occupy: 1. Striæ found in the neighbourhood of the anterior axillary fold, and on the breasts, abdomen, thighs, and buttocks. In all these situations there is a tendency for fat to accumulate. 2. Striæ found in the lower thoracic region and above the patellæ. In these situations there is very little tendency for fat to accumulate, and the effect of position seems a much more potent factor. In both cases the underlying

features of production are the same. Kui Hemmer has reported a series of 12 tuberculous cases, all of which fall into the first group described above, and concludes that they are due to distension of the skin caused by the rapid accumulation of fat in the subcutaneous tissues.

I have recently seen two cases which support this view. One was a girl, aged 20, in perfect health, who had gained 1 stone in nine weeks, and whose thighs had increased 1 in. in circumference. She consulted me because she had noticed some livid mauve lines running vertically on the inner and outer sides of both thighs. On examination these were found to be well-defined striæ distensæ. The other case was a young man who, during convalescence after an empyema, had gained 1 stone in 12 weeks, and had developed striæ over both deltoids and above the anterior axillary fold. He stated that his chest measurement had increased to such an extent that his coat and waistcoat, which had previously been loose, now felt extremely tight and uncomfortable.

It seems that there is one group of cases at the adolescent period characterised by striæ in situations where large deposits of fat are rapidly laid down. In this group the growth of the skin is unable to keep pace with that of the subcutaneous tissues and the striæ occur as a result of this rapid distension. Hemmer's conclusion that the striæ of pulmonary tuberculosis are directly due to a gain of weight appears unwarranted when their occurrence in other situations such as the thorax is considered. Among my ten cases of thoracic striæ only two showed any appreciable gain in weight. The comparative frequency with which the striæ have been found in typhoid and other prolonged diseases in which there is a tendency to lose flesh also does not seem to support Hemmer's theory. Other observers have taken the opposite view—namely, that the striæ are the result of emaciation and malnutrition, a theory for which, per se, there also appears to be very little evidence.

A neurogenic origin has been suggested by several people, but no conclusive evidence for this has been produced, and it is impossible in the majority of cases to correlate the situation of the striæ with the disease from which the patient is suffering. Striæ distensæ are frequently found on the side opposite to that of the lung lesion, which fact, together with the absence of any pain, is difficult to explain on the basis of a neurogenic origin. Similarly there is no evidence to support the theory that there is a trophic influence at work on the skin. If this were the case why are the striæ usually so localised, and why are there no obvious sensory or vaso-motor changes? It is possible that minute hæmorrhages or thromboses may occur in the skin and play a part in the production of the striæ. The section of one of my cases examined microscopically certainly shows many points of hæmorrhage into the dermis.

The effect of posture, however, seems much more important, a point on which Parkes Weber has already laid emphasis. In those patients who generally lie on the back the striæ were found on both sides of the mid-line, although it was noticed that there was a tendency for them to be more marked on the right side, possibly from the fact that the majority of people lie more on the right side than on the left. The position and weight of the liver may also affect this. Where the straiæ were confined to one side I found on inquiry that without exception the side affected was the one on which they were accustomed to lie or had lain during their illness. In those patients who are in the habit of lying on their backs and who while in bed adopt a semi-reclining position with their shoulders propped by pillows, the lines are found in the lower dorsal region, which is the position of greatest convexity, where the skin is maintained at its greatest tension. Similarly, in a person who lies on one side, the point of maximum convexity is in the region of the postero-lateral portion of the lower part of the thorax where the striæ are commonly found. In the same way, transverse striæ are produced above the patellæ in patients who lie in bed with their knees drawn up, particularly in abdominal conditions such as typhoid. In cases of pleural effusion one may expect to find striæ distensæ on the homo-lateral side. In pulmonary tuberculosis, however, when the lesion is more or less one-sided, the striæ are found on the contra-lateral side. This is due to the fact that patients with unilateral pulmonary tuberculosis nearly always lie on the unaffected side.

Cramer described seven cases of more or less unilateral pulmonary tuberculosis, in all of which the striæ were found on the contra-lateral side. This was ascribed by him to the compensatory distension of the chest on the healthy side, but although there is no record as to which side they lay on, it seems probable, in view of the nature of the disease, that it was on the healthy one, on which side the striæ appeared. All my cases were confined to bed for long periods, the shortest being six weeks, during which time the majority of them had well-marked and continued pyrexia. This is not regarded as an essential factor in the production of the striæ, particularly as they have been found to occur in the absence of any fever, but it is merely a manifestation of the toxæmia of varying degree which appears to be a common factor in the debilitating diseases with which these cutaneous changes are frequently associated.

The narrow age-limit leads one to suppose that the skin at this period is much more susceptible to such changes. From 15 to 20 is the age when great structural alterations in the body, particularly the skin, are taking place, and if the nutrition is at all impaired by any toxic condition or prolonged disease, the skin being very delicate, the elastic fibres are more easily ruptured when subjected to any strain. This condition is

somewhat analogous to rickets, where within a definite age-period, bony changes occur as a result of deficient nutrition.

Relation of Striæ Distensæ to Lineæ Gravidarum.

An interesting point is the relation of these striaæ distensæ to lineæ gravidarum. Is the mode of origin the same in the two cases? Some observers are inclined to think that it is, but although there is some similarity it seems probable that the two conditions are not identical. Lineæ gravidarum are found at any age during which pregnancy occurs, while the age-period is very strictly limited in the case of striæ distensæ. There is also a difference in colour. The striæ gravidarum are pinkish-white in appearance even when first formed and never present the livid purple colour of striæ distensæ, which seems to indicate a more profound change. One might argue that the general nutrition of the body, including the skin, is lowered during pregnancy, and that the pressure of tight clothing on the distended abdomen acts in the same way as the pressure produced by lying in one position. A comparison of the microscopical appearances in the two conditions should throw some light on the question, but I have unfortunately not had the opportunity of doing this.

Microscopical Appearances.

In only one instance (Case 7) have I been able to obtain sections of the striaæ for microscopical examination. These, together with control sections of normal skin, were stained by the Pianese method, and also by a combination of Van Gieson's and Weigert's stain, which demonstrated the elastic fibres very clearly. The epidermis showed no appreciable difference as compared with the normal skin, but well-defined changes were observed in the cutis vera. The connective tissue bundles appeared to be more spread out and parallel than in the normal, but the most noticeable change was in the elastic fibres, which were broken up into small strands and scattered irregularly over and around the connective tissue bundles instead of being intimately intertwined among them. In the centre of the striæ the elastic fibres seemed to have disappeared entirely, but their retracted stumps were found lying curled up in little bundles on either side. Sections of the hypertrophic striæ from the same patient showed a great increase of connective tissue layer, scattered through which were a great number of blood-vessels. In these sections there appeared to be very little elastic tissue, and what there was was confined to the periphery of the scar.

Conclusions.

The conclusions at which I have arrived are:—

1. That striæ distensæ are confined almost entirely to young adults between the ages of 12 and 22.

2. That at this age the skin is very delicate and growing rapidly, and that the elastic tissue fibres rupture allowing the white fibrous tissue and overlying epidermis to stretch, giving rise to striæ distensæ.

3. That striæ distensæ may be associated with almost any febrile illness.

4. That the distension and ultimate cleavage of the skin may be caused in healthy individuals by the rapid accumulation of fat in the subcutaneous tissues of the axillæ, thighs, etc.

5. That in other cases it is due to a simple distensisn following an effusion into the subcutaneous tissues.

6. But that often the nutrition of the skin is impaired by some constitutional disease, and that the main factor in these cases is the effect of posture—the striæ occurring at the position of maximum tension.

Finally, I wish to express my thanks to the physicians of the Victoria Park (Chest) Hospital for their courtesy in allowing me to publish these notes of the cases under their care, and to Mr. A. W. Smart, of the Pathological Department for preparing and staining the skin sections.

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THE TREATMENT OF CANCER:

By

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That the treatment of cancer better known to the Medical Profession as Carcinoma is now receiving world-wide attention is quite apparent from the numerous articles recently appearing in the daily papers all the world over, these being chiefly extracts from well-known Medical periodicals.

Cancer is understood by the Medical Profession to mean Malignant Neoplastic growths; therefore without knowing the correct Etiological factors it would be quite impossible to intelligently apply any agencies available for treatment—hence an acceptable theory is necessary—the number of theories put forward by the host of Scientists endeavouring to satisfactorily deal with the subject makes the Radiologists stand aghast however, without some theory to go on there would be no advance at all; for this reason a theory of cancer—Etiology—has been accepted and stated as an intracellular perversion of normal cellular metabolism, due to an interference with the harmonious, co-ordinating activity of the intracellular hormone and that of the other endocrine glands, the interference being due primarily to traumatism in some form." Those cases of cancer which do not yield to treatment are such as are complicated with certain blood troubles for instance cancer will flourish like a green bay tree if given a Syphilitic soil to grow on.

At the present time, this theory gives a working basis for the intelligent application of such agencies as Radium and the X-rays for the elimination of the resulting neoplasms.

In former days the treatment by X-Rays consisted of several small doses of known power so administered by cross fire through several ports of entry in order to as far as possible avoid the chance of setting up X-Ray Dermatitis a condition almost as difficult in some cases to cure as cancer itself.

As time has gone on, both due to improvement in apparatus and careful research along other lines involved, it has now become possible to give very large doses at a time such as 450. Milliampere minutes, a dose up to which it is fairly safe to go without actual destruction of tissue, a larger dose say of 675 M.A.M. it would be unsafe to go beyond without great fear of necrosis and the bringing about of large quantities of toxic products which would poison the blood stream rendering it practically impossible for the blood to carry off and eliminate these poisons, hence dire results would follow.

In deep seated carcinoma it is the practice to give doses of say 585 M.A.M. which is just below the danger point and this large dose should be carefully considered before it is administered, taking into consideration the patient's power to withstand it.

In Carcinoma, the dose given is 335 M.A.M. to 540 M.A.M. in sarcoma 270 M.A.M. to 380 M.A.M., in epithelioma about 380 M.A.M. to 450 M.A.M.

These doses are calculated and based on the following data—200 Kilo Volts 5 M.A. in tube, at 50 C.M. distance (20") filtered through 1 m.m.

copper + 1 m.m. aluminium. Port of entry 20 c.m. applied continuously for 90 minutes through two or more ports.

Before taking up treatment it will be necessary to have a complete knowledge of the following items.

1. Type and extent of the Neoplasm.
2. Patient's physical condition as shown by age.
3. Duration of Neoplasm.
4. Family and personal history.
5. Clinical history of growths.
6. Complete examination of blood especially the R.B.C. not to be below 25,00,000 Hæmoglobin (not to be below 50) and metabolic index as required.
7. Complete uranalysis.
8. Thorough physical examination.
9. Adequate protection.

The above information is necessary to arrive at whether the patient is able to withstand the additional Toxæmia which will be set up after the administration of these large doses.

At Erlangen the practice is to give these large doses at short intervals whereas at Frieburg the whole dose of 450 M. A. M. is given at one sitting if possible.

It has only lately become possible to give these large doses at one or more sittings within a short period due as previously mentioned to improved apparatus allowing of dosage at 2,00,000 volts more or less. Hence the penetration of the dose is high and the chances of involving (in the case) other troubles due to the X Ray, small. It may be here mentioned that Dr. Coolidge of Chicago has an X Ray Tube under operation and trial working at 300 kilo volts and great things are expected from it when out of the experimental stage.

In all deep Therapy Treatment a free circulation of air should blow over the patient and he should be completely protected from the Ray except at the port of entry to avoid the Ray sickness set up due both to the inhalation of Ozone liberated by the high electrical pressure discharges, as also from the Toxic products passed into the blood stream.

It would perhaps be too early to say that at the present time it is fairly sure that at least 75% of cancer cases so treated are showing every sign of thorough cure even after the lapse of several years.

It is to be hoped the general public will come forward to help forward the Cancer Research Fund, and I do not see why every Doctor and Medical Practitioner should not come forward with his donation be it large or small to be paid into a Doctor's Cancer Research Fund (if some one would start such a fund) the proceeds of which would ultimately be paid into the International Cancer Research Fund already started and located in Europe.

A NOTE ON VERTIGO.

BY

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In cases of vertigo the examiner has such a wide field of origin to choose from that any factor which appears frequently in such cases becomes at least of academic interest; and after this factor has been submitted to scrutiny by competent authority its place is established according to its value. In a paper which I read before the Academy of Medicine, in New York, I made a list of causes of aural vertigo; the past decade has modified my views considerably, but I quote the grouping as I then presented it.

Aural Vertigo.

Section I.—Peripheral causes: (a) Chronic progressive middle-ear deafness; (b) hæmorrhage into labyrinth and embolism; (c) traumatism.

Section II.—Aural vertigo due to altered state of blood pressure; (a) increased blood pressure; and (b) diminished blood pressure.

Section III.—Aural vertigo due to general systemic causes; (a) leukæmia; (b) occasional; (c) with ocular symptoms; (d) specific; (e) cerebral anæmia.

This classification fails, especially when one is dealing with extra-aural cases, the more important of which were considered by Dr. Gordon Holmes in the discussion on Vertigo at the Royal Society of Medicine on Feb. 26th last. The most important clinical feature of the majority of cases which I have seen in private and hospital practice, however, is that in section II. (b), since 1912 I have made a point of ascertaining the blood pressure of these patients. The result certainly astonished me; a low blood pressure was so common. The frequency with which I found that something was apparently acting as a depressant upon the heart's action was also unexpected. I would go so far as to say that a, if not the principal agent—*i.e.*, inpatients with a normally low blood pressure and over 45 years of age—was tobacco.

The action of a low blood pressure upon the function of equilibrium is central and may be severe, embolic; transitory, or anæmic in its effect. In the severe form the vertigo is accompanied by deafness, which may be capable of improvement. In the less severe or transitory form I usually find that removal of the exciting cause and administration of remedies calculated to restore the blood pressure to normal is sufficient to prevent recurrence of the symptoms. A very interesting example of the effect

A lady aged 69, consulted me for vertigo, stating that she had been under a heart specialist for very high blood pressure, which he had reduced to 140. The vertiginous attacks were coincident with this reduction. Allowing the blood pressure to increase somewhat put an end to the attacks.

I have no record of high blood pressure as a cause of vertigo, although it is quite commonly present in cases of tinnitus in the middle-aged. Amongst other cases I have seen, syphilis has been fairly frequently present.

KALA-AZAR IN KAYALPATNAM.

By

NADHA PILLAY, L.M.P., ANANTHAPUR.

Kayalpatnam, a coastal town in Tinnevelley District is a major union having a population of 12,605 of whom 50% are Mohamadans. The Mohamadan habitation with its highly congested quarters is isolated from the rest of the town which consists of several streets, one for each community of Hindus but separated from one another. One peculiar feature of the Mohamadan town is that it contains nearly 40 mosques one for each street. Each mosque with its limited compound serves as the burial ground for the people of that street. From the days of origin of the town, say for about 1000 years, one and the same ground with no possibility of expansion serves all these years as the burial ground. So much so, the subsoil water in the town wherever we dig is highly polluted and poisoned with decomposed materials. To make matters worse, one cannot escape noticing at least 2 or 3 heaps of filthy sweepings and noxious pools in almost every one of the Mohamadan streets. During the rainy season the whole town is a sheet of water with no proper drainage into the sea. Under these miserable conditions of life, it is no wonder malaria has found a congenial home in the town and is endemic throughout the year. In spite of the advice given on principles of sanitation, the Mohamadan populus are averse to giving up their mamul burying of the dead in the same limited enclosure and bathing in the abnoxious pools close by.

To the successive Medical Officers, it created an impression that only malaria is prevalent in the town, even though there had been very many cases of enlarged spleen and liver, cachexcia, cancrum oris etc., and so quinine was distributed freely as a routine measure. On my assuming charge of the dispensary in 1922, I also followed the footsteps of my predecessors, but found in the course of some months, that the so-called malaria cases are highly resistant to quinine in all its forms. On close observation I found that there were good many cases of enlarged spleen and liver,

cancrum oris, epistaxis, cachexia, attended by irregular temperature, among the Mohamadan population, chiefly among their children, which all, as a rule, are resistant to quinine. Mist. Sulphatis Triplicis and Mist. malarial cachescia have had no effect whatsoever. Mortality was gradually increasing in advanced cases. I suspected the presence of Kala-azar in the town.

On making enquiries from the public, I came to know that enlarged spleen attended with high mortality which was quite common some 20 years ago, disappeared altogether in3 year's time and has reappeared again during the last 5 years. Further, I was told that malaria in its ordinary form has been prevalent for the last 50 years, without any interruption. So, the history of the town tells us that Kala-azar was prevalent some 20 years ago and made a natural disappearance by creating an immunity among the population.

In order to confirm the presence of Kala-azar in the town, I sent one of my cases to Madras to find the L. D., bodies from the spleen puncture but was sadly disappointed with a negative reply.

Anyhow, from the various symptoms and aldehyde tests, I was confirmed of the prevalence of Kala-azar and began to treat with Antimony. I tried my first case with colossal antimony, but with no good result. Later, I tried Sodi. Anti. Tartarate (B. W & Co.) tabloids and the success was simply marvellous. I tried Sodi. Antimony Tartarate Ampoules of Bacterio-Clinical Laboratory, Calcutta, with equally good results. Big spleens which reached as far as the umbilicus, got reduced with 15 or 20 injections. Even though I had to encounter some difficulties at the onset, they were overcome in the course of a few months by the practical experience I gained. Many of my cases were children ranging from 2 to 12 years of age. In young infants from 2 to 5 it was very hard to get at the vein at the elbow joint, the usual site for the intravenous injections. I had, in such cases, pitched upon the jugular vein for the injections. With a slight of hand, the injection is made quite easy. In some cases, when injections were given continuously for some time say 6 or 7 in one vein, the lumen gets occluded and the vein loses its elasticity and becomes cord-like. In a very few cases, owing to the occlusion of the vein or otherwise, a drop or two of the antimony solution left outside the vein, acted as an irritant and caused the limb to swell up, thus making it unfit for injection for some days. Some chronic cases which required a large number of injections, feel irksome and tedious on account of this prolonged course of treatment. The alleviation of the misery of continuing this long course of treatment was engaging my attention for some time and I tried Fellows Syrup of Glycero-phosphates by mouth in conjunction with Antimony intravenously and found to my great relief that the medicine internally takes away many days of labour of injections and the patient improves surprisingly in a short time.

In fact, in four cases which had enlarged spleen as far as the umbilicus, 5 to 7 injections only were made and the Fellows Syrup was given internally. After a course of 3 bottles of the said syrup, the enlargement had completely disappeared in 2 months' time. In the course of the last six months, I treated 78 cases with injections and syrup by mouth. 59 cases got completely cured, 15 cases even though the temperature came down to normal and the general health much improved have still enlarged spleen resisting to the antimony, the spleen probably having become fibrous. The remaining 6 cases could not be traced out for giving any positive opinion. In all my cases the temperature which was attending with irregular remissions, stopped in the course of 5 or 6 injections. This created the confidence of the public which began to pour in large numbers. In some cases where there was a break of injections for a week or 10 days, the fever came again and brought out the enlargement of the spleen which had hitherto reduced considerably. So, it is imperatively necessary that the injections should be continued without any break. Since it was found impossible to get the cases for injections on every alternate day I fixed Wednesdays and Saturdays of the week as injection days. When people began to realise the benefit of the treatment they came regularly at fixed hours of these days and got themselves treated. No untoward result has hitherto been experienced in treating the cases which come at least seven on an average on the injection day. From the experience I had, the injections of Antimony Tartarate should, as a rule, be given only in the vein. In those cases where the basilic veins get occluded, collateral venous circulation is established in a few days and the injection with a finer needle may be given through them.

In most of the cases which came under my notice, round-worm played an important part in bringing the disease to an acute form. So, as a routine measure, I prescribed B. Pulv. Sant. Co., as a preliminary step to the injection with good results.

When cancrum oris has set in owing to extreme cachexia the patient is put on Iron and Strychnine and the gangrenous portion excised and dressed with antiseptics in conjunction with Eusol and Hydrogen-peroxide gargling. After slight improvement is perceived, injections were given in addition to Syrup of Hæmoglobin by mouth. In the course of my investigation in the town, I have found that certain cases where the gangrene of the mouth has set in, exposing the whole of the alveoli of the lower jaw, get cured completely without any medicine, perhaps due to the natural reactionary process of the system. There are at least half a dozen of such cured cases of adults, exposing their teeth on one side, who in their younger days had this dire scourge and who give a history of the disappearance of the disease as soon as this sign of gangrene had set in.

I find it rather hard to distinguish the K, A. bases from malaria, unless typical signs are visible, especially in a place which is undoubtedly affected with malaria and K. A. The public also are at a loss to get the benefit of the injection treatment, since both diseases produce the same symptoms and are amenable to quinine in the early stages. In my opinion, without waiting for a long time to distinguish one from the other, antimony injections may be given straight away at the onset since equally good results are obtained in both the diseases. So much so, if experiments are pushed on further, I hope a day will come when quinine would be replaced by the antimony injections in all cases of malaria. People also will appreciate more of the antimony injection treatment, as there is absolutely no risk if a little care is exercised, and as it is less costly, rather than the much detestable taste and cost of quinine for malaria. Recently, statistics were taken to find out the average number of Mohamadan children affected. Out of 80 stray children examined 25 had liver and spleen, 7 spleen, 3 liver alone and the rest being healthy.

During the last two years of my stay here, I did not come across a single case of Hindu child affected with Kala-azar, even though malaria could be seen sparingly among the Hindu children. Constant removal of sewage and sweepings, annual whitewashing of the houses, free ventilated habitations, daily bath and weekly oil baths (with gingelly oil) in good water, minimise the infection by mosquito and bed bugs, the transmitters of these diseases. These factors mainly explain the non-prevalence of the said diseases in the Hindu habitations, though situated not far off. Experience tells us that gingelly oil is a good antidote for bed bugs. I may also add that every Hindu house when affected with bed bugs, burns the dry gingelly plant, in order to eradicate the bed bugs.

As soon as I suspected the presence of K. A. in the town, I reported the fact to the Dt. Medical Officer, with a request that a special officer may be sent for investigation and research and I understand that the Surgeon-General is pleased to depute one officer who is expected shortly here. I hope he will be able to enlighten the medical world with his researches, as soon as possible.

THE TREATMENT OF KALA-AZAR

BY

DR. A. K. SARCAR.

Continued from page 317 of June 24 issue of "the Antiseptic."

4. During the period between 1911 to 1913 a good number of Kala-Azar cases had been observed under the treatment of renowned physicians of the Mitford Hospital, Dacca. These cases were generally coming from the A. B. Ry. lines; quinine has been given a fair trial in these case

without any appreciable result. Almost all the cases were found to die of Dysentery, Diarrhœa, Pneumonia and Nephritis. Antimony as a remedy was not known then.

5. In the autumn of 1914, Sir Leonard Rogers made up Sterile Solution to inject but could not get opportunity till 1915 when he secured a few beds in the Campbell Hospital and subsequently in the Medical College. He had obtained a favourable result in a series of cases when the reports of Italian Doctor's prior success reached him in India.

6. In February 1915, Dicristina and Karoma of Palermo, Scicilly got the credit of first treating and recording the singular success in the Mediterranian Kala-Azar in very young children by the intravenous injections of Tartar Emetic when technical difficulties were the greatest. They reported 8 cases, 5 of them were cured and 2 were recovering and only one died of nephritis.

7. At this stage of trial it was a great secret to prepare Antimony solution. The author observed many of the cases treated in the Campbell Hospital suffering most from restlessness, rigor, shivering, vomiting and sneezing etc., after the injection is finished. It seemed to him to be a brutal sort of treatment which should not exist. Both Sir Leonard Rogers and Dr. Brahmachari who were then treating the cases kept the method of preparation of this solution in secret. At this time Messrs. B. K. Paul & Co., prepared some ampules with p. c. solution of Pot. Antimony. These stock solutions were then tried by a few of the up-to-date physicians of Calcutta. The author had opportunities to treat a few cases only in the King's Hospital, Calcutta, (while a resident Medical Superintendent). The first few cases had similar troubles and led the author to search for any cause. It was then observed that the ampules containing the solution when kept up for a few days, show some floculent deposit. Since then fresh solution was prepared each time with the Pot. Antimony available and the troubles were lesser but not so much. After this the scale preparations of Antimony Salt of both Potassium and Sodium Salts were used practically having no serious symptoms. This is due to the use of pure solution of the Antimony Salts. In the beginning Potassium Salts of Antimony Tartarate were used by the physicians who were working in Bengal and later on this being more irritable than the sodium salt, the latter is being extensively used with less toxic symptoms ever developed.

Modes of Antimony Administration :—

I. By intravenous injection. The only technique to be observed is in pushing up thoroughly sterile solution of 1 p.c. or 2 p.c. very slowly. This

is the best method and if the needle of the Syringe reaches the lemen of the vein, there is no pain and no other trouble.

2. By intramuscular injections. Whatever solution is to be used is painful but less painful when scale preparation is used in making the solution. In cases of children and weak patients where intravenous injection is not possible owing to the veins being invisible, the intramuscular injection of 2 % solution of Sodium Antimony Tartrate in Albolem a turbid solution, vigorously shaken at the time of injection, is being now used with good result as claimed by some observers. At first, ½ c. c. dose, gradually increasing, upto 2 c.c with a little Creo Camphore solution because of its antiseptic purposes, have been used with 7 days interval between 2 injections. But it is lately used twice a week and even at the same site repeatedly especially at the upper and outer quadrant of the buttocks. If well borne, the quantity may be increased beginning with 2 c.c. and the solution may be diluted to 1 per cent. if there be any irritable symptoms. This meets with uniform success finally increasing up to 5 c.c. for the maximum adult dose as remarked by Dr. Braja Ballav Saha, M.B., in his paper on the subject (C. Medical Journal).

3. Subcutaneous injections can claim no advantages over the last named methods and are always very much painful. But it is sure to increase leucocytosis.

4. By inunction or by ionisation through the skin :—

No reliable report has yet been published but it is often given to rub over the enlarged and inflamed lever spleen while intravenous medication is going on.

5. By oral administration.

This method is said to have no perceptible benefit. Dr. B. B. Saha M.B., gave trial to this method in Calcutta.

Preparations of antimony that have been tried in the treatment of Kala-Azar by different workers are given below :—

A. Antimony Salts of organic acids :—

1. Sodium antimony tartrate. This salt is now very widely used by almost all practitioners in Bengal until it fails to bring any effect after a considerable number of injections about 30 or 40. It is less toxic to the heart muscles and more soluble than the Potassium salt. This gives success in about 95 per cent. of cases.

2. Potassium Antimony Tartrate.

This is the salt used at the beginning. Some physicians still use it instead of the former one. This has the disadvantages of more toxic effect than sodium and ammonium salts but the difference is not great and the doses employed are not one-sixth of minimum lethal doses.

3. Ammonium Antimony Tartrate has been used with success as claimed by some but it has not been very extensively used. Its toxicity lies between that of Sodium and Potassium Salt.

4. Hyper acid Antimony Tartrate (Uraethane) has been used by Dr. Brahmachari of Calcutta as intramuscular injection, being less painful than others.

5. Lithum Antimony Tartrate is the most soluble of the Tartrate Acid of relatively low toxicity but not yet been tried extensively.

B. Aromatic Organic Compounds of Antimony :—

(1) Acetyl-para Aminophenyl Stibrate of Sodium or Stibacetin has been fairly tried extensively but Dr. L. E. Napier who treated a series of 10 cases, records the result as not encouraging.

(2) Para Aminophenyl Stibrate of Sodium or Stibamine has been tried by Dr. Napier and Muir who recorded that the compound was unfortunately not stable but when freshly prepared it caused no local thickening and little pain on intramuscular injections. Its curative effect did not seem very satisfactory.

(3) Urea Stibamine has been tried very recently. Very good results have been claimed but it has not yet been extensively used. It is reported that only a few injections will be sufficient to bring cure.

C. Inorganic Prepardtions of Antimony that have been used are as follows :—

(1) Antimony suspended in a fine state of division has been tried and some success claimed by Dr. Brahmachari.

(2) Colloidal Antimony has been tried but with little success.

(3) Colloidal Antimony Sulphide was used in a number of cases by Rogers and he reported very favourably on it, but there is difficulty in preparation as the samples differ from one another causing a lack of uniformity in the results obtained.

(4) Antimony Oxide has been given intravenously, intramuscularly or by mouth by Sir Leonard Rogers. No ill effect follows the intravenous injections but none of the workers—Dr. Napier, Muir and Rogers—received any therapeutic success.

(5) Martindale's solution (Antimony Oxide dissolved in Glycerine) has been used with success by a few but no satisfactory series of cases in which it has been extensively used have been reported. *(To be continued)*

A CORRECTION.

In the July 1924 issue of "The Antiseptic" at page 337, in the article on "Electrolytic chlorogen," wherever the words "Electrolytic chlorogen" occur, please read as "Electrolytic chlorine".

The Antiseptic

AUGUST, 1924.

DEATH CERTIFICATION IN THE CITY OF MADRAS.

Our attention has been drawn to the notices recently issued by the Health Department of the Corporation of Madras reminding every Medical Practitioner, Hakim or Vaidyan, in the City of his obligation under sub-section (1) of Sec. 330 of the Madras City Municipal Act IV of 1919 ' to inform the Commissioner, Health Officer, Medical Registrar Vaccinator of the District or Sanitary Inspector of the Division with the least practicable delay of the existence of any dangerous disease (Cholera, Plague, Small-pox, Tuberculosis, Diphtheria, Enteric Fever, Measles, Influenza, Relapsing Fever and Acute Influenzal Pneumonia) in any private or public dwelling in the City of which he becomes cognizant', and also of the provisions of bye-law No. 5 of the bye-laws under Sec. 349 (23) of the Madras City Municipal Act IV of 1919 under which 'any Medical Practitioner in attendance during the last illness of any person dying in the city shall, within 3 days of his becoming aware of the death of such person, send a notice to the Health Officer furnishing the following particulars:—(1) Date of Death (2) Nationality (3) Name (4) Sex (5) Age (6) Profession (7) Cause of death (8) Residence at the time of death (9) Residence previous to last illness (10) Signature of the medical man (11) Residence of the medical man and (12) Date of notice', any violation or infringement of the above laws resulting in a prosecution in a Court of Law.

We are perfectly at one with the Health authorities of the Corporation of Madras in their endeavours to obtain as far as possible accurate information regarding the existence of infectious or Communicable diseases in the city, and threatening to set the wheels of law in motion against offending Medical Practitioners, Hakims or Vaidyans who, wilfully or otherwise, neglect or refuse to comply with

the provisions of the Act in this respect. The duties and responsibilities of the practising physician in the reporting of notifiable diseases cannot be more forcibly described than in the following words of Trask in his paper on "Vital Statistics, a discussion of what they are and their uses in Public Health Administration," which we are tempted to quote here for the information of our readers:—"The physician is the one who, because of the very nature of his work and his relation to the community, is best able to have this information and furnish it. He comes in contact with the sick to a degree others do not. Unfortunately many practising Physicians have little knowledge of the methods of health administration and in common with people in general frequently expect the Health Department in some mysterious manner to control diseases without placing upon them the burden and privilege of co-operating by the notification of the occurrence of cases.

The practising Physician whether he recognizes it or not or is so recognized by the community is essentially an adjunct of the Health Department for, unless he performs his part, the Health Department is in a large measure helpless. It would seem that the physician who fails to report his cases of preventible diseases may be considered as actively obstructing "Public Health Administration." We exhort every Medical Practitioner, therefore, in the City who comes under the purview of the Medical Registration Act to realize the grave responsibility that rests on his shoulders and perform this gratuituous but yet noble and humanitarian task in a selfless and willing spirit, thus proving himself doubly useful—useful to the community whose health and interests he is supposed to safeguard and the department of Public Health which is intended to protect the general health and well-being of the entire population of the City.

As regards the latter part of the notice *viz.*,the certifying of cases of deaths by Medical Practitioners, we have our own doubts and misgivings as to the legality of its enforcement. According to the bye-law, the Medical Practitioner is no doubt bound to send a notice to the Health Officer touching the death of a person whom he is treating *within 3 days of his becoming aware of the death of such person.* Well, how can the Medical Practitioner *become aware of the death of that person* unless he is informed about it by any relative of the deceased? The latter is seldom done nor is the relative of the deceased bound by law to inform the Medical Practitioner of the death.

Besides, the attending Physician is placed in an awkward position at that critical juncture. In the last stages of a man's illness, the relative of the deceased, naturally in his anxiety to save the person from death, abruptly dismisses the attending Physician and tries his luck by sending for as many other Physicians as possible in the hope that they may rescue the patient. Though the etiquette of the profession requires that a Medical Practitioner ought not to encroach on the domains of another except as a consultant and even that, only with his permission, these Medical Practitioners are not generally appraised of the fact of another being already in attendance on the patient. and so each one comes and plays his part incognito and runs away with his fees and sometimes even without his fees, leaving the patient to his fate. When death occurs, the relative of the deceased troubles himself no more about the Medical Practitioners and with a deep sigh and heavy curse dismisses all thoughts about them from his mind. Under such circumstances, what can the Medical Practitioner do? Certainly the Act does not contemplate that the Medical Practitioner or Practitioners should anyhow get themselves acquainted with the fate of the dying patient whom they had seen at the last moment so that the fact of his death may be reported to the Health Officer. How then are Medical Practitioners legally bound to report cases of death to the Health Department?

With a view to ensure satisfactory registration of deaths, certain duties are placed upon the various persons concerned with the case, in all civilized countries. It is the duty of the *undertaker* or other person disposing of the body to obtain the personal items called for on the death certificate. These items relate to the place of residence, age, sex, colour, marital condition, occupation, nativity and parentage of the deceased. These must be obtained from the person best qualified to give the information, usually a relative, and the information should be given over the signature of the informant. The statement as to the date and cause of death is made by the attending Physician. In this case, the relative who is responsible for the registration of the death is compelled to procure a certificate from the last medical attendant. Otherwise the dead body will not be permitted to be buried or cremated in the burial or burning ground. Such a restriction if placed on the deceased's relatives in our city will have a salutary effect and bring about the desired end. Of course, no separate fees should be charged by the last attending Physician for the grant of a

certificate of death. Unless legislation is undertaken to make it incumbent on the deceased's relative to procure a certificate of death and file it before a responsible officer of the Health Department before burial or cremation is permitted, there can be no use in blaming the Medical Practitioners for their negligence or indifference in the matter. 'Where death occurs without medical attention, two procedures are available. If the death occurred under circumstances suggestive of foulplay or suicide, an inquest must be held by a Coroner or other officer acting as a Coroner. In such cases, the verdict of the Coroner's jury is entered as the cause of death and attested by the signature of the Coroner or person acting as such. In case the death was apparently by natural causes but without medical attendance, the Health Officer is sometimes required to investigate the facts and to certify over his signature as Health Officer the probable cause of death.' It is then and then alone that Death Registration can be said to be fairly accurate and complete.

Under existing conditions and circumstances in the City, while legislation is defective and while there is imperfect knowledge and understanding among the generality of the masses, there is no good threatening to penalize the Medical Practitioners for their failure to certify the cause of death. Such a step will only lead to further estrangement between the Health Department and the Medical Practitioners in the City and co-operation between the two, which is essential for the weal and safety of the citizens, will then become impossible. We hope the Act will soon be amended so as to apportion the responsibility for the filing of death certificates on both the deceased's relative and the last medical attendant and not on the poor medical attendant alone.

CURRENT TOPICS.

SURGERY.

The Treatment of Fractures. D. P. D. Wilkie, Edinburgh. *The British Medical Journal*, April 26, 1924.

Operation should be reserved for the following classes of cases:

1. Those in which, owing to the interposition of soft parts, the fragments cannot be brought into close apposition.
2. Those in which repeated redisplacement occurs after reduction.
3. Certain fractures into joints in which a fragment cannot be controlled and interferes with joint function.
4. Cases of non-union of more than six months' duration.

The oblique fracture through one or other of the tuberosities of the tibia into the knee-joint is one of those for which operation with nailing is indicated. In fracture of both bones in the lower third of the leg, the tendency to malunion and non-union is such that many surgeons now treat all cases by operation, with or without the application of some internal splint. In this fracture reduction under an anesthetic with temporary fixation in plaster has much to commend it. If treated by splints —as by the box splint—elevation of the limb *without* flexion of the knee will be found a useful aid in preventing the forward projection of the lower end of the upper fragment of the tibia.

Wilkie lays emphasis on the following points:

1. In the case of most fractures it is necessary to *reduce* the fracture under a general anesthetic.
2. In upper limb fractures early active movement is desirable. (Fractures in the immediate vicinity of the elbow form an exception to this rule.)
3. In fracture of the lower limb restoration of the correct alignment and length of the limb takes precedence over all other considerations.
4. In certain fractures, notably Pott's fracture with partial dislocation, immediate fixation in plaster gives the safest assurance of a good result.
5. In compound fractures excision of the wound with primary suture should be attempted whenever possible. *A. J. S.*

Carbuncle and Its Treatment by Magnesium Sulphate. Albert E. Morison, England. *The British Medical Journal*, April 19, 1924.

Morison treated 28 cases of carbuncle by applying to the whole of the inflamed area a paste of magnesium sulphate.

With 1·5 lb. of dried magnesium sulphate are mixed 11 oz. of glycerin. The dried magnesium sulphate is in the form of a fine white powder which contains 12% less water than the ordinary commercial Epsom salts. The glycerin is put in a hot mortar and the sulphate added, slowly stirring and mixing with a warm pestle all the time. The result is a thick white cream, so hygroscopic that if exposed to the air it rapidly absorbs moisture and becomes fluid. It must therefore be preserved in a covered jar.

The paste is spread thickly on a piece of sterile white lint sufficiently large to cover the whole of the inflamed area. A piece of jaconet is put over the lint to cover it entirely, and cotton-wool in abundance over and around the part. A profuse discharge of serum takes place, and the dressing is left unchanged for 12 or 24 hours and then renewed. Within a few days the central slough separates and a raw granulating surface is left. The relief to the patient after one or two applications is very great. Pain is abated, constitutional disturbances disappear, and sleep comes naturally.

As soon as the slough has separated the crateriform ulcer is dressed with the paste until all signs of sphacelating cellular tissue have disappeared

and a healthy granulating surface is seen. The cavity is then packed daily and the undermined edges supported with strips of lint about 1½ in. wide, wrung loosely out of a saturated solution of magnesium sulphate made by dissolving 40 oz. in 30 oz. of boiling water and 10 oz. of glycerin and sterilizing in an autoclave. The whole area is then covered with a double layer of lint saturated with the solution, over which a piece of jaconet and then cotton wool is placed, and fixed loosely by a bandage.—*A.J.S.*

Suppurative Otitis Media Treated by Zinc Ionization.—T. B. JOBSON, England. *The British Medical Journal, March 1, 1924.*

During the past year 50 patients were referred for treatment by ionization. They included 57 suppurating ears, and of these 45 were treated by ionization. In 29 of these the otorrhœa rapidly ceased; 2 relapsed after a few weeks, 13 were not cured, and of 3 the result is not known. This gives a percentage cure of 60.

Of those not cured 6 were cases of cholesteatoma and 2 were old mastoid operation cases. Neither of these classes is quite a fair test of this method of treatment. Omitting these eight failures the percentage cure works out at 80. By cure is meant complete cessation of discharge. The advantages of treatment by ionization are: It will cure any case of otorrhea which is curable by drops, and in one-hundredth part of the time, thus saving an enormous amount of the patient's, doctor's and hospital's time. It will cure a large number of cases which do not mend with ordinary antiseptic treatment.

Contribution to the Question of Intrathoracic Goiter.—*(Beitrage zur Frage der Struma intrathoracica).* TH. HUNERMANN, Freiburg. *Archiv fur Klinische Chirurgie.* Volume 128, 1924.

In the Innsbruck Clinic in 1473 cases of goiter, 487 (32%) were intrathoracic. Intrathoracic goiters are defined as those whose greater portion is below the clavicle level.

The symptoms are marked dyspnea with an apparently small thyroid tumor, marked displacement of the trachea, fixation of the trachea, and signs of pressure on the great veins with back stoppage that cannot be explained by any visible tumor. The neck veins fill from below when they are emptied by the finger, and the arm veins do not empty when the arm is held high. There may be recurrense paralysis or paresis, sympathetic paralysis with regression of the eyeball, contracted pupils and ptosis, and positive findings with tracheoscopy.

The removal is more difficult than the recognition. Little attention should be paid to cosmetic result. The goiter should be shelled out with the finger after double ligation of the vessels, and if cystic it may be opened before being drawn up. If necessary the sternum may be split according to the method of Sauerbruch, but this was found necessary only once in over 500 cases in Innsbruck. *A.J.S.*

BOOK REVIEWS.

ENGLISH PHYSICIANS OF THE PAST.

By R. T. WILLIAMSON, M.D., F.R.C.P., Consulting Physician to the Royal Infirmary, Manchester. 96 pages. [Andrew Reid & Co., Ltd., Newcastle-on-Tyne].

The author, in this small book, has given us short life-sketches of twelve English Physicians of the past, among whom are included Gilbert, Harvey, Glisson, Sydenham and Bright—men to whom we owe so much of our knowledge of medicine. Much of the unimportant and uninteresting details usually found in biographies are omitted and only those details of life, interesting and useful to medical men, are included. Biography, the writer points out, is of little service if it merely interests but does not inspire and, it is our, as well as the author's hope, that the sketches in the book may stimulate and interest our readers.

AN IDEAL HAPPY LIFE OR DO BUT NEVER MIND.

By KHUSHI RAM. Price Re. 1 net. This little book deals with the ways and means of leading an ideal happy life, of which health forms the first and foremost factor. Education, social Life work, wealth, contentment, religion and self-realization are other contributory causes and the author has taken pains to bring home to the reader in plain and simple language the secrets of a happy and contented life. "Do but never mind"—the doctrine of duty for duty's sake without looking to the fruits thereof preached on the Lord's Songs or the Gita—is the motto of the book. We heartily commend this book to our readers.

AID TO MEDICAL DIAGNOSIS.

By ARTHUR WHITING, M. D. III Edition, 177 Pages. 19 Illustrations. Bailliere Tindall & Cox, 8, Henrietta St., Covent Garden, W. C2. 1924. Price S. 3, 6d.

This little aid to Medical Diagnosis deals with clinical investigation of medical cases; infectious diseases; digestive system; the blood and ductless glands; the Heart and blood-vessels; Lungs and Pleura; the joints; the urinary organs; and nervous system. The subject is comprehensively dealt with, and very useful for the examination-going students. But on no account the book should be read as a text book. Further the book contains number of instructive and explanatory illustrations.

DIAGNOSTIC METHODS.

By H. T. BROOKS, A. B., M. D., F. A., C. P., 4th Edition. With 52 Illustrations. 109 pages. Price S. 1·75. C. V. Mosby Company, St. Louis U. S A.

This is a guide for history taking, making of routine physical examinations and the usual laboratory tests necessary for students in Clinical Pathology, Hospital Internes, and Practising Physicians. This very useful book is intended for medical students and hospital internes and physicians, who have limited amount of time to give to laboratory work. The chapters on technique staining and examination of smears, and the most important exudates, etc. are very instructive and very serviceable to the practising physician. This is fit to be in the hands of every student in our clinical hospitals. The chapter on Examination of Urine is very thoroughly dealt with. The mere fact of the book having reached its fourth edition shows its usefulness.

THE PRACTICAL MEDICINE SERIES.

By CHARLES L. MIX, A.M., M.D., Volume I. 678 pages 83. With a number of illustrations. The Year Book Publishers, 304, South Dearborn Street, Chicago.

This is one of the eight volumes dealing with the year's progress in medicine and surgery. It is edited by a committee of five doctors. The present volume under notice deals with General Medicine. Part I contains the following important subjects among others, viz., Infectious Diseases, Endocrinology, Diseases of the Chest, Diseases of the Blood and Blood-making Organs, Diseases of the Heart and Blood Vessels, Diseases of the Kidney, Diseases of the Gastro-Intestinal Tract, Diseases of Metabolism, Diseases of the Liver and Gallbladder and the diseases of the Pancreas. The subject is very well illustrated and some roentgenograms are very clear and instructive. From the perusal of the first volume before us we think, the volumes are fit to adorn the library of the general practitioners for reference, especially to moffusil practitioners, where there are no medical libraries.

DRUG REVIEWS.

THERMOMETRES.

Messrs. James J. Hicks, Manufacturers of Hicks Clinical Thermometers whose advertisement appears on page——, are the Priemer Thermometer makers of the world.

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BRAND'S "WRITE UP".

Messrs. Brand & Co., Ltd., London, whose advertisement for Brand's Essence of Chicken appears on page.....have been Invalid Food Specialists for nearly ninety years and during the whole of that time have held the appointment to supply their products to the Royal Household.

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Their Indian Representative Mr. A. H. P. Jennings, Block E, Clive Buildings, Calcutta, will at all times be pleased to supply literature and price lists.

In the July issue of THE BLOODLESS PHLEBOTOMIST there is an article entitled, "Is this the oldest prescription in the world"? The prescription in question, which is inscribed upon a tablet of stone, now in the Metropolitan Museum of Art, is alleged to be 3,400 years old, and has among its ingredients semi-precious stones, which were ground to powder. The article is illustrated by a very good picture of the tablet. The inscription upon the stone is as clear and neat to-day as when it was given by a doctor-priest to a subject of one of the ancient pharaohs, 1,500 years or more before the Christian era. This is a matter which is of interest to all physicians. Any who have not read the article in the *Phlebotomist* may obtain a copy of that journal by addressing The Bloodless Phlebotomist, 22, Grand St., New York City.

BOOKS RECEIVED.

The following books have been received and the courtesy of the publishers in sending them is acknowledged Reviews will be published from time to time. [ED. ANTISEPTIC.]

"Golden Rules of Dental Mechanics".—By Harold Osborn, Fellow of the Chemical Society of Great Britain etc., Second Edition. Bristol: John Wright & Sons, Ltd., Pages 107, Price 5 Sh. Nett.

"Modern Methods in the Diagnosis and Treatment of Glycosuria and Diabetes."—By Hugh Maclean Constable & Co., Ltd., London 1924. M.D. D. Sc. 1.

"Modern Methods of Treatment."—Illustrated) By Clendening, M.D., Asstt. Prof. of Medicine—Lecturer on Therapeutics Medical Department of the University of Kansas, etc., Pages 691 Price.

Aids to Psychiatry.—By W. S. Dawsons, M.A., M.D., Oxon., D.P.M., M.R.C.P., London., Bailliere Tindall and Cox, London. Pages 309 Price 10/6 net.

"Fundamental Principles in Treatment.—Harry Campbell, M.D., B.S., F.R.C.P., London, Bailliere Tindall and Cox. Pages 477, Price Sh. 10/6.

The Human Testis.—By Max Thorek, M.D., Surgeon-in-chief, American Hospital. Pages 548 with 308 illustrations J. B. Lippincott Company, Philadelphia.

Nosography in Modern Internal Medicine.—By Knud Faber M.D., Professor of Internal Medicine University of Copenhegan, Pages 222 Price 3·75 Dollars Paul B. Hoeber Inc,, New York.

Dosage Tables for Deep Theraphy (1922).—By Prof. Friedrich Voltz Edited by Reginald Morton, M.D.. With 16 illustrations Pages 98. Price 10 Sh. 6d. William Heinnmann Medical Books Ltd. London.

Sex Problems in Women (1922).—By A. C. Magian, M.D. Pages 249 Price 12sh. 6d Willian Heniman, London.

A Manual of training for Nurses.—By H. R. Dutton. Pages 246 Pub. Butterworth and Co, Ltd., Calcutta, Price

"Surgical Cases in Note-taking."—By Dr. D. J. Asana, L.M.S., M.B., B.S., Ahmadabad, Pages 44.

English Physicians of the Past Andrew.—Reid & Co., Ltd., Pages 96, New Castle on Tyna.

Letters, Communications, etc., received from.—Dr. S. K. Natha Pillai, L,M.P. Ananthapur, Edward Swallow Vonom, New York, T. K. Kirpalni Ahor, G. H. Fichenor, New Orleans, T. A. Miller, B. Ramagarg P. B. Karkarey, M.B., Nagpur, Capt. M. D. Nimbkar Madras, Rao Bahadur Thakur Ramduri Sinha-Mohihana, Madhaviah M.B., B.S., Junagad.

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