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EDITED BY
Dr. U. RAMA RAU & U. KRISHNA RAU, M.B., B.S.

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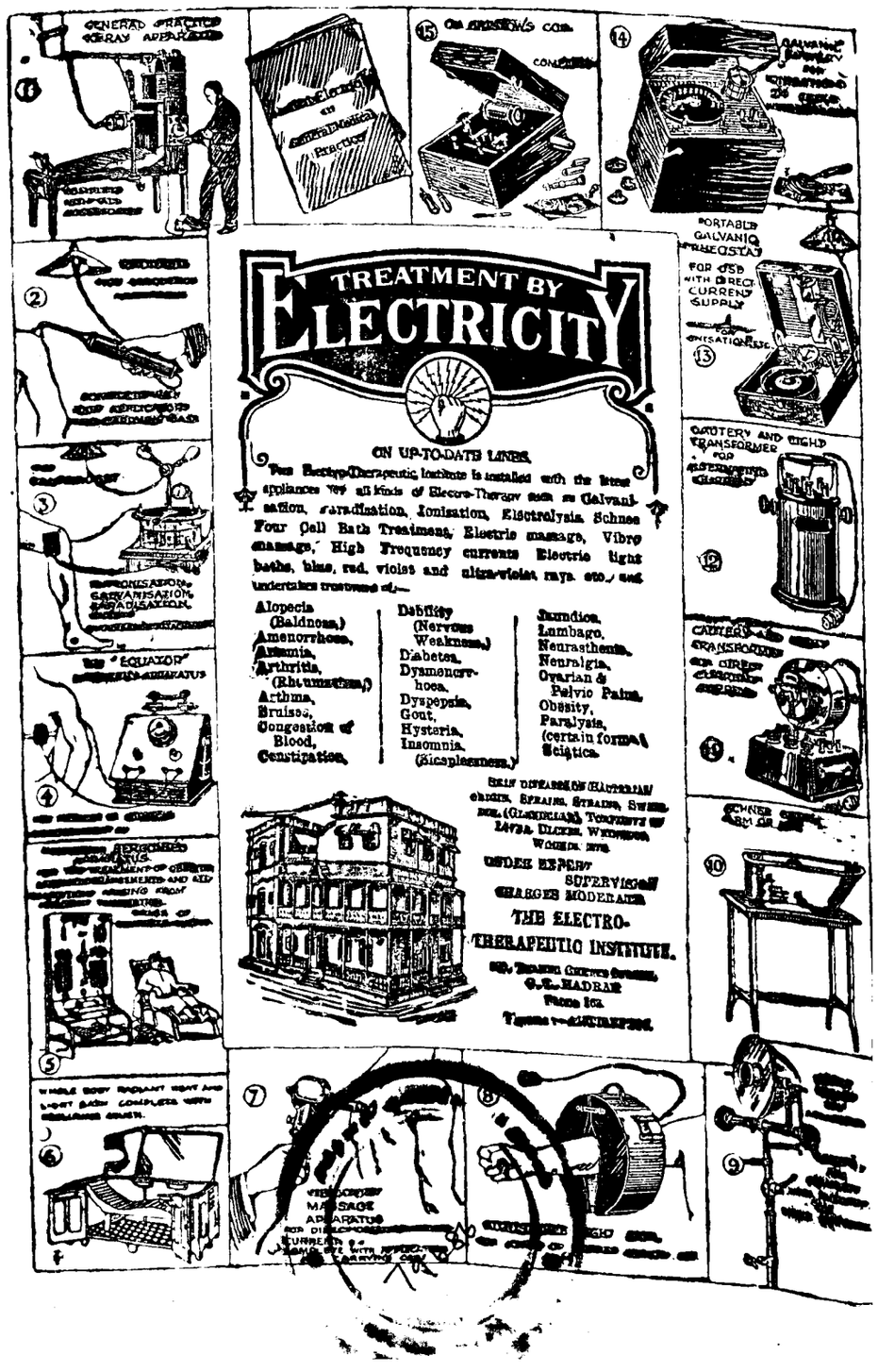

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Original Articles.

A STUDY IN PEDIATRIC RHEUMATIC PROPHYLAXIS.*

BY

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AND

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It is unfortunate that the medical literature is so bare of discussion concerning the prophylactic value of drugs. With the exception of commentaries upon such age-worn remedies as quinine and iron; and upon the newer arsenicals; information upon such subjects is meagre. The dispute as to the efficiency of salicylates in acute rheumatic fever is endless, although clinicians in general lean to a belief in its semi-specificity.

In this connection our interest has been greatly stimulated within the past year by the work of Leech [1] at the Harriet Lane Home in Baltimore; and we desired to test, upon a limited scale, Leech's theory that "The analysis as recorded seems to show that there is a definite advantage in giving daily rations of salicylates to children who represent actual or potential instances of rheumatic heart disease." [12, 13, 14, 15] Leech [1] is among the latest to report his experiences with acetylsalicylic acid in pediatrics. His groups consisted of a series of 67 children with potential or inactive rheumatic heart

*Specially contributed to the "Antiseptic."

disease. These children were given daily rations of 20 grains of acetylsalicylic acid for six months. A control group of 79 children with similar potential and actual rheumatic heart lesions was also used. He found in general that there were fewer recurrences of chorea in the experimental than in the control group. The control children did not do as well in the matter of gain in body weight, improvement in heart rate, general bodily comfort and actual physical capacity as judged by a functional classification based on the ability to carry on normal activities without discomfort.

Because of the previous work of one of us on magnesium [2, 3], we turned to a magnesium combined acetylsalicylic acid for the tests. The obvious advantage being that less salicylic radical is required and better toleration secured. Since one of us (E. P.) [3] has previously discussed the theory of magnesium synergism and the present paper is concerned essentially with salicylate action, the reader is referred to other texts for full discussion of magnesium [4, 5, 6, 7, 8, 9]. Suffice it to say that Winter and Barbour [6] found that

> "1. Magnesium salts in mice appear to reduce the toxicity of salicylates (protective antagonism).
>
> 2. Magnesium augments the antipyretic action of sodium salicylate and of aspirin. When given subcutaneously with salicylate to fevered rabbits, the earlier stages of antipyresis are characterized by marked synergism."

and Fox and Kaplan [10] found that

> "1. No symptoms of toxicity appeared in the forty cases studied in this series".....

The method pursued in the present study was to take a series of 16 children and separate them into two groups, therapeutic and control. To the latter no form of salicylate was given; but they received the same general and hygienic treatment as those under medication. These cases were then observed over a period of three months by careful physical examination, and history-taking, at frequent intervals. In addition some blood chemistry was done with a view to determining the hitherto moot point as to whether or not acetylsalicylic acid is split in the body and appears as sodium salicylate in the blood. The therapeutic cases of rheumatic fever were taken from East New York Clinics, the controls from Beth Moses Hospital.

OBSERVATIONS.

A. Therapeutic Group.

Case 24129—R. C.—East N. Y. Dispensary—Male, age 6 yrs.—Upon admission the child showed a temperature of 100° F, a pulse of 106, and respirations of 32. He complained of a cough of three weeks' duration. The parents stated that the child had always been nervous, over-active, tired easily; had failed to gain weight satisfactorily. Eight weeks previously child had measles—The physical examination revealed a congested pharynx: lungs were filled with scattered rales especially at the bases; choreiform movements were present—Tonsils were diseased—Patient was placed on 15 grains magnesium combined acetylsalicylic acid* daily. Condition on discharge revealed that cough had disappeared, general condition improved, choreiform movements less noticeable.

Case 2632—M. E.—East N. Y. Dispensary—Female, age 7 yrs.—Upon admission the child showed a temperature of 99·4° F. a pulse of 96, and respirations of 30. She complained of choreiform movements of two months' duration, a cough, sore throat, and general fatigue. Past history was essentially negative—The physical examination revealed a congested pharynx; there were coarse rales at both bases; roughening of the first mitral sound; also suspicion of a slight systolic murmur. Patient was placed on 30 grains magnesium combined acetylsalicylic acid daily. Condition on discharge revealed that choreiform movements were less pronounced, heart sounds clearer and steadier, objectively and subjectively improved.

Case 24337—T. R.—East N. Y. Dispensary—Female, age 5½ yrs.—Upon admission the child showed a temperature of 99.6° F, a pulse of 92, and respirations of 27. She complained of tiring easily, loss of appetite, precordial pain, and pains in arms and legs. Child had been complaining of precordial pain, and pains in arms and legs for past 6 months—for past month easy fatigueability. The physical examination revealed a congested throat—Tonsils were enlarged and inflamed—presystolic and slight systolic murmur at apex. Patient was placed on 15 grains magnesium combined with acetylsalicylic acid daily. Condition on discharge revealed that general condition had improved, appetite better, heart sounds clearer pains in arms and legs gone.

Case 9520—L. T.—East N. Y. Dispensary—Female, age 10½ yrs,—Upon admission the child showed a temperature of 99.6°F, a pulse of 94, and respirations of 26. She complained of aches and pains in joints of one year's duration, and of tiring easily—for past 4 years had been in rather poor health—The physical examination revealed enlarged tonsils badly diseased; there was a roughening of the first mitral sound; a systolic murmur; and a roughening of the aortic second sound. Patient was placed on 30 grains magnesium combined acetylsalicylic acid daily. Condition on discharge revealed that general condition had improved, pain gone, heart sounds clearer.

* Known commercially as magnespirin.

Case 2674—L. S.—East N. Y. Dispensary—Female. age 10 yrs—Upon admission the child showed a temperature of 100° F, a pulse of 105, and respirations of 34. She complained of aches and pains in joints, and sore throat. Three years ago the tonsils had been removed because of rheumatic fever—had been feeling unwell for past four years—The physical examinantion revealed inflamed throat; tonsillar bed and remnant of tonsils remaining were inflamed; there was evidently a recurrence of the rheumatic fever. Patient was placed on 30 grains magnesium combined acetylsalicylic acid daily, Condition on discharge revealed that all signs of pain and discomfort were gone, heart sounds much improved.

Case 13109—W. O.—East N. Y. Dispensary—Male, age 10 yrs.—Upon admission the child showed a temperature of 99° F, a pulse of 95, and respirations of 30. He complained of sore throat and pains in joints. Had been having attacks of sore throat repeatedly for past two or three years. The physical examination revealed enlarged and inflamed tonsils; there was a slight systolic murmur. Patient was placed on 30 grains magnesium combined acetylsalicylic acid daily. Condition on discharge revealed that pains were gone. throat appeared clearer, general improvement in condition, heart sounds stronger.

Case 4321—A. G.—East N. Y. Dispensary—Male, age 10 yrs.—Upon admission the child showed a temperature of 101.2°F, a pulse of 104, and respirations of 30. He complained of sore throat, fever, headaches, and joint pains. Had had chronic sore throats for past two years; occasional headaches and vomiting—The physical examination revealed enlarged and inflamed tonsils; there was a roughening of the first sound at the apex. Patient was placed on 30 grains magnesium combined acetylsalicylic acid daily. Condition on discharge revealed that pains had subsided, general condition better, heart sounds improved.

Case 21940—S. L.—East N. Y. Dispensary—Male, age 6 years—Upon admission the child showed a temperature of 99.8° F. a pulse of 90, and respirations of 24. He complained of sore throat, loss of appetite, pain and aches in bones and joints. Had been suffering with "sore throats" and colds off and on for past two years; there had also been recurrent pains in the joints. The physical examination revealed a congested throat—The tonsils were enlarged and inflamed. There was a slight systolic murmur at the apex. Patient was placed on 15 grains magnesium combined acetylsalicylic acid daily. Condition on discharge revealed that throat congestion was gone, heart sounds stronger and clearer, general condition improved.

Case 24297—R. D.—East N. Y. Dispensary—Female, age 6 years.—Upon admission the child showed a temperature of 99° F, a pulse of 88, and respirations of 24—She complained of pains in joints, easily fatigued, and loss of appetite. For past year or so had been in very poor health; no gain in bodily weight; tired very easily: and was disinclined to indulge in the ordinary outdoor activities of her playmates—The physical examination revealed badly diseased tonsils; there was a definite systolic murmur at the apex; the first mitral sound was prolonged. Patient was placed on 15 grains magnesium combind acetylsalicylic acid daily. Condition on discharge revealed that joint pains were gone, general condition better, heart sounds stronger.

B. Control Group

Case 65145—S. H.—Beth Moses Hospital—Female, age 15 years.—Upon admission the child showed a temperature of 100.6° F, a pulse of 85, and respirations of 33. She complained of head aches and pains referred to bones and joints. Had had repeated attacks of sore throat till tonsils were removed at the age of seven—The physical examination revealed teeth in rather poor condition; there was a systolic murmur at apex; roughening of mitral first sound. Patient was given alcohol rubs, antipyrene, an anti-rheumatic mixture consisting of KI, Fldextr. of Gelsemium and Tr. of Cimicifuga. Condition on discharge revealed that pain was somewhat ameliorated, no change in heart condition.

Case 64812—G. A.—Beth Moses Hospital—Male, age 13 years.—Upon admission the child showed a temperature of 104° F, a pulse of 112, and respirations of 30. He complained of severe pains and aches in joints of both legs, and severe headaches. Had had a similar condition prior to removal of tonsils five years ago—The physical examination revealed an inflamed throat; teeth were in poor condition; there was a systolic murmur at apex, rate very rapid and somewhat irregular. Patient was placed on KI, Fldextr. of Gelsemium and Tr. of Cimicifuga. Condition on discharge revealed that pain in joints and headaches were less severe, heart condition unchanged.

Case 23943—F. B.—Beth Moses Hospital—Female, age 15 years—Upon admission the child showed a temperature of 100°8° F, a pulse of 80, and respirations of 30. She complained of enlarged and inflamed tonsils. Previously was advised to have tonsils removed but refused—had had frequent attacks of sore throat—The physical examination revealed enlarged and inflamed tonsils; teeth were in poor condition; there was a systotlic murmur at the apex. Patient was placed on KI, Fldextr. of Gelsemium and Tr. of Cimicifuga. Condition on discharge revealed that general condition was improved, heart essentially the same.

Case 34381—I.H.N.—Beth Moses Hospital—Male, age 14 years—Upon admission the child showed a temperature of 99° F, a pulse of

80, and respirations of 28. He complained of pain in right shoulder and elbow for one week. Had had similar experiences before tonsils were removed at the age of six—The physical examination revealed a somewhat inflamed throat; teeth were in poor condition; there was a systolic murmur at apex, roughening of aortic second sound. Patient was placed on KI, Fldextr. of Gelsemium and Tr. of Cimicifuga. Condition on discharge revealed that pains had gone, heart condition same, general condition improved.

Case 41874—R.S.—Beth Moses Hospital—Female, age 13 years Upon admission the child showed a temperature of 98.6° F, a pulse of 74, and respirations of 22. She complained of repeated headaches, general malaise, and pains in joints. Her general condition had been rather poor for past year: had suffered from periodic attacks of headaches—The physical examination revealed enlarged and inflamed tonsils; there was a definite systolic murmur at apex. Patient was placed on KI. Fldextr. of Gelsemium and Tr. of Cemicifuga. Condition on discharge revealed that malaise was gone, pains less severe, general condition improved, heart condition unaltered.

Case 64606—M.B—Beth Moses Hospital—Female, age 15 years —Upon admission the child showed a temperature of 98.6° F, a pulse of 75, and respirations of 24. She complained of pains in joints, sore thorat, and general malaise. For past four months had been suffering with repeated attacks of sore throat and joint pains—The physical examination revealed enlarged and inflamed tonsils; teeth were in fair condition; there was a systolic murmur at apex, roughening of mitral first sound. Patient was placed on KI. Fldextr. of Gelsemium and Tr. of Cimicifuga. Condition on discharge revealed that pains had subsided, general condition better, heart unchanged.

Case 65207—O.A.—Beth Moses Hospital—Male, age 14 years.—Upon admission the child showed a temperature of 100.6° F, a pulse of 90, and respirations of 30. He complained of pains in joints, severe headaches, some nausea but no vomiting. Gradual onset one week ago. Had had chorea five years ago which left a definitely damaged heart—The physical examination revealed enlarged and inflamed tonsils; teeth were in very poor condition; there was a loud systolic murmur at apex, transmitted throughout precordium. Patient was placed on KI, Fldextr. of Gelsemium and Tr. of Cemicifuga. Condition on discharge revealed pains were less severe, heart condition remained the same, not much improvement in general condition.

DISCUSSION.

There is an impression among members of the medical profession that acetylsalicylic acid splits up into sodium-acetate and salicylic acid or salicylate in the blood when acetylsalicylic acid is administered. As a matter of fact such a loose combination of the two is undesirable in the first place in the original tablet, and when the acetylsalicylic acid is of the proper stability it should remain so even in the blood. This was borne out in the present series in which analysis of the blood demonstrated that there was no free salicylic acid present. While the patient who is being given sodium salicylate for rheumatic and other pains will always show

salicylic acid in the blood, the patient who is being given this drug should not have a positive salicylic acid reaction in the blood if the original tablet contains no free acetic and salicylic acids. This should be borne in mind as a criterion for a properly made tablet. The reader may perhaps think it worthwhile to check up on acetylsalicylic tablet for free salicylic acid. This is easily accomplished by adding a few drops of ferric chloride to the tablet. If free salicylic acid is present the tablet will turn purple; if only acetylsalicylic acid is present, and this should always be the case, the tablet will remain white, [11].

It is impossible to be dogmatic in the determination of such matters as prophylaxis and improvement in rheumatic children under brief observation. The aggregate value of published clinical reports is considerable; and it is to this evidence that the present paper should contribute.

There is shown upon another page a tabulation of the results. It will be noted that disappearance of pain of whatever nature was uniformly obtained with the salicylate; and was not obtained with the cemicifuga-iodide mixture. Further, it is evident that the nervous and secondary symptoms were largely alleviated in the therapeutic group. The children in general under the salicylate looked brighter, their mental reactions were quicker, and their capillary skin circulation was better than those in the control group.

CONCLUSIONS.

1. Acetylsalicylic acid probably exerts a prophylactic influence upon the rheumatic syndrome in children.

2. Acetylsalicylic acid with magnesium appears to be equivalent in such use grain for grain to acetylsalicylic acid alone.

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THERAPEUTIC GROUP.

Case Nos.	21940	4321	24297	24337	24129	2632	9520	2674	13109
Diagnosis	Rh. Syndrome.	Rh. Syn.	Rh. Syn.	Rh. Syn.	Chorea	Chorea.	Rh. Syn.	Rh. Syn.	Rh. Syn.
Length of Observation	2 mos.	3 mos.	3 mos.	3 mos.	5 mos.	5 mos.	3 mos.	3 mos.	2 mos.
Length of Previous Illness	2 yrs.	2 yrs.	18 mos.	unknown	years	2 mos.	unknown	4 yrs.	unknown
Improvement in Heart.	Slight improve in murmur. Beats stronger.	Roughening improved.	none	Murmur not affected. Beats steadier, slower.	slower beats.	Murmar disappeared.	Stronger impulse.	Murmur unchanged; impulse stronger.	Murmur unaffected.
Improvement in Pain	Joint pain relieved.	Joint pain cleared immediately.	Joint pain ceased.	Leg pains gone. Precordial pain gone.	...	...	Joint pains ceased.	Joint pain ceased.	Less joint pain.
Improvement in Weight	++	0	+	0	++	++	+	0	0
Improvement in Appetite	++	+	++	+	+	+	++	0	+
Improvement in Nervous Symptoms	+	0	+	0	Choreic movements less.	Choreic movements less.	0	0	+

CONTROL GROUP.

Case Nos.	65145	41874	64812	64606	23943	34381	63207
Diagnosis	Rh. Syndrome.	Rh. Syn.	Rh. Syn.	Rh. Syn.	Rh. Syn.	Rh. Syn.	Rh. Syn.
Length of Observation	3 mos.	3 mos.	3 mos.	3 mos.	3 mos.	3 mos.	3 mos.
Length of Previous Illness	10 yrs.	1 yr.	6 yrs.	4 mos.	2 yrs.	unknown.	Chorea 5 yrs. ago.
Improvement in Heart	unchanged.	unchanged.	unchanged.	unchanged.	unchanged.	unchanged.	unchanged
Improvement in Pain	?	0	0	0	0	?	?
Improvement in Weight	0	0	0	0	+	+	+
Improvement in Appetite	+	+	+	+	+	+	+
Improvement in Nervous Systoms.	+	+	+	+	+	0	+

SOME COMMON AILMENTS IN INFANCY AND CHILDHOOD.*

BY

K. S. SRINIVASA IYER, L.M. & S.,

Karaikudi.

The child is the nucleus of domestic happiness of parents; a sick child causes a great deal of anxiety and worry both to the physician and the relatives of the child.

Infants are very easily susceptible to many ailments—slight degrees of infection, intoxication or metabolic disorders produce quicker and exaggerated responses in infants and children. High temperature often seen in children results from digestive disorders; vomiting and diarrhoea produce very quick dehydration and wasting in children.

Ophthalmia Neonatorum :—Discharge is profuse; if left inadequately treated leads to permanent impairment of vision, blindness and later followed by gonococcal arthritis. Swelling of eyelids and purulent discharge, sometimes corneal ulceration appear about the second day after birth.

Treatment should be continued for sometime. Irrigation with concentrated solution of boracic acid, 5 to 10% solution of Argyrol or Protorgal—Prophylactic installation of Ag No. $_3$ grains 3 to an ounce at birth after washing with boric lotion of suspected cases is advisable.

Talipes :—Congenital forms commonly met with and generally due to malposition of foetus in uterus.

Treatment of Talipes is unsatisfactory. I had two cases for treatment soon after birth and in both these the results were not encouraging, though special splints were applied with plaster-of-paris jackets fixing the affected foot.

Diarrhoea :—There is increased peristalsis and consequently abnormally frequent action of bowels. There is generally an attempt on the part of the body to get rid of substances that irritate the bowel and threaten to cause disease. The irritation of the bowel may be due to simple mechanical causes like undigested food material or as is often the case to chemical causes in the nature of abnormal acids due to excessive fermentation. This excessive fermentation may be either due to the addition of too much sugar to the feeds or to the intolerance for fats. Diarrhoea may also be caused by infection. Sometimes specific organisms like streptococcus, dysentery, gas bacillus are found. In some cases diarrhoea is

*A paper read at the Chettinad Medical Association and specially sent for publication in the "Antiseptic."

only a symptom of infection in some other part of the body—parenteral, while in others the bowel itself is primarily affected—enteral, and signs of inflammation appear in it. The stools in the case of carbohydrate disturbances are green in color, acid, contain excess of mucus and numerous white curds of fatty acids, soaps or neutral fats with excess of watery discharge. Defaecation painful and noisy. Skin round the anus reddened and even ulcerated. Sour smelling vomiting which are frequent may be present in early stages. Distended abdomen due to presence of gas in intestines. Rise in temperature. Child fretful and restless.

In the case of fat indigestion, the stools are of grey to brown oily appearence with butter consistency. The amount of urine passed is usually small and there may even be anuria.

Treatment:—Stop all food till acuteness of diarrhoea subsides. Only boiled water, solution of glucose, or rice water, whey to be given. After the diarrhoea is brought under control the feeding must be gradually and cautiously increased according to the individual case. In children of over six months of age arrow root water is very useful for colitis.

In mild cases alkalies and carminatives do good. In bad cases castor oil in small doses; Bismuth useful when large intestines are affected. Tincture Camphor Co. or Dover's powder may be necessary to relieve the pain and the frequency of the motions.

For acidosis Sodium Bicarbonas in quantities to make the urine alkaline is necessary. It may have to be given rectally if not retained by the mouth.

Dysentery :—Both Amoebic and Bacillary types seen in children, though the latter is rare comparatively. Amoebic cases react well to emetine injections—three in less than half grain doses every other day is enough. The only drawback to emetine injections is the pain caused by minute capillary haemorrhage at the site of injection. In a case of a boy four years of age, who had an acute attack of bacillary dysentery with sudden onset, the number of motions were as high as a hundred on the fourth day and the disease was very refractory to all treatment; temperature ranged from 101 to 103; there was acute intestinal colic. The treatment given was the confinement of the child in bed, kept warm. All food stopped excepting whey and later warm arrow root or sago conjee; flannel binder to abdomen.

Oleum Recini, Calomel, saline purges were given. When colic was acute Morphia suppository, stupes of turpentine and opium etc did not give much relief. Antidysenteric serum had not the desired effect. Dieting and nursing were carefully attended to by two doctors in turn, and fortunately the boy came round after ten weeks. Since recovering from this attack the boy never regained his original

health and the alimentary canal is very sensitive even now though he is nearly fourteen.

Constipation ;—This is mainly due to improper feeding, under-feeding and insufficiency of fluid. A proper selection of food with orange juice and water between feeds will set right the condition. Milk of magnesia, pure olive oil may be given in obstinate cases. Massage of the abdomen every morning for a few minutes will be of great help.

Vomiting :—(*a*) *Overfilling of stomach* : This is physiological and occurs in the breast fed, frequently due to return of excess of food directly at the end of a feed. The vomit is small, consists of milk hardly altered in character. There is no discomfort or pain ; stools normal. Nutrition is unaffected. Treatment is of a preventive nature—careful handling after feeding and prevention of overfeeding.

(*b*) *Dyspeptic* :—More common. Relation of vomiting to the meal varies ; usually vomiting occurs soon afterwards. Stools either normal, pale and constipated or acid, loose and green. Discomfort and colic after food generally found. This form is rare in breast fed and quite common in the artificially fed babies. Too frequent or too much feeding is the most likely cause ; excess of fat or a poor tolerance of fat produces this condition. Vomit in this type has a strong acid odour.

Treatment:—Correction of the size of the feeds and the intervals between them. In cases which are refractory to the correction of the feeds, which is rather rare, Bismuth and Soda may given.

Disturbance about teething period :—Pain, Bronchitis, Eczema, fretfulness, irritability, impaired sleep, and sometimes convulsions are seen ; these symptoms cease as soon as the tooth appears. The best thing to relieve nervous symptoms is Potash Bromide in 2 or 3 grain doses ; reduction of diet ; castor oil ; and rarely lancing of gums.

Rickets :—Fairly common although its manifestations are not well marked. The first thing seen is the perspiration about the forehead during sleep as early as even the fifth month or earlier. The teeth are not healthy, decay easily and fall out early. Diarrhoea at every cutting of tooth with irritability and excitability of the nervous symptoms, and there may be convulsions. Depression of sternum and dumb-bell-like thickness of lower ends of radii are seen.

Treatment:—Increase of milk in diet and Parish's chemical food always effect a cure.

Measles:—The preliminary catarrhal symptoms are characteristic of this disease. Koplik's spots are rarely seen. Commonest complications are diarrhoea, Broncho-pneumonia and otitis media. Proper diet and good ventilation are necessary factors in treatment.

Whooping Cough :—First a nasal catarrh is seen, with a mild inflammation of the trachea lasting a week or so. The "whoop" first appears at night, then afterwards during the day. In mild cases there are only a few whoops for the whole of the disease and in bad cases there are present almost every hour. Bronchitis, ulcer on the tongue, and subconjunctival haemorrhage are present. Well ventilated airy place is important. Bromides with Belladonna, Soda-bicarb and Amonium-benzoas give best results.

Acute Abdominal conditions :—Abdominal pain and vomiting are the leading symptoms of acute abdominal disturbances. In children one has to depend more on the local and general examination and on the observation of details regarding the appearance, position of the child etc. Abdominal emergencies of children are almost always referable to the alimentry canal, especially intussusception. Difficulties in proper and early diagnosis are due to the fact that the most obvious symptoms at the onset of illness may direct attention elsewhere. The local condition may be masked by the intensity of early toxaemia or the symptoms may indicate more as a disease of the urinary tract or the lower limb than of the bowel. Early diagnosis of acute abdominal conditions is very important because of the tendency to diffuse spread of infection from inflammatory fever, and the severity of the general effects, toxaemia, shock and collapse which give rise to a very dangerous conditions in a short time.

Pain and vomiting are caused by : (*a*) Irritation of mucous membrane as in gastro-enteritis ; (*b*) Inflammation of peritoneum and (*c*) obstruction of the bowel.

Enteric Fever :—Rare before the age of three—Bronchitis, Broncho-pneumonia commonly seen. Diarrhoea frequently met with. Delirium present which is troublesome ; Haemorrhage and perforation are rare. A boy aged ten had a typical attack of Typhoid and on the 23rd day of the disease there was haemorrhage and the boy collapsed in 24 hours. Careful nursing and dieting are important factors in the treatment of this disease.

Worms :—Threadworms : Symptoms of indigestion, chronic intestinal catarrh, wasting, nervous symptoms like disturbed sleep, teeth grinding and eneuresis, the result of chronic irritation, vulval discharge may be present ; pruritis of anus and rectum, discharge of mucopus. Treatment is in the boiling of drinking water ; raw vegetables and fruits to be well washed ; starchy and sugary food to be reduced ; bowels kept free ; sulphur lozenges after food and locally rectal warm saline or infusion of quassia and insertion of blue ointment into the rectum.

Roundworms :—Less common than the threadworms. Dyspeptic symptoms, abdominal colic, ravenous appetite, increased thirst,

sleeplessness and nervous irritability. There may be fever, convulsions and nervous symptoms. An Indian Christian boy eight years old had persistent high temperature for four days; vomited all medicine and food, not even water was tolerated. Giddness. No pain anywhere; lungs clear. On the fourth day vomited one round worm and then temperature came down to normal. Santonin was given and only two worms were passed. The boy is now alright and shows no signs though it is four months since he had the acute trouble.

Treatment:—Santonin with calomel on empty stomach followed by a purge of castor oil or saline. Prophylactic boiling of the drinking water and washing of the vegetables and fruits.

Infantile Biliary Cirrhosis of Liver:—Liver much enlarged; Jaundice present in later stages; spleen enlarged; abdomen enlarged—runs in families. Causation obscure. It may be due to a primary developmental defect, or syphilitic toxaemia.

Treatment:—Not definite. Mercury is of great help in the form of hydrargyri cum crete or calomel; white radish juice (முள்ளங்கி); Bitter gourd juice (பாகல்சாறு); small doses of grey powder or calomel given from time to time, promotes healthy action of the liver.

Fevers of obscure origin:—Rapid rise of temperature from trivial causes is so common in children that pyrexia alone is not sufficient enough for anxiety. It is a continuous high fever especially if other disturbances ensue, rather than a single rise, which is significant of disease in infancy. Sudden rise of short duration may be due to exanthemata or influenza; pneumonia, otitis also cause obscure fever; temporary disorders of digestion which is quickly relieved by an emetic or an aperient. Persistent and recurrent rises are caused by infection of throat and ears, pyelitis, pneumonia, alimentary tract infection in which case it may be markedly high and associated with constipation or very slight and persistent and probably of nervous origin, typhoid, paratyphoid and worms.

Affections of throat and Larnyx:—*Cough*: This is generally due to throat conditions and not to pulmonary disease. It may also be occasioned reflexly from stomach, ear or brain. Throat coughs are due to pharyngitis, enlarged tonsils and adenoids or to an elongated uvula. The cough may be accompanied by vomiting and epistaxis.

Acute Tonsillitis:—Pain, swelling and temperature. Treatment local measures to throat, rest and general treatment; dietetic and medicinal, swabbing Mandel's Pigment once or twice; afterwards spraying and inhalation. If tonsils and adenoids are septic they should be removed.

The following should be very strictly observed to prevent the development of diseased condition of nose and throat, thereby avoiding the resulting serious effects:—

(*a*) Breast feeding and the subsequent dietery rich in vitamins especially vitamin B. (*b*) Nasal breathing; clothing should be loose round chest and abdomen at all ages. (*c*) Provision of as good hygienic conditions as possible—well ventilated rooms, free access of sunlight etc.

Bronchitis:—Associated with coryza. Onset acute with vomiting and rise of temperature. Physical signs vary according to the extent of affection of the bronchial tubes and to the stage of the disease. If large tubes only are affected first sonorous and later sibilant rhonchi are heard over a limited area. If the smaller tubes are affected the sounds are more numerous and diffuse. There will be high pitched rhonchi and later rales in moist stage. Fremitus, percussion notes and character of breath sounds are little altered. Sputum is watery and mucoid at first and later purulent. In very severe cases especially infants where there is capillary bronchitis the tubes become blocked and the lung collapses. There is dullness to percussion and the breath sounds are diminished or even absent. Marked dyspnoea and cyanosis are noted. In these cases the respiration rate is markedly increased. Temperature is high and irregular.

Pneumonia:—Onset acute with fever and malaise, vomiting or drowsiness usually present—older children complain of abdominal pain. Short painful cough develops later and sometimes absent. Expectoration is generally absent. Dullness, increased vocal resonance are often first suggestive evidences. Moist rales appear during resolution. In all cases apices, axillae and intrascapular regions should be carefully examined. The general symptoms of drowsiness, fever, and rapid respiration are very important as from these alone a diagnosis can be made while waiting for the confirmatory signs in the lung.

Breathing characteristics are the marked expiratory dilatation of alae nasi, rapid respiration rate out of proportion to that of pulse, respiration shallow, no true obstructive dyspnoea, no cyanosis and no recession of chest.

Temperature high 103 to 105 even, sustained remissions not so much as in broncho-pneumonia; termination by crisis on the 5th to 8th day with no tendency to collapse or cardiac failure. Occasionally temperature comes down by lysis. Pseudocrisis distinguished from the true one by the failure of the pulse respiration rate to drop are fairly common. Generally there is rapidity of resolution in this condition. Pneumonia is common after the age of two. Bronchitis with pneumonia frequent in infancy. Pure pneumonia is more common in strong healthy children than in the weaker ones.

Treatment of Bronchitis and Pneumonia :—Rest in bed in a well ventilated place. Tight clothing to be avoided. Careful changing of the position of the patient gently from time to time to avoid collapse of the lung. Easily digested food in small quantities, and often. To start with an opening dose, in the absence of diarrhoea, is advisable. Belladonna and bromides give relief to cough and restlessness. Treatment of pneumonia is in good nursing, rest and quiet, fresh air, careful feeding and plenty of water to drink.

Spinal Caries :—Result of injury to the cord; may be tubercular; deformity occurs early.

Treatment :—Absolute rest in bed; plaster-of-paris jacket to correct deformity; fresh air; good nourishing food. Tonics.

Eneuresis :—This is generally nocturnal and found in nervous and excitable children. Treatment lies in the restriction of fluid intake especially after the evening. Child to be thoroughly wakened every two hours or so after going to bed to pass urine; Belladonna and Ergot in small doses thrice daily produce successful results.

Convulsions :—Idiopathic or symptomatic. In some children a tendency to convulsions exists in such high degrees that even disorders of the most trivial character afford sufficient stimulus for its occurrence. This exaggeration of nervous excitability may be due to the influence of neurotic inheritance. Another reason for the heavy incidence of convulsions in childhood is the frequency with which epilepsy commences in this period of life, as it is well known that "more than 10% of epilepsy commences during the first three years of life." Fits may occur in a variety of forms, from a generalised seizure to twitching of a single muscle or group of muscles or a temlporary loss of consciousness with no apparent muscular spasm. All are epilepti-form and no features distinguish those which are symptomatic from those of epilepsy proper. The convulsions in infancy may be due to asphyxia or injury of the brain at birth; and in the early few months it may be idiopathic, while the effects of rickets is a predisposing cause from the 6th to the 24th month. Symptomatic convulsious are caused by a variety of conditions and may be considered under: cerebral and meningeal, fever, asphyxia, peripheral irritation and rickets.

Cerebral and meningeal :—In new born convulsions may be due to intracranial haemorrhage, congenital abnormalities of brain, or meningitis.

Fever :—Convulsions may usher in disease of acute onset with rise of temperature as pneumonia, scarlet fever or acute pyelitis.

Asphyxial convulsions occur at birth when there is difficult abour, and later in the paroxysmal stage of whooping cough.

Peripheral irritation :—In this case it is mostly due to round worms, acute otitis media, teething, indigestion and gastroenteritis.

Rickets :—This exerts an indirect influence on the occurrence of fits in children. It aggravates nervous excitability which is naturally high in infancy, so much so that slight irritation like teething and indigestion give rise to a fit.

Treatment :—Potash Bromide in three grain doses three or four times a day with Tincture Belladonna; Chloral in a grain dose four times daily till convulsions cease.

Tetanus :—In new born the organism finds entrance through the cut surface of the umbilical cord. Older children are affected by infection through a wound or injury which in some cases are very trivial.

A typical case of tetanus was treated by me a few days ago. An Adi-Dravida boy aged six years was brought with convulsions. There was no external wound or injury but a history of an accidental fall with no visible abrasion a few days before. The spasms were very painful and appeared once in about 15 minutes and each lasted about 10 to 15 seconds. Four injections of stock antitetanic serum; with bromides and Maganesium Sulphas internally gave good results.

THE ROLE OF PARATHYROID IN THERAPEUTICS.*

BY

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In recent times treatment with the extract of the parathyroid gland has assumed an important place in the armamentarium of the medical man, and it is being used extensively for a variety of conditions. In some cases its use is on the rational lines and naturally the results are very satisfactory; while in others it is being given with imperfect knowledge of physiology or the pathology of the disease and hence the results are doubtful or even utterly disappointing.

At the outset let me mention that parathyroid extract is a new remedy and the clinical experience of its use has not yet stood the test of time, and the laboratory experiments are difficult to control. The confusion becomes all the more perplexing due to the fact that some preparations like Parathormone (Collip) are potent, while others, especially the dry extracts given orally are absolutely innocuous. Therefore in the present state of our knowledge one cannot be very dogmatic about its uses and abuses.

The common teaching that "Parathyroid regulates calcium metabolism" is an ambiguous expression, and I believe, has led to

* Specially contributed to the "Antiseptic."

its indiscriminate use in cases of faulty calcium metabolism. I shall therefore, give a brief resume of its physiology first, and then some of its therapeutic indications.

As a result of experiments on dogs it has been found that removal of all the four parathyroids quickly leads to the death of the animal, but in partial removal death may be delayed for a considerable time, and the muscles of the animal are thrown into clonic and tonic contractions similar to infantile tetany. An examination of the blood at this stage shows a marked rise in the quantities of Guanidin and Methyl-Guanidin, together with a decrease in its calcium content. Macallum and Voegtlin have shown that these symptoms can be controlled by administering large doses of calcium salts, or an extract of the gland itself. It is believed that parathyroids neutralise these toxic substances by combining them with the calcium present in the serum, in a way not yet fully understood. Again it has been shown by J. B. Collip that injection of parathyroid extract causes a rise in the serum calcium and phosphorous contents together with an increased excretion by the kidneys, and D. Hunter has pointed out that its prolonged administration deprives the bones of their calcium and phosphorus moities as seen from their less defined shadows in the skiagram. Therefore, the natural conclusion is that parathyroids increase the calcium and phosphorus content of the serum by mobilising the same from the bones.

If the above view is the correct interpretation of things, the indications for the administration of parathyroid become clear-cut. It comprises of those diseases that are due essentially to a lowered content of serum calcium and where the bones are normal. e.g., the various forms of tetany, sprue, pulmonary tuberculosis, the varicose, gastric and other chronic ulcers.

Now parathyroid extract is commonly given for a variety of bone-diseases *e.g.*, rickets, osteomalacia, tuberculosis of bones. osteitis fibrosa, ununited fractures, defective dentition and a host of others in the hope of increasing the calcification of the osseous tissue. As has been said above this remedy instead of calcifying the bones withdraws calcium from them, and is, thus, liable to do more harm than good. It is therefore contraindicated in all such cases.

Commonly parathyroid is prescribed with calcium salts, and used in this way it is supposed to give very satisfactory results, even in diseases of the bones, but it is difficult to say what part the parathyroid actually plays in it, and similar or even better results are not to be obtained by the proper administration of calcium salts alone. I, therefore venture to suggest that the administration of parathyroid should be limited to the first of the above mentioned group of cases, and never tried in cases of bone-disease.

INCIDENCE OF LATENT DYSENTERY AMONG THE SOUTH INDIANS.*

By

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Among the chief tropical diseases that account for a large mortality and disability among the South Indians dysentery in its various forms plays an important part. In its infectious nature in its disabling persons from their ordinary avocations of life, in the complications that it produces, in the acute sufferings caused by it and in its being a carrier in chronic and latent forms it is rivalled only by a few other diseases. The various forms in which the disease manifests itself deserves only a passing mention as it is well known to the profession. These are:

I. Bacterial—Bacillary (Shiga, Flexnor etc).

II. Protozoal—Amoebiasis, Entamoeba, Hystolitica, Balantidious coli etc.

III. Helminthic—Bilharzial and Verminous.

Each class appears to have its own characteristic features in the signs, symptoms and complications produced by it. And both the main and the most prevalent forms viz, the amoebic and the bacillary are peculiar to enter into a chronic stage causing numerous complications and endless miseries to the victim. But the most fearful and dangerous part of the disease is the latent form it assumes. Generally a person getting Dysentery first goes on with it for some time with some home remedies until the disease puts him down to bed and ultimately takes a serious turn. It causes numerous foul smelling motions with blood and slime or with either of these with at times high fever, toxæmia and anorexia, In this connection it will be worthwhile to note the important distinguishing features between the two main forms of Dysentery:

	BACILLARY	AMOEBIC
1.	Acute epidemic	Chronic endemic.
2.	Onset acute	Onset insidious.
3.	Incubation period short	Incubation period long.
4.	Pyrexia common	Pyrexia rare.
5.	Duration short days or weeks	Duration prolonged.
6.	Fatality high	Fatality low
7.	Complications: polyarthritis	Complications: Hepatitis abscess etc.

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* Specially contributed to the "Antiseptic."

8.	Tenderness general, marked over Sigmoid flexure	Local tenderness; thickening over sigmoid flexure, Transverse Colon, cœcum etc.
9.	Death: Toxaemia and exhaustion	Exhaustion, perforation, Hepatic abscess.
10.	Teresmus severe	Not accentuated.

The main seasonal incidence on the prevalent dysenteries and diarrhoeas is from May to October in relation to the maximum prevalence of flies through which milk and food may be contaminated. Fruits such as mangoes, Jack fruits etc, which are in abundance during this season and form a common food of the poorer classes in several parts of South India naturally upset the digestive organs and set up intestinal catarrh which ultimately activates the latent dysentery in them. In Malabar the dysentery and diarrhoea curve increases during the rainy season corresponding to the above period and is often complicated by hook worm infection which predisposes to dysentery: chiefly amoebic cases are more prevalent during the winter months due to low temperature. Emetine lowers the mortality and morbidity of amoebic cases but relapses are very common due probably to the deficient course of treatment. And this latent and chronic dysentery manifests itself into diarrhoea and gastro-intestinal discomfort due mostly to amoebic infections and commonly limited to æecum not causing active signs of dysentery. And in my experience such anamolous cases as also certain cases of diarrhoea occurring in females after delivery are more numerous than actual dysentery ones.

It will also be highly interesting to note certain extracts from the report of the Medical Advisory Committee of Mesopotamia during the Great War about the incidence of dysentery among the Indian Troops of whom the South Indians formed the majority. "The report indicates that Deysentery is a serious cause of ineffciency in the field and recommends the fullest co-operation between the clinician and the bacteriologist. Of 490 convalescent men with neither blood nor mucus in stools 9 per cent contained entamoeba. The committee adds that bacillary dysentery is evidently the predominant type. One conclusion arrived at was that the nature of a negative examination increases with the interval since treatment ended, i.e., during the first three weeks after treatment. The effect of emetine wears off and what the physician desires to know is whether the infective agent has been completely killed or is again remaining. Passing over deductive argument the committee lays down as an arbitrary standard a minimum of six examinations where E. H has been found, i.e., six examinations should be made during convalescence to make fairly sure that the patient is not a carrier."

The following tabulated statement will bear ample testimony to the high prevalence of latent dysentery in South Indians. It is taken from among the prisoners of the Central Jail, Coimbatore in 1929-30 who were selected for cooking work. Generally only the most hardy men are picked out for kitchen work in Jails and before being put on that task their stools are sent up to King's Institute, Guindy for bacteriological examination to ensure their being non-carriers of the dysentery, cholera and enteric groups of diseases.

Results of the examination of stools (bacteriological) of 152 convicts 1929-30.

Description of pathogenic organisms found.	Number infected.	Percentage.
1. Colicysts	28	18·42
2. Entamoeba Hystolitica cysts	28	18·42
3. Tetramitas cysts	1	·65
4. Iodamoeba cysts	2	1·30
5. Blastocystis Hominins	1	·65
6. Entamoebae coli	2	1·30
7. Entamoebae Hystolitica	3	1·95
8. Bacillus Flexnor Isolated	1	·65
9. Bacillas shega Isolated	3	1·95

Every prisoner on admission is kept for an average period of 10 days in quarantine outside the main jails during which time they are given prophylactic treatment for hook worm and dysentery. The table shows the incidence of the latent infection even after the the above prophylactic treatment and that among the apparently most healthy and sturdy men. Systematic prophylatic treatment (Foster's) against dysentery has a distinctly beneficient effect except in a a few very chronic cases which baffle such treatment. And hence it is that the notorious jail dysentery has become a thing of the past. And I cannot help remarking that the success of the above treatment depends largely upon the zeal and willingness of the assistant medical officers to carry out a regular microscopical examination of the stools and strict isolation of the infected cases. But at present, the unpopularity, humiliating conditions and want of encouragement to these officers in the jail department are factors tending to a retrograde step and occasional outbreaks of the disease are still not uncommon.

Such being the case it is an undisputed fact that a large number of apparently healthy individuals are likely to be dangerous carriers of the disease and some steps must be taken to free them. The whole question thus becomes a national concern of supreme importance.

Campaigns against ankylostomiasis, malaria, leprosy etc., have been carried on by the Government with remarkable results. In the regular admissions to the public hospitals if a systematic probing be done in the clinical case-taking regarding the occurrence of dysentery or chronic diarrhoea, a regular course of prophylactic treatment can be carried out. And the large number of private practitioners in various places will also do well to follow the same to the immense benefit of the suffering humanity.

THE PRESCHOOL CHILD.*

By

Dr. Mrs. Anna Thomas, *Karachi.*

(Continued from Page 100, February, 1932.)

4. Want of proper mental and Physical recreation and open Playgrounds.

Noisworthy and Whitley in their "Psycology of child" say that 'a child who does not play not only misses much of the joy of childhood but he can never be a fully developed adult. He will lack in manhood many of the qualities most worthwhile because many of the avenues of growth were unused and neglected during the most plastic period of life.' Play is so important and it is impossible to overemphasise the value of play to the little child in his mental and physical growth. Joseph Lee said 'The child plays to live' and the preschool child's life is bound up in the expression of itself in play. Play is not mere occupation, keeping a child busy or out of mischief nor is it mere amusement. The Greeks made play one of their chief branches of education and the question has been considered of sufficient importance for several philosophers to suggest theories to account for the instinct of play. Every young animal plays in a way which specially fits for its future need in life. For example, the lamb skipping about the field is training its muscles for its natural haunt, the mountain side, while the kitten running after its tail and chasing a ball or cork is using the very best means to fit itself for the mouse hunt of later life. Thus, amongst animals, we find that each species has the instinct to play in a way which satisfies its special needs. Careful observation of animal play has shown that the parent animal guides the play of the young and makes use of it, to train each instinctive tendency as it arises. We may observe in the case of children that as each instinct arises there is a certain type of play to satisfy it and to train it. This is why different types of play appeal to children at different stages. Play has been rightly called

* Specially contributed to the 'Antiseptic.'

the mother of education and close study of child-play reveals the fact that intellect, memory, imagination and character are all powerfully affected in their development by the place given to play in the life of every little child. The preschool child till 3 years of age indulges in experimental play, and from 3 to 7 indulges in imitative play. During the period of experimental play the body is ever experimenting with his muscles and sense organs. The baby will clutch at a bright object and loves to put everything into mouth and likes to taste everything and constantly repeats the same action and by experience learns what not to touch and taste. During the period of imitative play, the little child loves to copy the activities of grown-ups around him. The parents ought to be vigilant at this period so that the baby copies only good and not bad things. Supervision of a child's play is as necessary as supervision of food and health habits and careful supervision repays a hundred-fold to the parents. Play is not only a valuable asset in the child's physical development, but it is a big factor in the development of his mind and character, the things of his spirit so difficult to affect later if the opportunities of his childhood are neglected. The parents ought to provide with proper materials for the play of the child—materials with which he can reconstruct the world as he sees it. One can observe the four instincts that underlie all human achievements namely, workmanship, imitation, competition and co-operation. Conspicuous among the children that play in the sand-box and the parents especially the mother should carefully watch and help the baby to develop these instincts in a healthy manner. Many parents in India bestow little or no attention to the play of children and consequently, the child's faculties and instincts are not developed properly and the preschool child thus fails to attain the proper standard. We ought to always remember that from earliest infancy nature by means of play educatss the little child as his faculties and instincts gradually develop and if we make use of this wonderful instinct of play in children by guiding it aright, we may hope to help towards the development of a well-balanced, self-reliant and self-controlled generation ready to take its part in the great future before India. Great attention ought to be paid about the mental and moral development of the preschool child. We know that the physical body of a child, if only its training is begun at a sufficiently early age, may be modified to a considerable extent. We have seen how acrobats train children to perform wonderful feats with their limbs, which adults can never do. If the physical body of a child is thus plastic and readily impressible, his astral and mental vehicles are far more so. The psychologists declare that they thrill in response to every vibration which they encounter and are eagerly receptive with regard to all influences, whether good or evil, which emanate from those around. The pre-

school children are so susceptible and so easily moulded that they soon set and stiffen and require definite habits, which when once firmly established, cannot be altered easily. Parents and other elders must therefore set a very good example to the little preschool child as he watches them closely and imitates them faithfully in every details. In the matter of selecting companions and nurses to children great care ought to be exercised. Some parents think their responsibility rests with giving good food and clothes etc., to the preschool child. But recently the attention of parents is drawn to the fact that mental and nervous side of the child requires equal and perhaps better attention and if it received due consideration there would be far less nervous and mental diseases in the world. We must always remember that a normal child is open to suggestion. The child has no acquired experience of its own to guide it and is therefore largely dependant for direction on the direct or indirect suggestion supplied by those about it. A child forms habits early in life which is found to persist throughout life; therefore it is all important that these habits should be to its advantage as they form the mental background and will colour and influence its future actions. The mental atmosphere pervading the house must have a mark for good or ill upon the child. The imitability, furrying and worrying of an house will soon have the effect on the plastic brain of the child and he becomes irritable and fussy. The psycho-analysts tell us that all nervous unrest are reflected upon the physical health of the child and that they show themselves in errors of digestion, sleeplessness and various other ills. Some of them will become very serious if not at once, at some future time. Just as physical disabilities may retard and interfere with mental development so nervous unrest may affect the bodily health. An atmosphere of fear is exceptionally baneful and unrest and excitability are quickly imparted to a child. Taking them too much to an atmosphere of excitability is not good as it means overstimulation which is not only harmful to mental development but also affects physical health and commonly leads to sickness. A child requires occupation and not excitement. Morbid and depressed atmosphere also is harmful to children. There is a Vernacular proverb which means that 'habits formed in the cradle will last till the grave.'

Open Play Ground.

Want of open play-grounds for children is greatly responsible for the ruined health of the preschool child. The preschool child must have plenty of open space to run about and play in the sunshine. Children of poor people owing to want of open play-grounds and of rich people owing to indifference or negligence, do

not get the fullest opportunities of playing in open grounds. Many of our cities have not sufficient number of open play-grounds for the children. The Juvenile Officer of Nashna, New Hampshire, an Industrial city of 28,379 inhabitants reports a little less than 50 per cent. decrease in juvenile cases since the establishment of open play-grounds under the City Commission in 1922. One enthusiast of open playgrounds goes to the extent of declaring as follows:—

"Put labour, love and play in all the homes of the world and there will be no more war or rumours of war." The following humorous and interesting recipe to make healthy children was once published in the *Meichigan Health Bulletin.* "Take one large grassy field, one half dozen children, 2 or 3 small dogs, a pinch of brook and some pebbles. Mix the children and dogs well together and put them in the field straining constantly. Pour the brook over the pebbles. Sprinkle the fields with flowers. Spread over all a deep blue sky and bake in the sun. When brown remove and set away to cool in a bath tub." Many preschool children do not grow up to the proper standard for want of open play-grounds and enough sun-shine. In the city of Edinburgh, Toddler's play grounds have been organised and specially equipped and supervised for the use of the preschool children.

In every part of India, one sees wonderful temples but very seldom a playground for children in whose hearts are the temples of our ideals and those of the nation. It is time that the rich and the philanthropic, nay, every father and mother should exert themselves to provide children with playgrounds and parks in open spaces when the future hope of the nation may enjoy enough sunlight and fresh air.

Toys.

The preschool child period is also the toy age and therefore the kind of toy becomes of utmost importance in its value to the little child. Toys were never intended as substitutes for a mother's intelligence. The safest guide in choosing toys for little children is never to give them anything that requires nothing of them. The sand-box gives more pleasure to the preschool child than any one thing and it will be advantageous if those who can afford may build one on a slightly sloping part of the yard where the sand may be drained and kept cleaned by sunshine. The sand-box will be a welcome playground for the child with a few simple toys, where he can imitate the world he sees around him and where he can create a world for himself. The dolls have a very important place in the life of the child in this period. The dolls are the first audience of the child. Upon them he tries out all he has learned that interests him. The dolls' teeth are brushed vigorously, nails are cleaned, drinks of

water are given, faces washed, endless dressing and undressing, naps given and hair brushed, until the poor doll becomes more and more dilapitated, but the lessons learnt by the little child are more and more firmly fixed in his mind. All the moral side of life also is tried out on the poor dolls. They are rewarded with kisses and sweets for good behaviour and are put to bed for bad. Every bit of discipline a child receives is immediately passed on to the doll.

In all the plays of children, whatever the equipment, if the play is instructive and interpretive, it must have as its basis the same basis upon which the real world depends. Play is not a substitute for anything else. Play is in itself a vivid factor in growth and development which cannot be neglected with safety. The preschool age gives to the little child his own real experience in play which later finds expression in his reading and writing and is the groundwork of his later development. Play is the learning process itself and resourcefulness, observation and adaptability are some of the qualities learnt. Work will never be a drudgery when the play spirit is present and psychologists tell us that work and play are not two different things but only two aspects of one great activity which is life. Play and work should never be spoken of as opposing activities. The preschool child must be trained to look at play and work as simply attitudes of mind towards life and then he will never feel the school as a prison house in after life.

5. Neglect of Personal Hygiene

Many parents do not care to create sufficient interest in the children about their (children's) own care and teach them the value of personal hygiene from early in life. We have seen that children are keen observers and faithful imitators and the habits formed early in life will stick up to the grave. Therefore, the parents should be very careful in the observances of their own personal hygiene and thus set a good example to their children. The first and foremost thing a child should be taught is the value of sunshine and open air. Both rich and poor alike do not teach this simple lesson to the child. The writer has seen well educated people who know well in theory about the benefit of sunshine and open air, do not enjoy them themselves and when questioned confess that they are unable to expose themselves, as from early childhood they were kept and brought up in rooms where little of sunshine or open air entered. Therefore, from early childhood this respect of the personal hygiene should not be neglected in the preschool child. His home may be but one room, but if that room is full of air and sunshine all the time, he has a splendid chance of health. Space is a valuable asset for health, because it can be filled with air. Whether the house is big or small and whether the parents are rich or poor, it does not

cost anything extra to give enough fresh air to the children. But it is a sad fact that many a child is not brought up in an environment of enough open and fresh air. Fresh air is the first essential to life and growth, and the ability to give that to our children is not a question of the size of our incomes entirely, but the intelligent grasp we have of the necessity of supplying it and the real economy wrapped up in so doing. Fresh air and sunshine are much happier and pleasanter things to pay for than Doctor's services. The school child at least gets some fresh and open air when he goes to school, but the preschool child is denied this free gift of nature to a great extent. Either out of fear or ignorance, the preschool child is denied sunshine and open air by many a parent and consequently he does not grow up to the proper standard. An experienced medical authority writes "To keep the normal child healthy give him sunshine. To help the sick child get well give him sunshine, not by bottles but by day's full. Tuberculosis and pneumonia, rickets, malnutrition, bronchitis and many acute infectious diseases are directly affected by the rays of sun." In Dr, Roller's Sanatorium at Leysin, Switzerland, many children suffering from bone tuberculosis are treated successfully by scientific treatment of exposing the children to sun's rays. Another important matter of personal hygiene in which the preschool child should be trained is the daily bath. Daily bath is an ordeal to lots of children. Many parents also consider it a trouble because the child hates his bath. This trouble can be easily got over if the child is taught to look upon his bath as a real personal necessity and a matter of comfort to him. In the average Indian home, on the oil bath day, many little children yell and scream because the oil is drifted into his eyes and the parents do not gently deal with the children during the bath. It is a day of ordeal to the little children. To save the worry its baths are neglected, the child grows up a dirty individual without bestowing any thought to this aspect of his personal hygiene. The preschool child must be trained to keep himself clean and a training in every detail of his toilet really saves time in the end to make the child like all the necessary parts of the personal hygiene he is learning at this age, because he will never carry it out himself later, if he has not really interested in it. The children at this age should also be kept from rubbing their eyes, from staring at strong lights, from the flickering light of moving pictures and from doing any eye-work in a poor light. The medical inspection of school children has shown that many children suffer from bad eye-sight. This is due to the neglect of the eye during preschool age. Any abnormality in the eye should have immediate care. As far as possible eyes must be kept clean by a daily wash of boric acid solution. The ears of the preschool child is as important as the eyes. Any neglect of earache

or discharge in the ears will produce fatal complications. The generality of the people neglect small affections in the eyes or ears of their preschool children or treat with indifference such matters as insignificant and when developed into complications, it may be too late to cure the diseases and consequently the children suffer in school as they cannot reach the average standard. The best protection for the preschool child's ears is to guard the avenues of approach, his throat and nose. These two filters of dust and disease must be kept clean and normal. During the preschool age, the brain, nerve cells and the heart of the child are all doing their best to grow and the most essential process of that great growth the child's breathing is so often neglected. When the nasal passages are closed by adenoids, these should be removed. If the throat presents enlarged diseased tonsils, they should be treated at once. Mouth breathing should be discouraged, because it has an immediate effect upon the teeth causing prominent and crooked upper teeth and a narrow arched palate. It is advisable to take the preschool child periodically to a dentist for examining and cleaning the teeth. It is said by authorities that the ultimate possession of a strong set of teeth is largely a matter of rightly living during the preschool age, for after a tooth has "come through" there is very little improvement of it possible. The critical time is while the tooth is forming. This is the basis of the care of the first teeth while the permanent ones are being formed. The 20 milk teeth present at the end of the 2nd year must serve the little child until the 6th or 7th year and the appearance of the permanent teeth. Then first teeth must be kept clean and free from decay. Well chosen mixed diet helps most in forming sound teeth. Chewing is one of the most important cleansing measures and prevents much of the straightening work later. The child must be trained to keep his mouth sanitary always.

SLEEP.

Sleep is necessary to all both old and young. No one can afford to do without the proper amount of it, for during sleep the whole body enjoys the best form of rest. Children are growing, developing, creating new tissues in all their organs and during the day are constantly active, constantly using up energy which can only be restored and a surplus gained for the necessary creative powers by a sufficient number of hours by sound, refreshing sleep under proper conditions. The child who for some reason or other does not get sufficient sleep, is the victim of neglect and its future may be seriously impaired. The brain is increasing rapidly in weight until the 7th year and during the time of rapid brain building the child requires much sleep. The children of the poor are much neglected in this respect; they either get insufficient sleep or sleep under totally unsatisfactory conditions, e.g, in crowded, noisy and badly ventilated rooms; the quality of sleep is affected; they are restless and subject to dreams and since sleep is the time of brain building, the brains of these unfortunate children very often suffer considerably. Children from their earliest years should be trained to regularity in habits and a definite hour for bed should be strictly adhered to. The preschool child should have at least 13 hours of sleep every day. The preschool children should not be taken to crowded festivals and other entertainments when they breathe for several hours a foul atmosphere and become over-excited with the result that when they go to bed they are sleepless and restless and when morning comes are listless without energy. Quiet peaceful sleep is the sign of perfect health. When anything is wrong with the child, his sleep is almost invariably disturbed. The preschool child whose sleep is neglected and is not regular and who does not sleep the maximum number of hours will not grow up to the proper standard and his dull pathetic expression, the heavy and darkly ringed eyes, lack of concentration and retarded mental capacity are all in marked contrast to the bright, intelligent, alert and active child who is trained to go to bed at an early regular hour and rises, rested, refreshed, eager to face the amusements of the day.

The normal tire of a child is not fatigue. Fatigue is caused when the normal sleep is broken and the child fails to react to the rest period. Then his exertion is not replaced by strength gained in sleep or rest, and he fails to gain in weight or develop normally. There are important aids to good sound sleep for children. Complete evacuation of the bowels every day and a clear nose and throat passage are essential. A quiet dark sleeping room without artificial light is conducive to rest. One of the common disturbances of sleep of a child is the bed-wetting habit. This should not be allowed to continue. The habit can be broken by a little care and patience, just as a child is trained not to wet his clothes. The child must be trained to exercise voluntary control over his bladder by urinating at the command of "stop, start." He can be helped by giving no fluid to drink 3 or 4 hours before going to bed. During the night once or twice and before going to bed he must be induced to urinate. A few nights of careful attention will stop this habit. Any prolonged persistent bed-wetting in spite of careful training needs expert medical supervison. No little child is interested in his health but he is interested in what happens to himself and therefore the parents should stimulate him to build real bridges between the rules for the care of his mind and body and himself. This is no longer theory but fact. "Many efforts for the welfare and care of children from the Federal Children's Bureau to the most isolated of Kindergarten teachers in the country side, have proved by actual experimentation with the

child himself that if they put health habits into his world, in his language, within the field of his imagination and within his powers of imitation, he will build the necessary bridges between our grown-up regulations and his own expression of those in his daily life." We cannot teach a little child to live if we do all his living for him. So we must teach him to drive his own health engine so that he can get the utmost comfort, efficiency, happiness and usefulness out of it.

6. A Low Standard of Living

The vast majority of the people of India are very poor that they do not have two full meals a day. Chronically half-starved, they fall an easy prey to Malaria, Kala-azar and other infectious diseases. It is but natural that children born of such poor people and live in such grinding poverty will not be able to grow up to the proper standard. It is for the statesmen and economist to solve the question of Indian poverty. Before that is accomplished we have to find ways and means to relieve the suffering of the preschool children of the poor people. At least free medical advice and treatment should be provided for them.

7. Illiteracy of Parents

It is said 'the great task of modern public health is educational task.' The rank illiteracy of the people of India has got to be removed. The shocking state of illiteracy among the fathers and the absolute lack of knowledge and education among the mothers are responsible for the children growing up without any training in health habits. The preschool child is entirely in the hands of the parents who are illiterate mostly and ignorant of the laws of health. For the proper bringing up of children, an elementary knowledge of the elementary principles of physiology, psychology and ethics is indispensable. A vast majority of the parents in India has absolutely no knowledge in these matters. Herbert Spencer wrote that 'if a Merchant commenced business without any knowledge of Arithmetic and book-keeping, we should exclaim at his folly and look for disastrous consequences or if a doctor began advising before studying Anatomy, we should wonder at his audacity and pity his patients. But that parents should begin the difficult task of rearing children without ever having given a thought to the principles——physical, moral or intellectual.——which ought to guide them, excites neither surprise at the actions nor pity for their victims." In India, the number of literate males is 149 per thousand and the number of literate females is only 13 per 1,000. That means. 987 out of every 1.000 females go without even the most elementary education and driven by religion or blind social customs become the mates of perhaps equally illiterate males and mothers of helpless children. The total number of married females over 15 years of age who are illiterate are about 64 millions and these illiterate, ignorant mothers nurse the future generation of India. Therefore, the preschool children in India who are entirely at the supervision of their ignorant, illiterate parents do not grow up to their proper standard. Cumpulsory elementary education for males and females ought to be introduced all over India.

Cases and Comments.

A CASE OF UNDIAGNOSED FEVER.

BY

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Rajan Clinic, Trichinopoly.

The list of undiagnosed fevers in the Tropics is unending. The Typhoid group with its developing alphabetical allies the Paras A B and C have just taken up only the first three letters. Meanwhile the pathology of the fevers themselves is not clear and definite. The physiology of the thermogenitic centre and the influences that are brought to play on it are yet only imperfectly understood. The facts we know are more speculative than real. For instance we do not know why a particular group of poison, bacterial or otherwise, produces a higher temperature than others. The more we dive into the logic of it the more perplexing becomes the etiology of fevers. Insects, reptiles, mosquitoes, bugs, damp air, protozoa and bacteria have been contributing their share in helping us to trace one cause or other for the fevers. Still the number of fevers for which the cause is not known is large and every day adds to this list. The greater the aids we develop for diagnosis the greater seems to be the difficulty at arriving at a correct diagnosis.

In this wilderness of unknown causes, it is not surprising to find uncertainty with regard to treatment. The line of treatment becomes vague and manifold and varies with individual cases and with individual medical men. It is difficult to explain the rationale of any particular line of tratment. The case that I am now reporting has baffled me completely. I placed the case before the District Medical Association attended by over fifty medical men for diagnosis and treatment. It has been of no avail. In the end I stumbled upon a line of treatment which seems to have cured the disease. I am in doubt whether my treatment had anything to do with the cure; nor am I certain how long the cure is going to last. It cannot also be said that similar methods adopted in identically similar cases will give the same result. I am tempted to parody the famous poet who has given us a lot of homely couplets and say 'Inscrutable are the ways of Disease'. Such cases humble one's pride and experience, and remind us how little we know of the human body and its ailments. The case now under review has given rise to these thoughts and I gladly share them with the readers of the 'Antiseptic'.

Patients name	...	Mr. G.
Age	...	37 yrs.
Family history	...	Father and Mother alive. Brothers and sisters alive. Married ; has three children.
Profession	...	School master for the past 10 years.
Previous history	...	Kept good health all along. No history of any specific infection.
Present disease	...	Fever for 3½ months before admission.

History of the illness :—On the evening of the 29th May '31 the patient had an attack of fever which came on with rigor and the temperature rose up to 105. The fever continued at that temperature for three days and the patient was partly unconscious all the time. After 3 days it dropped down to 101 and remained so till 7th June '31. (ten days). Besides the rigor the onset of the fever was accompanied by acute pain in both feet which were slightly swollen.

On the 7th June the temperature was normal. The pain and swelling in the feet also disappeared. But the fever returned on the 8th (next day) and the patient has been running a temperature similar to that shown in the accompanying chart. The fever usually starts with a slight chill, acute pain in both thighs, leg and feet. The temperature goes upto 104 or 105 and occasionally to 107 when he becomes delirious. It lasts for a few hours 4 to 6 hours on an average and then subsides with profuse perspiration. There has been no head or back ache or pain in any other joint during the fever.

State on admission :—The patient was admitted in my Clinic on the 14th August '31——3½ months after the onset of the disease. Earlier in the course of the disease he was treated by Allopathic doctors and has had two intramuscular injections of Quinine bihydrochlor and one intravenous injection. Later on he was under the care of practitioners of the indigenous system.

General condition :—On admission he was pale and weak but looked cheerful during intervals from fever. There was no oedema of the feet. He was crying in an agony of pain in the feet and legs when the fever started and the pain lasted till the fever came down. His sleep was good when he had no fever. His hearing was not good normally but after the administration of quinine he became stone deaf. The skin looked normal. It was fairly soft and supple.

Circulatory System :—Pulse low tension, regular
Blood pressure—normal
Heart—normal

Digestive system :—Teeth fairly well kept—no pyorrhoea
Tongue looked fairly clean for the period of pyrexia.
Liver and Spleen—normal
Alimentary tract—normal
Rectal examination—nothing abnormal
Bowels ... ... —regular
Respiratory system —Lungs, Throat, Tonsils—all normal.
Nervous system :— Reflexes—normal
Kidneys :— Appeared normal
Blood :— Leucopenia—marked
No abnormal corpuscles
No malarial parasites
Hemoglobin percentage 50
Copra's test for Kala-azar-negative
Faeces : Normal—No ova present
Urine : Sp. Gr. 1010
Reaction—acid
Albumin—nil
Sugar—nil
Phosphates—present
B. Coli, Staphylo and pus cells present
Joints :— Normal

X-ray examination of Kidney & Gall bladder :—Normal

After this examination I imagined the source of trouble was in the bladder and the initial treatment was directed to that end. Roughly from the 14th to 23rd. Aug. the treatment consisted of alkaline diuretics by mouths, Cylotropine injections intravenously, with two intravenous injections of Sodium Cacodylate and one Urea-stibamine. The bladder was washed and methylene blue was administered by mouth in the form of pills. Urine was tested frequently. B. Coli, Staphylo and pus cells were present in varying quantity, but a general diminution of the infection was noticeable. But this did not affect the temperature in the least.

The second fortnight consisted in giving injections of Quinoplasmoquine with Antipyrin and quinine by mouth and asperin and caffeine whenever the temperature was high. The liquid diet of barley was replaced by ordinary rice food, pepper water, buttermilk and vegetables. The temperature was lower under this regime and there was complete intermission of fever for a day in the middle. The urine remained in the same condition.

The third fortnight in the line of treatment was with large intravenous injections of Sodium Cacodylate 5 to 6 cc. of 3 grs. in

1 cc. solution with one injection of Iodine. Internally nothing was given except some Veronal for sleeplessness and Asperin for pain and temperature. The fever showed intermissions of a day four times during this period. The urine remained much in the same state.

From the middle of September intravenous injections of Iodine were given with one injection of Urethritis vaccine in the beginning. The temperature was maintained at 103 and the intermissions which were frequent in the previous fortnight were completely absent in this period right up to the middle of October. From the 8th October the temperature began to rise to 104 and the pain in the legs, feet and thighs continued unabated during fever. On the 8th an injection of Urea-stibamine was given. The temperature dropped to normal on the 12th October. He was taking a mixture 3 times a day of the following :—

Pot. Iodide	gr. v
Pot. Bromide	gr. xx
Sod. Salicylas	gr. x
Chloral Hyd	gr. v
Tr. Nux Vomica	m. x
Spt. Ammon Arom	m. xv for each dose.

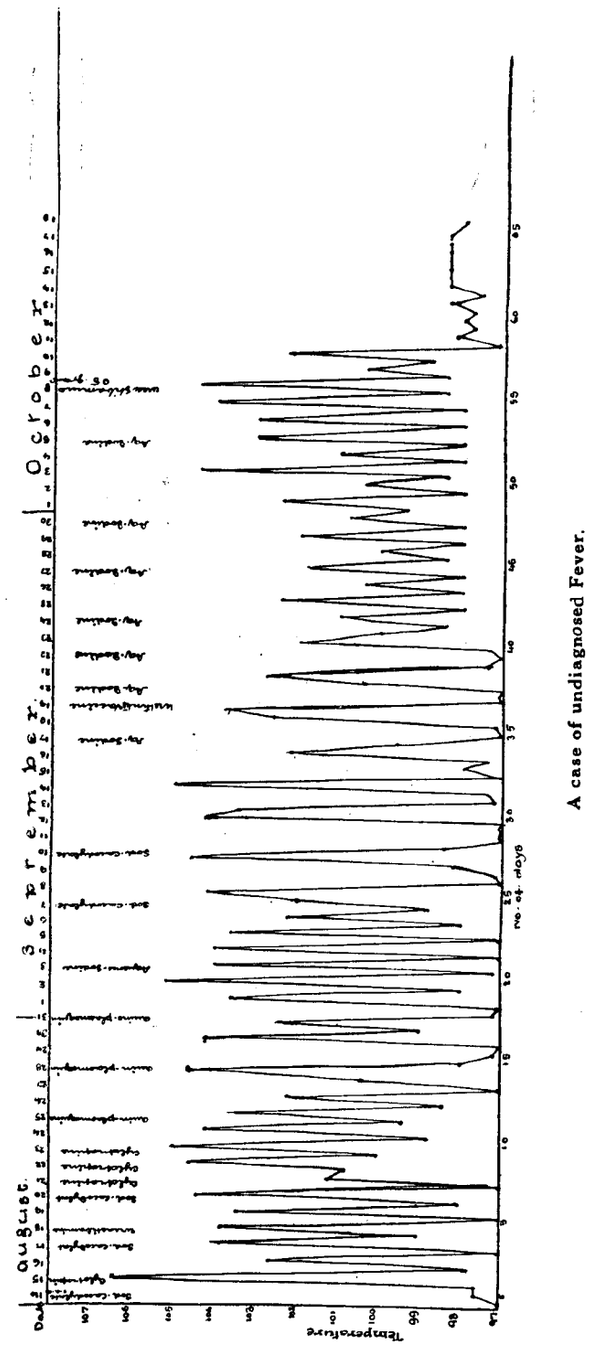
The patient stayed in the Clinic till the 18th Oct. a week after the temperature came to normal——a total of 65 days stay in the Clinic. The total period of illness is 140 days. The urine showed pus cells, stray staphylo and B. Coli at the time of discharge.

The patient is presenting himself for observation every fortnight. He has no fever, no pain. He has put on weight, has picked up color and looks quite normal. He is taking Syrup Haemogen three times a day.

Special features of the case may be summarized as follows ;

1. In all probablility the injections of Iodine may have increased the leucocytic count and thus provided a gradual immunity against fever.
2. The bladder and urine condition have not been responsible for the fever though an examination of urine led one to this conclusion.
3. The extraordinary type of high temperature associated with pain in the lower extremities.
4. The rigor at the onset and profuse perspiration at the end suggesting some seat of inflammation unreachable by the methods employed for diagnosis.

The case was produced for diagnosis at the Clinical Meeting of the District Medical Association Trichinopoly in September. 1931.



5. The sudden drop of all signs of fever in one day with no recurrence.
6. The maintenance of fairly good appetite all through this period of illness.
7. The absolutely normal condition of Liver and Spleen.
8. The absence of any evidence of corpuscular cell destruction during half an year of acute temperature.
9. The phenomenally rapid convalescence after the cessation of fever.

What is the fever due to?
What is the cure due to??

REPORT ON A CASE OF STRICTURE OF THE DUODENO-JEJUNAL FLEXURE BY THE LIGAMENT OF TREITZ SIMULATING GASTRIC DIVERTICULAM.

BY

N. KRISHNASWAMI, L. M. & S.,

Hony. Asst. Physician, Govt. Hd. Qrs. Hospital, Coimbatore.

Marappan aged 38 was admitted on 2-12-1931 into my ward for the following complaint.

(1) Pain in the epigastrium.
(2) A feeling of fullness in the stomach always.
(3) Persistent vomiting of foul smelling fluid.
(4) Frequent acid eructations.

Duration.—Two and half years.

The Epigastric pain had no relation to food. Three to four hours after taking food the patient used to vomit. The vomiting only slightly relieved him of the feeling of fullness in the stomach. Abdomen tender on pressure in and around the umbilicus. Bowels constipated S. R. Negtive.

The patient was put on mist. Gastric belladona alkalina. He was getting stomach washes daily. This was done for a month. The patient had not the slightest relief and he was craving for operation.

Patient was sent to X-Ray Department for Bismuth meal and radiography (*Vide* skiagram prints).

X-Ray Report. Stomach is abnormal in position, shape, and size. It is more abdominal than thoracic, transverse each half on either side of the median line. It is dumbell shaped with considerable dilatation of the Pyloric antrum. There is an organic diverti-

culum pedunculated from the greater curvature of the pars media of the stomach. It may be congenital or acquired. It is generally characterised by its rounded form delicate and mobile contour. The absence of Rœntgen signs of an infiltration process in the neighbourhood excludes the possibility of a malignant tumour. Of course diverticula of the stomach are decidedly rare. Tone: atonic, mobility much delayed. In two hours only about half of the meal is emptied and there is a considerable residue both in the stomach and diverticulam after six hours.

Small Intestines. There is a considerable dropping of the ileum into the pelvis with much retentions after six hours.

Caecum. There is filling defect in its outer or external portion in the early stage. There is a considerable area of irritation resembling punched out appearance suggestive of ulcerate lesions.

The patient was prepared for operation and laprotomy was performed and the abdominal organs were examined. We were surprised and disappointed when we found no diverticulum but we found at the Duodeno jejunal flexure a very severe constriction by the ligament of Treitz. The third portion of the duodenum was ballooned. A clear diagram is herewith annexed to show the exact findings after laprotomy.

Pressure of duodenal pouch squeezed the Bismuth meal from the lower part of the stomach and thus gave rise to an artifact of "Hour glass stomach." Traces of Bismuth meal between the compressed parts and cavity of the stomach gave the impression that duodenal dilatation was continuous with the cavity of the stomach whereas it was only over lying shadows.

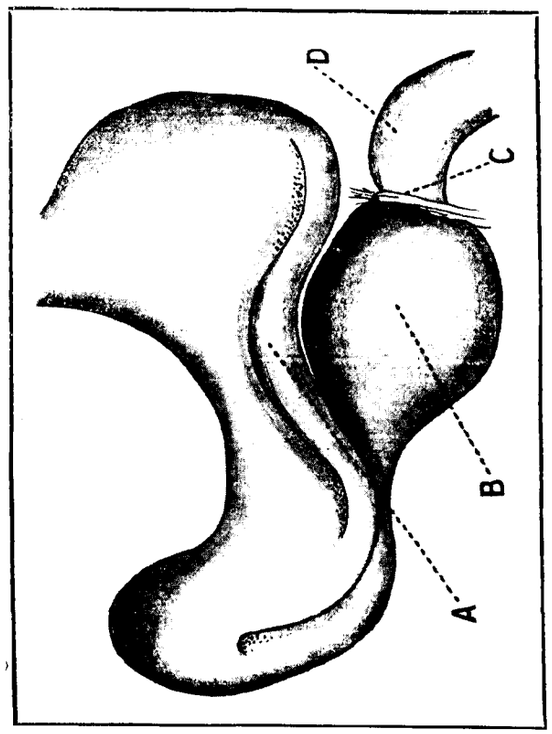
Operation Report by Lt. Col. F. C. Fraser, I.M.S.—Duodenojejunostomy performed by Funeys method after division of the ligament of Treitz. Division of the latter might have been sufficient but might have scarred and contracted up again. Gastrojejunostomy alone would not have relieved the collection of stagnating food in the dilated portion of the duodenum.

The patient had an uneventful recovery and was discharged from hospital on 12-2-32.

My thanks are due to Lt. Col. F.C. Fraser, I.M.S., District Medical Officer and Superintendent, Govt. Head Quartesr Hospital, Coimbatore for having permitted me to report this case.

2 hours after Bi meal

¼ hour after Bi meal



IV

A. Greater curvature of stomach folded up by pressure of dilated 3rd part of duodenum.
B. Dilated third part of duodenum.
C. Constructing ligament of Treitz.
D. Jejunum.

III

6 hours after Bi meal

SOME INTERESTING CASES OF TETANUS.

By

KALIGATI BANERJIE. M. B.,

Suri, Birbhum, Bengal.

The following cases are of interest as (a) tetanus toxin gained access through an inoculation site not commonly seen. Result of intramuscular injection of antitetanic serum is hopeful, though thecal injection is by far the most successful.

Case 1. The patient a Hindu boy aged 3, was brought to me on account of (1) too much restlessness and crying.

(2) Twitching of right side of nose and mouth.

(3) Diffculty in swallowing. When first seen the child had some rigidity of neck. As the boy's father gave no history of dogbite, the boy was laid down on the table where he was found to have a little opisthotonus. Jerks were exaggerated but there was no rigidity of arms and legs. Teeth were firmly clenched and no glands were palpable in neck and no history of tonsilitis was elicited. It was very difficult to examine the throat. There was discharge from right side of nose and discharge was a bit foul. The father admitted that a few days ago there was a piece of betalnut poked in the nose and which they could not get out, but was of opinion that it had surely come out. The diagonsis was made (1) clenching of teeth (2) rigidity of neck. I gave him a nasal wash with hydrogen peroxide 25% +glycothymolin 10 % which produced extreme twitching of right side of face and eyes and an injection of 6000 units of A. T. serum I. M. That night the boy had 3 convulsions and in the morning he had a tempreature of 100°. I gave him another injection of 10000 units and after washing out rectum, 24 grs of chloral hydras in saline 1 pint glucose 2 ounces and sodi bicarb half ounce was given. Sodi bicarb is recently said to be of value in controlling Spasms and in fighting too much lactic acid formation during muscular convulsion. I stopped the nasal wash with the idea that there should be no disturbance in the site of wound in a person with tetanus. But twitching was more marked though fits were much less in number.

6000 units of serum with chloral hydras was given on the third day but it could not check the twitching or fit completely. Moreover watering started from his right eye which could not be closed totally —the boy was going to have Caphalo-tetanus. On the fourth day the nose was explored under chloroform and a piece of betelnut came out with crusts which was found to be impacted in the inf

turbinate bone. A thorough nasal wash was given and 6000 units of serum—thenceforeword further progress in paralysis of face was prevented and convulsions and twitching were checked. The patient recovered completely within a week.

The points which made the case interesting are (1) Age of the patient—the chances of recovery at this age are said to be few. (2) Mode of injection—nothing short of thecal injection is said to have curative value, but here I.M, was effective. (3) Site and vehicle of inoculation—though children insert all sorts of foreign bodies in the nose—few other cases like this are seen. Here tetanus B. gained its way through an ulcer caused by a piece of betelnut. The bacillus, perhaps, was carried by dusty air or along with dirt in betelnut or with dirty hand of the child (4) Difficulty in swallowing was due to pharyngeal spasm due to irritation of pharyngeal plexus—perhaps reflexly from stimulation of 2nd division of 5th nerve from nasal area. (5) Onset of cephalotetanus—it is seen in cases with injury of head and face. The first effect was stimulation of facial nerve indirectly from 2nd division of 5th nerve as shewn by twitching of nose (6) Complete cessation of all symptoms after removal of causes.

Case 2.—A Hindu boy aged 6 was found to have severe tetanus. There was no source of injury. But he attended a feast 4 days previous to the incedent where it would appear he had injured his gums with a piece of cooked bone and some blood oozed out. The boy succumbed next day and probably the source of inoculation was the ulcereated gum and vehicle was the piece of bone. The case is worth recording from the unusual site of inoculation and vehicle.

Case 3.—A Hindu boy aged 12, the son of a medical practitioner in charge of a charitable dispensary was injected 5 grs of Quinine Bi hydrochlor which was made in his Dispensary. A week later that boy developed night-starts and pain in the back of the neck. 2 days after, the typical lock-jaw and convulsions started and the boy was sent to me. He was given intrathecal injection of 6000 units after withdrawal of 20 C.C. fluid and 10000 units I.M. There was no tenderness or inflammation at the site of injection. The boy succumbed in spite of all our efforts. Points which make the case worth recording are—(1) Indiscrimination in Quinine injection. Tetanus Baccilus is said to thrive in Quinine, powder and ordinary boiling will not kill the spores (2) Absence of visible change at the site of inoculation.—Kataphylaxis is the element here.

Case 4.—A Mahamodan girl aged 9 was treated for enlarged spleen by a local quack with red hot iron to the splenic area. The patient was seen by me 3 days after typical symptoms of tetanus developed. There was a little ulceration in left hypochondriac area. The part was aseptically dressed. He was injected 12000 units of antititanic serum I.M. everyday for 4 days with Chloral and morphia to check the spasms. She recovered though she was a hopeless case. Points of interest in this case are (1) I.M. injection in big doses was effective in this case quite contrary to the expectation. (2) Danger of tetanus in ulceration made from counter-irritants.

Case 5.—A Hindu woman aged 30 had severe tetanus without any sign of external injury. She had offensive discharge P.V. and she began to mensturate a few days back. The patient died, inspite of, thecal treatment. Perhaps the common practice of using a dirty daifer is responsible for inoculation—the site of course being the eroded menstruating uterine area. Three more cases of this nature were seen.

AN INTERESTING CASE OF TETANUS.

BY

DR. M. RAMACHANDRA RAO, M.B. & C.M.

Chief Medical and Sanitary Officer, Pudukottah.

A well built lad by name Ramaswamy aged about sixteen was brought to me one evening from a distant village, for consultation. His complaint was pain over the Tempero-maxillary joints while attempting to open his mouth. Pain on left side of chest and heart region and mid-Spinal region.

Previous History.—He had just returned after a month's tour in Mysore, where he had been to witness Dasara festivities. No history of injury to his person can be elicited.

Examination.—Heart and lungs were found normal except the pain on opening his mouth; there was no sign of trismus.

Diagnosis.—Provisionally I diagnosed the case, as Tetanus and gave an injection of Antitetanic Serum 1500 units (Hœst) with Bromidi and Salicylas mixture internally, with instructions to the parties to bring back the patient if convulsions are developed.

The patient was brought again on the 3rd day with well marked symptoms of tetanus convulsion, and partial Lock Jaw.

On careful examination of his mouth, I found there were two carious teeth. On further questioning I found out that he had used fine mud, from the side of a tank for cleaning his teeth, while on our. This is a common process of cleaning teeth in Southern India.

It is through these rotten teeth, Tetanus Germ should have infected the system.

Then the treatment consisted of intravenous injection of 3000 units Antitetanic Serum every day, for 4 days and 1500 units intramuscularly for 4 more days. Both P. D. & Co., & Hoest preperation were used. In addition Luminal Sodium injected every night along with the usual Bromidi mixture.

Locally the teeth were touched with Tincture Iodine and Listerine Gargle freely used.

The symptoms began to abate after 10 days and the convulsion reduced and the patient gradually improved in health and after 20 days he was almost alright.

The interesting points of the case are :—

(1) Infection, spreading through carious teeth.

(2) The first symtoms were very vague and consisted of pain in the left Chest, Heart region, and Mid Spinal region. This symptom is fairly common and I have seen it in six cases out of 25 I have treated.

More than 75% of my cases were successful, if treatment is properly pushed and sufficient quantity of Antitetanic Serum is injected.

A CASE OF THREAD WORM SIMULATING TYPHOID FEVER.

By

BRINDABAN PRASAD, *Medical officer, Govindapur, Gaya.*

I was called on 3-7-31 to see a patient named Rupia a girl aged about six years. I found her in delerium state which was of low mutty type. The temperature was 104° F. The pulse was extremely slow beating at the rate of 80 only per minute. She was a little restless. Liver and spleen were not enlarged. Tongue was dry and coated the patient had not passed motion for two days. She complained of a little pain in the abdomen. There was termour of both the hands. She had not slept for two days. *Previous History* :—She had been suffering from fever for more than a week and was under the treatment of a *Vaidya*. The fever increased day by day in spite of treatment and rose to the state described above. He was giving her rasayin in ginger juice. When the patient showed signs of delirum and her extremeties became cold I was called for urgent help.

Thinking it to be a case of typhoid fever. I prescribed the following :—

℞

Pot. citras	grs. v.
Liq. amon acet	m. xx.
Tr digitalis.	m. ii.
Spt chloroform.	m. v.
Aqua.	ʒ v.

6 doses every 4 hrs.

(2) Eu de colougne lotur to be kept on forehead.

(3) One dose of sleeping draught contains Pot. Bromide and chloral thyd only.

(4) Calomel	gr. i.
Soda Bicarb	gr. v.

To be given at bed time.

The patient showed some signs of improvement. Fever came down to 102° F. She passed two loose stools next day and had a sleep for four hours. Her nervous symptoms remaind as before. The same mixture was continued for four days, but no improvement could be noticed. She complained of abdominal pain as before.

Then on suspicion of intestinal worms I gave her the following :—

Santonin	gr. i.	one dose at bed.
Calomel	gr. iv.	
Soda	gr. iv.	
Castor oil ʒ iv.	in the M. P.	

To my utter surprise patient passed for loose motion containing large number of thread worms. The temperature fell to normal and she became quite alright next day. But after two days she began to get fever in the night, I gave her one dose of Santonin powder. She passed large number of thread worms again, after that she became perfectly healthy.

A CASE OF KALA-AZAR ASSOCIATED WITH ANKYLOSTOMA DUODENALE.

By

SISIR KUMAR DUTT, L.M.F., *Bogra.*

(*Late House Surgeon, Campbell Hospital, Calcutta.*)

One day I was called upon to see a female aged about 35 years. The husband of the patient informed me that she was suffering from low fever for a long time. The patient was under the treatment of a Kaviraj for nearly a month and a half before she came under Allopathic treatment.

I throughly examined the case and found the following symptoms.

Her appearance was pale, face puffy and feet oedematous. She was too Anaemic and debilitated.

Spleen—Midway between the costal margin and umbilicus.

Liver—Slightly palpable.

Heart beats—Feeble. Haemic Murmur present.

Pulse—116 per minute.

Temperature—Rises generally in the evening, and ranges between 99° and 101° F.

Her teeth were very unclean and gum was spongy and Pyorrhoea present.

Lungs—Slight bronchial Catarrh.

Appetite—Not good.

Patient was passing loose stools for some time.

I took the blood for examination of total differential count and for K. A. Test and I asked them to send her stool for examination as I suspected ankylostomes also.

The blood report was :—

Hœmoglobin value	18%
Erythrocytes	200,0000 M.
Leucocytes	1000
Poly	59%
Small	34%
Large	1%
Eosino	6%

Kala-azar Test :—

Formaldehyde	±
Hoemolytic Test (Roy).	+

In stool examination—plenty of Ankylostoma ova was found.
The following medicines were prescribed for the patient :—

I. ℞

Thymol	Gr. iv
Hydrag. Subchlor	Gr. $\frac{1}{6}$
Stovarsol	Gr. $\frac{1}{2}$

Mft. Put in capsule send 12 such
3 capsules morning and night.

II. ℞

Hœmogen with Ext. of Liver 1 Phial.
1 Dram twice daily after food.

III. And an alkaline mixture with Saline was given also.

After 3 or 4 days her husband came and told me that the patient passed a big (round) worm.

Prescription No. 2 and 3 were continued. After a few days I was informed that the patient was complaining about pain in the gum. On examination it was found that cancrum oris was starting. So the following medicines were given for the present :—

1. One Antiseptic gargle.
2. Injection of Urea-stibamine ·05 gram twice a week.
3. Injection of Aolan 5 cc. with Liq. Iodine min. v twice a week alternately with Urea Stibamine.
4. Syr. Hoemogen with Ext. Liver as before.
5. ℞

Angier's Emulsion	Dr. 1
Tr. Nux Vom	m. 5
Urotropine	gr. 5
Aqua	Oz. 1

Mft. send 6 such.
T.D.

This treatment was continued for 4 weeks and the patient improved gradually. But the symptoms of Ankylostomiasis were again prominent, so another course of Thymol treatment was given and the patient is cured of the disease.

A CAUSE OF APPARENT LAZINESS IN COOLIES.

BY

DR. NABADWIP CHANDRA DUTTA,

Burmacherra Tea Estate, Kajuricheera P. O., South Sylhet.

Medical men working on estates know that in a labour force there are always a number of coolies who never seem to be willing to work, who are constantly reporting sick, and who are often considered to be just lazy.

As a tea garden doctor I am daily dealing with many such patients, and when I commenced practice at first I thought much about these cases, and decided that there must be some medical cause for the condition of these coolies.

On examination I found these coolies dull and apathetic, and complaining of pain in the joints, drowsiness, defective memory, and giddiness, and I further found that they were anaemic with low haemoglobin percentage, and sometimes oedema of the feet. Blood examination revealed a reduction in the number of red cells, and the presence of eosinophiles. Stool examination, however, showed the real cause of the condition, i.e. hookworms.

I, therefore, gave the patients Ol. chenopodium m. 25; and Saccharin grs. 15, followed after an hour by a full dose of Magnesium sulphate. Later each patient was given a prolonged course of iron tonic and the results have been satisfactory leading in many cases to a complete change in the patients, turning them from useless coolies to useful members of the labour force.

Much has been written about the economic aspect of this condition, and I can only urge on my medical brethren in charge of labour forces to give a yearly treatment to all labourers, and thus help to keep the labour force free of the disease.

In the cases where I found ascaries, I found Ol. Chenopod equally efficacious, and I may mention that for round worm in children over two years of age I have found Ol. chenopodium in appropriate doses safe and successful, and, as santonin is so expensive, this is economical where many have to be treated.

AMOEBIC HEPATITIS.

By

K. Venkat Rao, L.M.P.,

Purasawalkam, Vepery, Madras.

I was called in to see D.D. aged thirty on 27-4-31 to treat him for fever with nausea and vomiting. The history was that he had been suffering from repeated spells of fever, sometimes remittent and at others intermittent, lasting for about a week at each time from January 1931, and on each of these occasions treated for Malaria.

Subsequently, only a week before he saw me, he was discharged from a Hospital wherein he stayed for twenty days, where his blood was examined, the report being "negative". He does not remember whether his motion was examined.

The present condition is as follows: Temperature 103°F. Pulse 120. Tongue coated. Emaciated to a considerable degree. Face pale. Nausea and vomiting are the chief complaints. The fever started after 9 A.M. Complained of pain on the right chest towards the lower position. Unable to lie down on the left side on account of increase of pain in the right chest. Has slight dry cough. On further examination I found his liver to be a little enlarged downwards (usually upward enlargement encountered) and tender. There was subacute pneumonia at the base of the right lung. A history of his having suffered from dysentery some one year back which lasted for three months was elicted on further enquiry.

I put him now on a mixture containing Amm. chloride with soda salicylas etc. The next morning his temperature came to nearly normal. I gave him an injection of Emetine ½ gr. There was only a rise to 101°F. that evening, I gave him in all six injections of Emetine on alternate days with the continuation of the mixture. From the 3rd day onwards he had no temperature, but he had a little pain still over the right base of the lung which was ascribed on further examination to the inflammation of the pleura. I now added Pot. Iodide in the mixture and gave him Iodex for external application. This made him completely alright.

This case has been sent for publication with the express idea that when we are confronted with a case of pyrexia which simulates malaria, we should not immediately jump to the conclusion that it is so. We have to bear in mind that conditions such as Amoebic Liver may give rise to pyrexia which apparently looks like malaria. The history of having suffered from dysentery, tenderness on the Liver area with increased Liver dullness, inability to lie on the left side and subacute pneumonia of the right base led me in this case to the correct diagnosis as evidenced by the result of the treatment. In Dr. Savill's System of Clinical Medicine, under Liver abscess, it is said that 'there is an asthenic variety of Liver abscess with insiduous onset, general failure of health and periods of continuous or intermitting fever followed by periods of apyrexia resembling malaria" and the above case belongs to that group and it was really treated for Malaria for nearly four months.

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THE ANAEMIAS.

VERY much still remains to be discovered with regard to these obscure diseases, but there is ample evidence to show that the knowledge regarding this group of maladies is slowly but surely being put upon a sounder basis.

The classification of anaemias is becoming increasingly difficult. As new facts come to light, the existing classification into two main groups of Primary and Secondary is found to be unsatisfactory and inadequate. It is really a confession of ignorance. Horsfall offers a grouping based on aetiological considerations. He recognises two major groups—those caused by loss of blood and those which are the result of deficient blood formation. The first group is subdivided into extravascular (Haemorrhage, Purpura, Haemophilia) and Intravascular (Pernicious anaemia, Splenic anaemia, Banti's disease, Infantile anaemia, Familial Acholuric Jaundice and Malaria). The second major group is also divided into extra-vascular (Septicaemia, Nephritis, Phthisis, Hyperlactation, Pernicious anaemia, Achlorhydria Diet deficiency, Drugs, Hypothyroidism) and Intravascular (Aplastic anaemia, Familial acholuric jaundice, the Leukaemias, Hodgkin's disease, and Chloroma). Though at first sight this list appears formidable, yet it will be observed that all these heterogeneous factors fall naturally into these two main groups of blood loss and deficient blood production.

Pernicious anæmia by reason of its importance will be considered first. Its causation has not yet been definitely settled. It was once thought that achlorhydria was the cause of pernicious anæmia. But

it has now been relegated to a position of secondary importance in favour of some deficiency in protein digestion. The fact that Pernicious anæmia may develop in rare cases in the presence of Hydrochloric acid, and the fact that cases of sprue which show a typical megalocytic anæmia and respond to liver treatment may still have free Hydrochloric acid in the gastric juice and the fact that absence of Hydrochloric acid is a frequent finding in malignant diseases, in chronic diarrhoeas, in chronic arthritis, in biliary tract disease and in most cases of anæmia and without the Pernicious anæmia syndrome conclusively prove that the absence of hydrochloric acid may be a contributory factor in the production of Pernicious anæmia and that the essential factor is probably a lack of the substance necessary for Protein digestion. There are others who claim that they have evidence of the presence of a virus in the blood of Pernicious anæmia patients but as long as they are unable to induce the disease in animals by inoculation with cultures of the virus, their claims cannot be seriously considered.

The Tropical anæmia of Pregnancy, a condition which is so very frequently met with in India, has also received a certain amount of attention. It has been regarded aetiologically as a toxæmia of pregnancy because of the histological changes present.

The anæmias of Infancy have also been carefully studied. Parsons divides the anæmias of infancy into four groups according to their cause thus: (1) defect of nutrition including the simple or dietetic anæmias and the endogenous or constitutional variety; (2) infection; (3) abnormal hæmolysis; (4) a combination of one or more of the preceeding *causes*. A number of illnesses in infancy are associated with these anæmias and such infants are readily susceptible to intercurrent infections. The importance of recognising and treating these anæmias cannot be overemphasized.

There is increasing evidence to show that the condition commonly called 'Achlorhydric anæmia' is quite distinct from pernicious anæmia though one may succeed the other. In this condition, it is contended, there is always achlorhydria and a low colour index characteristic of secondary anæmia. It is however proved that it is due to iron deficiency, the result of defective diet and impaired gastric secretion.

Coming to treatment an enormous amount of literature has sprung up in recent years regarding the use of raw liver or liver extracts in the treatment of anæmias in general and of Pernicious anæmia in particular. It is assumed that, since those anæmias which respond to liver extract are characterised by a megaloblastic bone-marrow, the effective principle exerts its influence upon the development of the megaloblast. This effective principle enables it to mature in the normal manner and prevents the megaloblast from

proliferating. The Researches of Belbe and Lewis have further shown that this effective principle in the liver influences the stroma of the red cell and its development primarily and that the pigment utilisation is only secondarily affected.

This effective principle has recently been isolated from Liver by Dakin and West. It is a combination of B (Beta) hydroxyglutamic acid and a Y (gama) hydroxyproline. The exact linkage is not yet known. Its formation is still uncertain. Whether it is formed directly by the gastric enzyme acting on meat protein or whether the product of this gastric digestion has to undergo further elaboration before storage in the liver is not yet definitely ascertained.

Regarding the dosage and method of administration of the extract or the whole liver there has been no unanimity. While some favour the administration of single massive doses others are of opinion that small daily amounts are more valuable. Absorption of liver, however, is diminished by sepsis, nervous lesions, arteriosclerosis and iron and thyroid deficiencies. An interesting development in the use of liver extract is its administration by injection. This is supposed to produce a quicker and greater reticulocytic response than the oral administration. Both intravenous and intramuscular injections are given and are supposed to be the only method that could be used to supplement oral therapy. Its use is obvious in moribund patients who are vomiting.

The work of Castle and others has led to an extensive employment of desiccated stomach in the treatment of Pernicious anaemia and successful reports have been published. It is claimed that the results are better and that, though the effect on the blood picture are the same as those of liver, the erythrocytes and Hæmoglobin increase characteristically. Normal health is reached more quickly, work is resumed sooner and, the gastro-intestinal symptoms are relieved. Several cases with early posterolateral involvement of spinal cord have also been reported to have been successfully treated. It is even suggested that failures with this treatment are due to use of an inactive preparation, inadequate dosage and wrong diagnosis.

In addition to these specific treatments with Liver and desiccated stomach, various other therapeutic measures have been tried. The use of Hydrochloric acid and brain diet and the use of amino acids are only a few of these. It is also not surprising to find that vitamins have also entered into this new list. White it is certain that vitamins A and C have nothing to do with either the cause or cure of anaemia, it has been found Vitamin B has proved useful in macrocytic forms of anaemia.

With regard to anaemias other than those exhibiting the the pernicious anaemia syndrome, it has been definitely shown that

iron is a very useful remedy, notably so in simply achlorhydric anaemia and the anaemia of infants and strange to say not in the more subtle form of a colloidal solution or an organic compound, but as the old fashioned reduced iron and ammonium citrate. Another point that has definitely emerged from all recent work is that copper has a great influence in rendering ionic iron available for the formation of haemoglobin. Combined iron and copper therapy will therefore be very useful in the above mentioned anaemias.

As we have said in the commencement of this article there still remains a lot to be understood and accomplished in regard to this obscure group of diseases. We have only attempted to place before our readers a general summary of the advances in the last few years. For a detailed study we would recommend our readers to study the February issue of the "Prescriber" which contains references to practically all the important papers that have appeared in the world's leading medical Journals on this subject.

Gleanings from Medical Press.

SURGERY.

"The Fourth Venereal Disease":—Under the name of "Nicolas and Favre's disease (benign lymphogranulomatosis)" Marianne and Romme gives an account of a condition previously described by Nelaton as simple subacute inguinal adenitis with suppurating foci in the glands, by Lejars as strumous bubo of the groin, and by Marion as subacute adenitis of the groin. The disease is usually conveyed by coitus; ten to fifteen days after connection a small erosion on the glands penis appears, and one or two weeks later the inguinal glands enlarge; the liver and spleen are seldom enlarged. The skin over the enlarged glands becomes red, adherent; fluctuation may be detected, and a fistula forms. It is said to deserve the name of "the fourth venereal disease." In the acute stage minute abscesses may be seen, in sub-acute cases plasm-cells, and in chronic cases gaint cells. Aseptic puncture of closed glands gave exit to fluids which remained sterile on aerobic and anaerobic culture; but the disease has been transmitted to animals, and three surgeons who wounded their fingers in operating on the enlarged glands contracted the disease, which appears to be caused by a filter passing virus.—*Presse Medicale*, 1931, XXXIX, 1773—*Practitioner.*

The Diagnosis of Primary lung Cancer:—The most useful signs and symptoms pointing to a diagnosis of lung cancer are:—

1. A sputum persistantly negative for tubercle bacilli in a patient with haemoptysis.

2. The presence of ronchi localized to one side of chest.
3. The onset of asthmatic attacks in an elderly patient.
4. The on set of a pleural effusion, particularly if the fluid is blood stained, in an elderly patient.

A patient with any one of these symptoms or signs should be carefully examined clinically, radiologically, and in particular with the bronchoscope.—*The Clinical Journal—The Diagnosis of Primary lung Cancer*: *Willam Brockbank.*

A Note on Septicaemia:—Sir W. I. de C. Wheeler, *B. M. J. Nov. 28. 1931.*

In his introductory remarks in a joint discussion in the section of Medicine and Surgery at the annual meeting of the Britsh Medical Association, Eastbourne, gives the following remarks on treatment of septicaemia. Many cases of septicaemia without discoverable cause are encountered by surgeons, physicians and biochemists and the treatment in consequence is not satisfactory. Assuming that there is no primary focus, and that the organism is streptococcus, serum should be employed. As has been suggested by Horder 50 c.c. of the univalent serum is given intravenously on three consecutive days. For a prompt action of the serum it must be given early and in sufficient doses. Intravenous injections of antiseptics as mercurochrome, gentain violet though have many followers yet the results are not quite satisfactory. The writer has tried 20c.c of a 1% solution of mercurochrome in cases where other remedies have failed and, finds no benefit out of it. Horder recommends arsenic as a useful drug in septicaemic conditions. Blood transfusions have little or no effect in the control of sepsis; indirect benefit may be derived in the more chronic cases.

Intravenous administration of larger quantities of fluid are always beneficial. About 3000 to 4000 c.c. of a 10% dextrose solution in normal saline may be given continuously by the drip method in the internal saphenous vein without disturbing the patient. The advantages of this are, the patient is fed, the glycogen reserve of the liver is raised, the heart is stimulated, and diuresis is increased. Tap water can be administered simultaneously by the drip method into the rectum or saline into the subcutaneous tissues of the breast.

Treatment of septicaemia cases in the open air must be instituted wherever practicable. It must not be forgotten that patients suffering from infection of the blood stream respond to treatment better in the open air.—*V.C.S.*

The Choice of a Local Anaesthetic.—The question read: "In minor surgery in the office, what type of local anaesthetic do you find most practical?"

Of the 1,579 physicans who answered 749 or nearly 50 per cent favoured novocain, either with or without adrenalin. The solution strength and technic were mentioned by some, omitted by the majority. The second favourite was that good outstandly ethylchloride. Undoubtedly this is one of the most economical and simplest methods available. However, it does have a number of disadvantages as compared with infiltration anaesthesia. Procain, butyn, cocain, and a few scattered mentions of one of the newest anaesthetics, nupercain, completed the picture as follows: Novocain, 749; ethyl chloride, 312 Procain, 196; Butyn, 128: cocain, 110; scattered, 84.

It is difficult to establish any definite form in the choice of a local anaesthetic. Proponents of various methods find advantages in their particular choice. In general the choice of anaesthetic should depend upon the case rather than on the habit of the physician or surgeon.

It does seem though that procain offer advantages over novocain, which are worth considering.

Procain.—Local infiltration anaesthesia.—Since the introduction of procain and epinephrin, infiltration anaesthesia has become a most important addition to the anaesthetic agents.

(1) This method is very safe when proper agents are employed and the technic is aseptic. Procain in diluted doses of from 0.25 to 0.5 per cent in distilled water with the addition of a proper amount of epinephrin seems to be very safe. From 6 to 8 ounces or more of this solution can be safely employed. In using small amounts of this solution, say 1 or 2 ounces, .1 drop of 1: 1000 epinephrin should be added to each 200 drops of the 0.5 per cent procain solution; in using larger amounts, from 6 to 8 ounces, a total of not more than 20 drops of epinephrin should be used. I can find no report of a fatality from 0·25 to 5 per cent of procain. The addition of epinephrin is most important. It produces a local anaemia which prevents rapid absorption and therefore makes the effects both safer and more prolonged. The epinephrin also reduces the bleeding to surpassingly small proportions.

A very definite warning should be given in regard to the use of epinephrin in too great concentration. Epinephrin in what is apparently a very weak solution is capable of producing necrosis of the tissues. I have not seen necrosis when the epinephrin has been 1:100,000; that is, one drop to 100 drops of procain solution. I believe on the whole, however, that a safer rule would be 1:2000,000; that would be 1 drop to every 200 drops of the procain solution.

I believe that local anaesthesia with procain and epinephrin is a very safe and satisfactory method which should be employed in a large group of cases. I do not believe that range of local anaesthesia should be stretched too far. I am using it in about 30 per cent of my cases.

Blocking.—By blocking I mean the attempt to anæsthetize the field of operation by infiltrating the nerve supply of the part proximal to the site of operation, as blocking the splanchnic nerves, the gasserian ganglion, the brachial pluxes, the great sciatic nerve and the anterior crural, or the internal pudic.

Blocking has a limited field. Blocking of the gasserian ganglion, brachial pluxes, and the like should be rejected. These are in themselves important surgical procedures and cannot compete at all with the simpler and safer methods. In dental surgery the blocking of the inferior dental and branches of the superior dental nerves have a very useful field. As a rule, nerve blocking should be limited to the blocking of nerves which appear in a dissection under a local infiltration anaesthesia, as blocking the ileo-inguinal nerve in hernia operation under local anaesthetia.

Nupercain:—Nupercain gives an anaesthesia that is slightly more delayed than that of porcain, but more intense and from three to six times as lasting. Its toxicity is twenty times greater than that of procain. There have been two deaths from faulty technic or careless dosage and some intoxications. However, the authors cite several other investigators who have had excellent results and state of their own work; "With the doses employed by us in surface anaesthesia, nupercain has not intoxicated any patient, though several of our patients had previously been intoxicated by procain. Nupercain does not irritate the skin of the fingers nor cause onychia. The advantages of nupercain over procain are greater than the disadvantages.

The following technic is given:—Infiltration local anaesthesia with a 1: 1000 solution of nupercain has been used as a routine during the past fourteen months for cystotomy, circumcision, meatotomy, hydrocele, excision of supra pubic fistulas, epidedymectomy, and incision of abscess, with entire satisfaction.

Necrosis at the site of injection has never been encountered although a 1: 200 solution has been repeatedly used for meatotomy.

Local vascular dilation, as encountered with procain, is but epinephrin, as advised and employed by some, has never been used by us.

The delay in anæsthesia as compared to procain is so slight that it can be disregarded.

The largest dose given by us was 105 c.c. of a 1 : 11,000 solution ; 40 c.c. for caudal and forty minutes later 65 c.c. for abdominal block. The operation was suprapubic cystotomy for implantation of radon seeds into a tumour of the bladder.

The usual dose for cystotomies is from 40 to 60 c.c. ; although one patient, an extremely thin male with a distended bladder, required 10 c.c.

Surface (urethral and bladder) anæsthesia with a 1 : 250 solution of nupercain has been used, 1,000 times at a conservative estimate, during the past year in routine work. No great force is ever employed.

With the use of 10 c.c. bulburethral syringe, the anterior urethra is greatly distended with from 4 to 8 c.c. and the meatus compressed for from two to three minutes. The resulting anæsthesia usually prevents spasm of the "cut off muscle" and allows an additional 10 c.c. to pass into the posterior urethra and bladder. Should any amount of force be required, a small catheter or a metal instillator is employed. Special precautions are taken where there is a pathalogic condition of the urethra. Anæsthesia is complete in ten minutes.

The resulting anæsthesia is more profound and more lasting than we have hithertofore seen. This is attested by the patients themselves. The absence of burning sensation following the passage of sounds for stricture speaks for the duration of the anæsthesia.—*Extracted from the American Medicine, November 1931 pp. 3, 4 & 12.—V. C. S.*

Ether Hyper Glycaemia :—The association of a rise in blood-sugar with ether anaesthesia has already been observed and discussed. Mekie (Edinburgh), whose observations on this subject were recorded two years ago now describes experiments on rabbits, from which he concludes that the rise of blood-sugar is due to mobilisation of hepatic glycogen, and that the action of ether is directly on the liver cells. Canta Row and Gehret (Philadelaphia) after experience of ether anaesthesia in eight patients with disease of the biliary tract and from other conditions, conclude that the hyperglycaemia is due to increased hepatic glycogenolysis. The average rise of blood-sugar per ounce of ether administered was greater in patients without or with slight biliary tract disease ; when jaundice was present the rise was less, while in one patient with extensive acute diffuse necrosis of the liver the rise was almost unperceptible. Every effort should be made to secure an adequate hepatic glycogen content before protein, and patients with biliary tract disease should be regarded as having hepatic damage whether or not evidence of hepatic insufficiency is demonstrable.—*The Prescriber.*

MEDICINE AND THERAPEUTICS

Protein in Asthma.—Nelson and Porter (*B. M. J. Dec. 19, 1931*) call attention to the undeniable fact that a small injection of protein in high dilution has very marked effect on the spasmodic attack associated with asthma. 40 per cent are markedly benefited; 35% are improved and 24 per cent are effected but not very deeply. The protein used was simple broth and the substance selected was the "Tabloid Broth" made by Messers. Burroughs Wellcome and Co. A standard solution is made according to their directions by dissolving one tablet in 5 c.c. of water and sterilised by boiling. The correct dose was found to be somewhere between O. 1 cc of 1 in 100,000,000 to 75 cc of 1 in 1,000,000. The injections were given weekly.

Some avoidable errors in Transfusions : Nathan Grosof, M.D. Brooklyn, *Medical Times and Long Island Medical Journal*, November 1931 Pp. 377.

Since the recent vogue of the direct method of blood transfusion was instituted, reactions following transfusion have been quite numerous. As in the majority of cases the operation is done on patients fully aware of their surroundings, the problem of combating their fear is an important factor in the success of the transfusion. Surely we can avoid to a great extent many of these reactions. The problem that confronts the operator has two aspects, namely, a mental as well as a physical one.

What is the picture in a true isohemolytic reaction ? After being in a perfect state of calmness, the patient during the progress of the transfusion coughs a little, becomes restless and begins to complain of pain in the transfused arm. Suddenly one observes an increase in the respiratory and pulse rates, and a peculiarly mottled pinkish appearance of the skin. The mottled areas seem to appear first in the face and then on the abdomen, back and extremities. The mottled areas vary in size from 3 cm. to about 10 cm. in diameter. There is a rise of temperature, usually with a true chill. The patient appears to pass into a state of coma and shortly thereafter expires. However, some do not terminate in such an unfortunate way. Many of the reactions following blood transfusions are milder in character. Some develop a haemoglobinuria with jaundice, but eventually this group improves. At other times the severity of the reaction varies from a simple small rise of temperature without a true chill to a definite picture of pulmonary oedema. I have seen two cases where the right side of the heart was overloaded in patients with chronic myocarditis. These patients immediately developed physical signs of myocardial failure and pulmonary oedema. Death came on rapidly in spite of all medical aid.

What causes reactions to occur although blood grouping cross matching have been properly done? Undoubtedly there are certain factors every one must contend with when blood transfusion is given.

1. Apparatus. The operator on setting up the apparatus may allow the little particles of powder on the sterile gloves to fall into the machine. Then again the same particles have a tendency to settle into the saline dishes. Naturally as the operator runs the saline through the machine, it seems very likely that this foreign substance could enter the recipient's blood stream.

2. Fibrin. I have noted upon cleaning the apparatus little particles of fibrin within the inner chambers clinging to the springs. These same foreign particles of fibrin transferred to the recipient's blood stream. In spite of all precautions one cannot avoid the formation of fibrin within the apparatus.

3. Oil. In talking to the operating room nurses it was learned that their final technic in cleaning the apparatus is to run through it a sterile solution of liquid albolene. When the operator performs the transfusion, if he is in too great a haste, he will not rinse the apparatus thoroughly, and as a result the recipient receives oil droplets within his blood stream.

4. Tubing. I have often observed being used tubing which had undergone a porous change as a result of sterilization. The operator upon using the old tubing will, while performing the transfusion, inject quite a number of cubic centimeters of air into the recipient's blood stream.

5. Time. Judgment must be carefully weighed in performing a transfusion. Rapidity should be avoided. Many a reaction can be prevented by allowing the blood to be transfused at a slower rate within a longer period of time. No matter how urgent the case might be, giving 500 c.c. of blood, for example, within three minutes is quite a risk. One must carefully observe the patient's physical and cardiac reserve. Never rush into a transfusion with the thought of how soon you can finish the operation. There must be a definite time allowed for the transfusion, remembering also that too slow a stream is likewise contraindicated, as early coagulation might take place within the machine. Blood is a liable substance and outside the body physical changes, which we do not understand, can occur. Perhaps some toxic substance develops outside the body which might be a causative agent in reactions following blood transfusions.

Summary. It follows from this brief resume that a transfusion having decided upon, the three factors affecting it should all be carefully watched: 1. the patient whose blood must be carefully matched, 2. the apparatus should be carefully cleansed; 3. the operator who should be alert and neither hurry nor unduly slow, and should thoroughly inspect the apparatus before the operation.—*V. C. S.*

Deeks Ointment for Pruritus Ani. The formula for Deek's ointment for pruritus ani is:—

Salicylic Acid	4 parts.
Bismuth sub nitrate	10 parts.
Mercury salicylate	4 parts.
Oil of eucalyptus	4 parts.
Vaseline and lanoline	equal parts up to 100 parts.

As a general cooling lotion and to ease the erythema after ultra violet radiation (when erythema ought to be produced), a calamine and zinc oxide lotion is invaluable and may be dabbed on the affected area two or three times daily. The need must be impressed upon every patient of thorough washing after each defaecation with some germicidal soap.—*The Indian & Eastern druggist.*

Effect of Transfusion on blood Donors. H. Jones and H. Wilding note the effect of transfusion on 350 donors of both sexes. An immediate loss in weight of from ½ to 1 lb. was observed in the men after an average service, but it was soon regained, sometimes a stone being put on eventually. Many of the men noticed an improvement in their general health, acne and constipation being particularly benefited, while routine tasks were performed with greater facility. On the whole the thin, wiry types of men stood the loss of blood better than the fat. The female donors were not so satisfactory as the males. Whenever the average of 400 c.c. (or upwards) was given by a woman she develpoed anaemia rapidly and the return to normal was delayed. Hence the authors recommend that if several donations are contemplated to be made from the same women they should not exceed 300 c.c. apiece. They also advise that the same rule holds good for men if 500 c.c. taken in their maximum.—*Journal of the American Medical Association* thro' *The Medical World.*

The decomposition of chloroform. It is so well known that chloroform is liable to oxidation that all pharmacopoeias direct the addition of alcohol, which acts as a preservative though it does not entirely stop the decomposition. Phosgene (carbonyl chloride) is one of the products formed of oxidation and the object of adding alcohol is to convert this phosgene into hydrochloric acid and ethyl carbonate. The pharmacopoeias give tests intended to detect either hydrochloric acid or phosgene itself, and these are examined by Mr. N. L. Allport in the November number of the *Analyst.* The test in most of the pharmacopoeias

is a mere test for hydrochloric acid, either present in the chloroform at the time of testing or formed during the test by the action of water, with which the chloroform is shaken, on any phosgene present. The water is separated from the denser chloroform and tested with silver nitrate. This test Allport found to be not very sensitive, for a slight opalescence only was given when 10 parts per million of phosgene was present in a million parts of chloroform. The test with barium hydroxide proposed by Ramsay is less satisfactory since it depends on the formation of barium carbonate, which may be formed from atmospheric carbon dioxide dissolved in the chloroform. A test suggested by Utz, in which chloroform is treated with benzidine for 24 hours in the dark, yields a slight turbidity with about 5 parts per million, which is rather more delicate; but a general reaction given by mixtures of phenols and aldehydes with condensing agents was found by Allport to be more delicate and rapid. The reagents chosen are resorcinol and vanillin. To 15 c.cm. of medicinal chloroform contained in a dry stoppered bottle of about 25 c.cm. capacity add 20 mg. each of resorcinol and vanillin. Replace the stopper and when the reagents have dissolved, set the bottle aside in a dark place for one hour. Add 5 c.cm. of 1 per cent aqueous ammonia solution, shake and allow the mixture to separate. When there has been prior formation of phosgene or in the presence of hydrochloric acid a pink or red colour develops in the aqueous layer, reaching its full value in about 30 seconds, its intensity varies with the quanity of impurity present. The presence of alcohol is necessary for the development of the colour, which is given strongly by as little as 1 part per million of phosgene, blank tests with pure chloroform showing no colour at all until after about two minutes when the liquid darkens by reason of the resorcinol present. The presence of even a small amount of phosgene in a drug which is used to produce anaesthesia seems very undesirable and this new test should be of value in deciding whether a sample is suitable for this purpose—*The Lancet*.

An aetiological classification of anaemias.—R. E. Horsfall, M. D. *The Practitioner* December 1931.

Gives the classification of anæmias based on ætiologicai considerations; it is suggested that this form of classification may be of help to the physician confronted with the task of elucidating a case of anaemia.

I. *Loss of Blood* :—

1. Extra vascular (*i.e.*, blood lost outside the vascular circuit) :—

(*a*) Hæmorrhage, *e.g.*, hematuria, menorrhagia, hæmoptosis, haematemisis, melaena, trauma, ankylostomiasis.

When writing to advertisers, please mention the "Antiseptic."

(*b*) Purpura.
(*c*) Haemophilia.

2. Intra vascular (*i.e.* blood destroyed inside the vascular circuit) :—
   (*a*) Pernicious Anaemia—better called macrocytic anaemia, or achylic anaemia in the light of recent knowledge. This condition may equally well be grouped under 11. (1) E.
   (*b*) Splenic anaemia.
   (*c*) Banti's disease.
   (*d*) Familial acholouric jaundice. (This may also be grouped under 11. ((2) B.)
   (*e*) Infantile anaemia—a physiological process commencing after birth, which may become pathological in severity.
   (*f*) Malaria.

III. *Deficient Blood formation* :—
   (1) Extra vascular :—
      (*a*) Septicaemias, toxaemias, cachexias—eg. syphilis, malignant disease, tuberculosis.
      (*b*) Nephritis.
      (*c*) Pthisis.
      (*d*) Hyper lactation.
      (*e*) Pernicious anaemia.
      (*f*) Achlorhydric anaemia—in menopausal women, with a characteristic glossitis and dysphagia.
      (*g*) Diet deficiency (1) iron and copper (late infantile type); (2) vitamins—scurvy, beriberi, and possibly von Jaksch's anaemia,
      (*h*) Drugs-Mercury, lead, arsenic, salycilates, morphia, cocain.
      (*i*) Subthyroidisim.
      (*j*) Skin-lack of sunlight,
   (2) Intra vascular :—
      (*a*) Aplastic anaemia (1) Agranulocytic anaemia, where both red and white cells are deficient (2) granulocytosis where the granular white cells only are deficient.
      (*b*) Familial acholuric jaundice.
      (*c*) The leukaemias.
      (*d*) Chloroma.
      (*e*) Hodgkin's disease—Lymphogranulomatosis maligna.

In addition to this table the writer gives the following special procedures which may be found useful in an obscure case.

(1) Complete blood examination :–
  (*a*) Red cells-total count; presence of immature cells; fragility; Price-Jones curve; haemoglobin ; colour index.
  (*b*) White cells-total and differential count, Arenth index; presence and count of immature cells.
  (*c*) Plasma-clotting time; Von den Bergh's reaction; blood culture.
  (*d*) Platelets-total count.
(2) Fractional test meals.
(3) Stool examination for parasitic ova and occult blood.
(4) Renal function tests.
(5) Histological examination of lymphatic gland.
(6) Tuberculin skin reaction.

Elucidation of the personal and family history is as important in cases of anaemia as in other pathological conditions.—*V.C.S.*

OBSTETRICS AND GYNAECOLOGY.

Effects of Female sex hormone on conception:—Experiments on guinea pigs, made with a view to determining the effects of injections of the female sex hormone on conception and on pregnancy, showed that the female sex hormone is the active agent in producing estrus. In previous studies it had been found that injections of the serum from pregnant women would delay the onset of estrus in guinea pigs. These observations would seem to indicate an antithetic action between the female sex hormone and the corpus luteum hormone. Other experiments have indicated that the injection of the female sex hormone into pregnant white rats would terminate the pregnancy if it had not exceeded five days. Other investigators also, using white mice, were able to prevent conception and to interrupt pregnancy at any stage with comparatively small doses of the sex hormone. With guinea pigs small doses of the female sex harmone prevented conception and with larger doses it was possible to interrupt pregnancy and in some cases caused the death of the mother. (*Jour. A.M.A. May 16, 1931. thro' Minnesota medicine.*

Treatment of placenta praevia:—According to M. Pierce Rucker, Richmond, (*Journal A. M. A. May 1931*) there are certain fundamental principles in the treatment of placenta previa that should be observed whether the patient is treated in general practice or in a well equipped obstetric hospital. The significance of the haemorrhage in the last half of pregnancy should not be minimised. Too often the patient is encouraged with the hope that it will not recur. No pelvic examination should be made until every thing is in readiness to manage the patient should it be found that the placenta is presenting. A vaginal pack done as a makeshift until help can be secured or the patient can be taken to a hospital probably does more harm than good. A better plan is to give the patient a dose of morphine and disturb her as little as possible. The importance of blood transfusions is self evident. One cannot show the cervix too much respect. Dilation should not be hurried and should be complete before any operative delivery, except a Braxton Hicks version, is attempted. If voorhees bags are used, a number 5 is preferable. When the bag is about to come through the cervix the patient should be in readiness for an immediate delivery should be necessary. The extra-ovular placement of the bag is preferable. Post Partem haemorrhage has not been a problem in the author's cases, but its danger should be constantly borne in mind. In the interest of the child, caesarean section has a place in complete and partial placenta previa. —*Illinois Medical Journal.*

Studies of uterine haemorrhage. Relation of the haemorrhage of the events of the Menstrual cycle and to the pathologic findings:—C. F. Fluhmann, M.D., and Dorothy L. Morse. M.D., Sanfransisco. (*American Journal of Obstetrics and Gynaecology, April, 1931*) An analysis of 1,137 cases of abnormal uterine bleeding showed that 630 were associated with pregnancy, while 507 cases were in non-pregnant women. The latter patients were classified into eight distinct categories according to the clinical manifestations of the haemorrhage,

1. Mennorrhagia, or profuse or prolonged flow in patients with otherwise normal menses. The sequence of events of the menstrua cycle in the ovaries and endometrium is undisturbed. The most frequent etiologic factor is any condition which interferes with contractile power of the uterus or results in a hyperæmia of the pelvic organs.

2. There is no irregularity in the time factor, the menstrual periods appearing too frequently, or are delayed, or are totally irregular in their occurrence. The main etiological factor is to be sought in disturbances of ovarian function, which may be of primary endocrine nature or secondary due to anatomic lesions.

3. (a) Haemorrhage initiated with a menstrual period may continue for a prolonged length of time. In these cases are mainly found lesions intimately connected with the endometrium. such as submucous fibromyomas and endometrial polypi, or definite pathologic changes such as hyperplasia of the endometrium or endometritis.

(b) Continous bleeding may set in during the stage of endometrial proliferation. The physiologic explanation may be found in a sudden destructicn of the corpus luteum due to extension of an inflammatory process.

(c) Bleeding during the endometrial stage of secretion is of unusual occurrence,and may be partly due to the premenstrual hyperemia of the pelvic organs.

4. Haemorrhage may occur in the middle of the menstrual cycle at a time corresponding to the rupture of the graafian follicle, the so-called "Ovulation bleeding".

5. A type of haemorrhage characterizing hyperplasia of the endometrium is found when the menstrual periods become progressively more profuse or irregular and end finally in continues bleeding.

6. Bleeding may occur following a period of amenorrhœa in non-pregnant women of child bearing age due to (*a*) hyperplasia of endometrium or (*b*) a traumatic or ulcerative lesion of the uterus following a previous removal or destruction of the ovaries.

7. Hæmorrhage may occur at irregulr times and without any connection with the events of the menstrual cycle, due to traumatic or ulcerative lesions of the cervix or endometrium resulting from new growth or inflammation.

8. Irregular haemorrhage due to the same causes as in group 7 may occur in women past the climacteric. In rare cases ovarian new growths may also affect endometrium and produce bleeding.—(*thro 'Medical Women's Journal*).

Habitual Vomiting in Infants:—Stephan Cherbuliez record-the persistent vomiting of an infant one year old who as a result of the habit acquired at six months, became very anaemic and much emaciated, the surface was cold and dry, sleep fitful, and crying incess sant,hunger and thirst being extreme from the gastric intolerance. The bowels only acted after enemata and the stools were hard and dry. All treatment whether by dietary measures or drugs, had been unsuccessful at the hands of several predecessors until Cherbuliez began to administer atropine in doses of 1/120 grain morning and evening. This stopped the emesis at those times but as it returned in the intervals the atropine was given four times a day. The vomiting ceased immediately, the skin became moist, the stools natural, and the child improved in all respects. The atropine was continued in decreasing doses for three months when the cure was complete. (*Lausanne: Revue Medical de la Suisse Romande*).—*Through the Medical World.*

Signs of foetal Asphyxia:—E. Frey from his observations on 2,376 labourers proves the possibility and ease of recognising the early sings of foetal asphyxia during delivery. When the foetal heart is found to be less than 100 during the interval between two uterine contractions, asphyxia is indicated and the immediate use of forceps called for. It is possible however, that the rhythm may improve

chloroform anæsthesia of the mother, and Frey states that in 35 cases where this course was followed the majority of the children so far recovered as to permit of spontaneous delivery being waited for. He believes the slowing down and weakening of the foetal heart to be not so much a symptom of poisoning by carbon dioxide as of the pressure on the cranium giving rise to mechanical irritation on the vagus. (*Stuttgart: Zeitschrift fur Ceburtshnlfe end Gynakologie*). Thro'.—*The Medical World.*

Proceedings of Societies, Conferences Etc.

Dr. U. D. Gopal Rau, Hony. Secretary, The All-India Medical Licentiate's Association, Madras Branch, writes:—

At a clinical meeting held on 29th Feb, at 5-15, P. M., under the auspices of the Madras Branch of the All India Medical Licentiates Assn, at "Giffard School" Govt. Hospital for women and Children, Egmore, a very large gathering of the members of the medical profession at Madras including ladies and medical students was present.

Rao Bahadur Dr. A. Lakshmanaswamy Mudaliar. B.A. M.D. F.C. O.G. read a scientific paper on "The Recent Advances in Obstetrics" and explained the same through lantern pictures exhibited on the screen. Among other points of practical importance to the general medical practitioner, were the anemias and early diagnosis of pregnancy, through the help of X ray photographs, induction of labor and the place of Contraceptives in life, wherein the learned doctor, pointed out some of the latest obstetrical therapeutics including instrumental application gained by his vast experience in the line and from his recent continental tour.

The paper was very much appreciated by the audiance and the secretary of the association, while thanking Rao Bahadur Dr. A. Lakshmanaswamy Mudaliar, for the interesting and instructive lecture, hoped that he would continue to give his support and sympathy with the licentiates, in the achievemant of the two main objects of the association (i) to keep their professional knowledge up to date by a regularly organised clinical meetings (ii) to increase their status and standard of medical education.

In the end a businesss meeting was also held and at which Dr. D. V. Venkappa, the provincial secretary of the association was unanimously proposed to be one of the ex-officio members of the Governing body of the Madras Branch. Among other resolutions placed before the meeting was the one regardi[illegible]bill of the Madras delegate to the Darbhanga Conf[illegible]nce, which was passed unanimously. The meeting terminated [illegible] vote of thanks to the chair and the authorities of the institution for having allowed the use of the school for the day's functio[illegible]

Book Reviews.

The Psychology of Insanity.—By Bernard Hart M.D. F.R.C.P. [Cambridge University Press London.] Price 3 sh.

That this hand-book, which was first published in 1912, has gone through 4 editions and has been reprinted 10 times speaks for its popularity and a perusal of it confirms this opinion. Written in a racy style, it impresses upon the reader the fundamental principles of Psycho-pathology or a psychological explanation for morbid mental phenomena.

The author's practical experience as a psycho-therapist has enabled him to deal with those matters whose validity is beyond question and "to introduce those principles which have already acquired a claim to recognition."

This is as it should be, for, with the several "Schools" of psychology and with devirgences of thought a student finds himself in a maze of conflicting opinions. If he grasps the fundamental principles laid down in this book, he is on sure ground and can proceed to assess at their real worth the several theories and opinions of different investigators.

This handy volume has been a favourite with Students of Psychological Medicine and in the present edition the recent advances in this branch of knowledge have been referred to as explanatory notes, thus bringing it up-to-date.—*F.N.*

An A.B.C. of Medical Hypnosis.—By Hopewell Ash. [71, Grosvenor St., Grosvenor Sq., London W. 1.] 2 sh.

There is nothing special about the book. It is a pamphlet of about 56 pages containing odds and ends and a few practical suggestions about hypnosis. The author rightly emphasises the value of the co-operative method of inducing hypnosis. It is the method of choice when the patient is intelligent and willing to co-operate; but as too often happens if he is highly resistive we can only rely on the method of domination. Medical hypnosis is a serious affair. No mere dilettante can afford to trifle with it. The claims of the author that a perusal of this pamphlet will equip a practitioner with sufficient knowledge to practise hypnosis are to say the least extravagant. Even as regards nomenclature, in his efforts to be better understood, the author frequently becomes unscientific—"Manifest hypnosis, Dream States, Personal Electricity etc."

There are however some useful practical suggestions. As an advertisement or rather as an appendix to more serious volumes on hypnosis, the book may have a place.—*M.V.G.*

The Nature and Treatment of Stammering.—By E.J. Boome, M.B.Ch.B., D.P.H., T.D., and M.A. Richardson. Cloth. Pp. 135. [London: Methuen & Co. Ltd. 1931.] Price 3s. 6d.

This is a very interesting book which will be of great value to all who have anything to do with the stammerers—parents, teachers and physicians. Stammering is a common complaint of nervous children and a very distressing one to all concerned. The subject is unfortunately ignored by the medical profession as a whole, the general practitioner as well as the specialist taking little interest in it. As a result of this the treatment of stammerers has been mainly in the hands of quacks and charlatans.

The authors have a wide experience in handling stammerers for Dr. Boome is a Divisional Medical Officer of the London County Council and Mr. Richardson a Senior Assistant in connexion with the London County Council Remedial Courses for Stammering Children. They discuss causation of the trouble from its various aspects and indicate the lines of treatment which they have found useful in their rich experience. They devote a chapter to the stammerer's point of view in which comments by stammerers themselves are included. We believe this chapter will go far in securing a proper understanding of the mind of the stammerer. We cannot do better than quote the authors' conclusion here. "We find it necessary to emphasize more strongly the paramount importance of a complete investigation of each case from every point of view—physical, psychological, and environmental. Often the discovery of some trivial detail will alter the whole aspect of a case. Equally important is the application of the principles of mental and physical relaxation in treatment. Every stammerer is an individual case, but this in no way contradicts our statement that class treatment is the best method for dealing with young children.....It is our earnest wish that the perusal of these pages may result in a message of hope to the stammerer, some enlightenment to his parents and teachers, and a more reasonable attitude on the part of the general public towards those oppressed with this distressing affliction."—*N.P.*

Synthetic Biology and the Moral Universe.—By H. Reinheimer, [Rider & Co., Paternoster Road, London. E. C. 4] 6 sh.

Mr. Reinheimer, whose writings in the realm of Biology have been recognized to be of great importance develops his pet ideas on synthetic biological philosophy in this book.

In his previous works he has repeatedly urged that "the standards of virtue and vice in the Universe depend upon two antitheses viz., Symbiosis and Parasitism, that it is definitely immoral for an organism to be parasitic, that a carnivorous animal is a semi-degenerate organism and that herbivores are the best fitted to live in harmony with the world."

Dr. Whitehead in his recent book "Science and the Modern World" makes the statement that the "prestige of the more scientific form belongs to the physical sciences" and that "biology apes the manners of physics." Mr. Reinheimer retorts by saying that "biology has hitherto acted only as a parasite and has become pampered in constitution and pontifical in attitude—the Nemesis of Parasitism." Attempts at reform easily meet with resentment. Biologists hold "mere philosophy" in complete contempt (p. 27). Academic biology consists of little more than a dogmatic teaching of prejudice (p. 49). It is well known that Darwinism implied the repudiation of morality (a mere man-manufactured article—(p. 51). These are few examples of his views on Epistemology.

In the section headed Biology and Pathology, Dr. B. Sokoloff a disciple of Metchnikoff, comes in for a great measure of largely unmerited criticism. Dr. Sokoloff according to Mr. Reinheimer is a modern wayfarer not unlike unto Faust, ready to strike out new lines of his own (p. 61) and does not seem to be in the least aware that the ideal phenomenon for the study of harmony is symbiosis (p. 78). The truth in regard to the absence of a proper understanding of biological problems according to this author is "we have failed to do any thinking but have merely unreflectingly and wastefully amassed a vast uninterpreted rubbish heap of facts, whilst an army of solemn triblers and dogmatic impostors ("warranted incapables" in William Jame's pharaseology) are clubbing and brow-beating those who have volunteered upon the most essential task of all, that of interpretation" (p. 80). It is owing to the priestly pretensions for such pedantic triflers that biology is in a mess and is now compelled to send out S. O. S. signals in all directions for aid (p. 81). Talking of endocrine glands and hormones which have come into great prominence in recent years, he thinks the glands have no doubt their duties in symbiosis to discharge towards us; but we in our turn owe symbiotic duties to them and this fact is most often forgotten (p. 98). It is the nonsymbiotic, the parasitic life throughout which exhibits physiological weakness (p. 99).

Bodily feeling (omnivorous habits showing no discrimination in matters physiological, such as feeding) is responsible for our pessimism, our fatalism, our perplexity, our finding bad reason for what we believe upon instinct (p. 122). We must stop thinking that mere

heuristic success is the guarantee of truth. Nor, should biologists expect mathematicians and philosophers to do all their thinking for them (p. 124). If we start with the idea that the "mills of God grind slowly but they grind exceeding small"—an experience for which other facts which we know about the world supply ample warranty—we shall be able to infuse new life into biology and to reconstruct it from top to bottom (p. 151.)

The solution of the puzzling problems in biology is more important than a malignant "proliferation" of the "mysteries" due to the fact that biologists have begun with the wrong end of the stick, having shelved everything that was most worth building on (p. 174).

The above quotations from the book under review give a very fair idea of the views of the author on the relationship of Biology to the modern universe. He has produced a formidable array of arguments in favour of his pet theories. It should be conceded that some of his ideas are thoroughly original, thought-provoking and important while others are at least interesting, if unacceptable to the orthodox biologist. One would like however Mr. Reinheimer to have been more tolerant and less carping in his criticism of biologists who honestly differ from him.—*T.N.S.R.*

The Cancer Process.—By J. J. M. Shaw, M. A. M. D. F. R. C.E. [E & S. Livingstone, 16 & 17, Teviot Place, Edinburgh] 1930 PP. 16—1/- net.

This is a thesis based on the experimental work carried out in the Surgical Research Department of the University of Edinburgh with all references and notes of experiments being laid aside. The small book amplifies "Cancer is caused by prolonged contact between the cells of living tissue and any substance which possesses three properties—viscosity and insolubility in tissue fluids and toxicity to cell life." And we find a silver lining in the darkest cloud when the author emphasises "Potassium is essential to cell life its chief effect being a transformation of omnipresent Gamma rays of radium into the short Beta rays which are active to the call. These short rays control cell energy and metabolism. In cancer and all rapid Proliferations—the stimulating effect of a moderate increase in Beta rays is obtained by increase in Potassium moiety of cells. "And it goes home in every pessimist's heart when the author believes that ultimately all cancers may prove curable by (i) suitable control of Potassium, locally and systemically before and during the use of prolonged radium at distance with occasional preparation by Deep Xrays (2) by alteration in general health. But he is silent about the practical points which will make us control "Potassium" in the Divine Laboratary of the Human System,

The book would have lost much of its dryness had experiments been added to the thesis. The author is also silent about the Virus theory of cancer,—nor does he dwell on how the process can be applied to every part of the body wherever cancer occurs.—*K.G.B.*

The Concentration of Vitamin B. 1. from Rice Polishings, Part 1.—by I. A Simpson, [The Institute for Medical Research Kualalumpur, F.M.S.]

This short publication is one of a series of Bulletins issued from time to time by the Institute for Medical Research, Federated Malay States; the present one under review being No. 2 of 1931. That this institute is doing very useful work is evident from the varied nature of important subjects dealt by it during the last seven years; a short synopsis of the Bulletins issued from 1924 to 1931 is given at the end of the pamphlet.

Vitamins in general, and Vitamin B in particular, partly because of its anti-neuritic properties and partly because of rice being the staple article of food of a large proportion of the world's populace, and the trend of the modern man being more and more towards artificialities, have, of late, come into much prominence. It is a happy augury that this Research Institute has taken up the 'Studies in Vitamin B. 1., and the medical literature is sure to be enriched thereby.

The author closely following the concentration method (which has been elaborately described in the bulletin) adopted by Jansen and Donath has hitherto been able to extract from rice polishings and subsequent absorption on to acid clay 450 milligrammes of a semi crystalline concentrate, which it is interesting to note, compares very favourably in its high potency with the other active concentrates so far isolated by the other workers in the field. This product is not only able to protect pigeons from Polyneuritis but is also curative. The author, however, points out that since the material was not forcibly fed to the test birds in the prophylactic tests as was done in the curative ones, the former are not very reliable. Then follow some biological tests—both preventive and curative with the concentrate as well as with the vitaminised acid clay carried out on pigeons—a novel feature of these experiments, others having so far made tests on rice birds only—and the results thereof have been summarised in tabular forms, which altogether afford a very interesting and instructive reading. Another appealing feature of the bulletin under review are the two plates appended thereto showing the marvellous curative effect produced within a few hours of the administration of fractional milligramme doses of the concentrate to pigeons suffering from Polyneuritis.

The author is certainly to be congratulated on his success so far achieved in this work; but further researches towards the purification of the isolated substance together with the results of tests with this concentrate on Beri-beri patients will be eagerly awaited.—*G. L. S.*

The Essentials of Bacteriological Technique,—By R.F. Hunwicke, B. Sc. A. I. C. with an introduction by W. G. Savage, M.D., B.Sc., D.P.H. 1931, 108 pages Illustrated [Williams & Norgate Ltd., 38, Great Ormond Street, London] Price 6/6 Net.

Mr. Hunwicke is to be congratulated on writing an extremely practical book dealing with only those subjects which are of every-day importance. Such important subjects as the bacteriology of water and of milk and the examination of meat and canned foods and testing of disinfectants which are usually given scanty attention in most text-books are fully discussed here. The reader is further given only techniques of proved utility and is not presented with the confusing list of culture media, stains and staining methods which is usually the case in most text books of bacteriology. It is essentially a text-book for the student of public health but it also will be useful for those who want some help in setting up a laboratory. It is probably with this idea that the author has provided a chapter or two on Laboratory equipment, culture media and microscopy. We heartily recommend this book to all interested in the study of bacteriology. —*U. K. R.*

Anaesthesia.—By W. Stanley Sykes, M.A.M.B. (Cantab) D.P.H, (Leeds) M.R.C.S., with a section on local anaesthesia.—By P. J. Moir. M.C.M.B. (Glasgow) F.R.C.S., (Eng.) The Modern Treatment Series [Jonathan Cape Medical Publications Ltd., 30 Bedford St., London.] 1931, Pp. 128. Price Sh. 5/- net.

This little book like its other companion volumes has been specially written for the use of general practitioners.

The historical details are omitted, while the physical and chemical characters of the anaesthetics are well described in an impressive manner. The book is divided into three parts. General principles of anæsthesia and anæsthetics form the subject matter of the 1st part. Methods of administration of Nitrious oxide, Ethyl chloride Ether, Chloroform mixtures, Endotracheal methods, Avertin, Hydrocorbon gases, (Ellylene and acetylene) together with their indications, advantages and disadvantages are clearly set forth and practically treated. We have no hesitation in recommending this book to all the general practitioners as a safe guide on anaesthesia.—*V.C.S.*

Abdominal Pain.—By John Morley, Ch. M., F. R. C. S., with an introduction By J.S.B. Stopford, M.D., F.R.S. Pages 191. [E. and S. Livingstone, Edinburgh; Indian Agents: Butterworth & Co., (India), Ltd. P. Box 251, Calcutta.] Price Rs. 7-14.

In this booklet the author attempts to point out the fallacies with regard to the orthodox theories about abdominal pain and how they do not conform to the clinical findings. After explaining the Lennander's, Ross's and Mackenzies' theories on abdominal pain and also the observations of Hurst and Kappis, he gives his own alternative theory, which is mainly deduced from personal clinical observations at the bedside and on the operation table. In the third chapter, he discusses the significance of shoulder-tip pain and its causation in different conditions. The characteristics of pain in different abdominal conditions with proper explanations are described clearly and concisely. The pains arising from stomach and duodenal ulcers, and cancer of the stomach are described minutely. The description of mechanism of pain in Appendicitis is very interesting. Other organs of the body as liver, gall-bladder, pancreas, spleen, intestines, and organs of the pelvis, find a place in the book. The book is highly educative and interesting.—*K.L.R.*

National Medical Journal of China-Parasitology Number.—The Parasitology Number of the National Medical Journal of China August-October 1931 contains a collection of original articles on various tropical diseases caused by parasites. To mention a few, the article on "Amoebic liver abscess" would interest both physicians and surgeons. The photographs of patients with liver abscess pointing the various places are very instructive. The technique of aspiration of the liver abscess is described. The method adopted is aspiration plus emetine or emetine and yatren. The attempt to immunise Hamsters against Kala Azar was a failure. Healthy Hamsters have been successfully infected by feeding with carcasses of infected Hamsters, and in the article on "the transmission of Kala Azar" the suggestion has been made that the oral route of infection deserves to be seriously considered, not as a means of spread from man to man but probably as the means of keeping up the disease in the reservoir host. Immunity to protozoon infections is quite a new field of enquiry.

The article on "filariasis in China" will be read with interest by those who are investigating this disease in India, especially with regard to the distribution and transmission of the disease. The investigations have shown that the transmitting agents are not confined only to the culicine mosquitoes and that Anopheles hercanus is an important transmittor of the disease in the Woosung District in China. Malarialogists would be interested in the article on "The Larvae and Pupae of the North China species of Anopheles." Exceedingly interesting are the papers on the study of the pathogenic fungi which give rise to various diseases of the skin, scalp, nails etc. There are two papers based on histological reactions in the skin due to external parasites and in the mucus membrane of the digestive tract due to intestinal worms. The department of Pharmacology has contributed an article on "the treatment of worm diseases with Chinese drugs," and in another article are extracted interesting pieces of information from some old Chinese medical books on worm infections. The last

article in this special number entitled "the Doctor, the Missionary and the Scientist" by Hu Shih, member of the Board of Trustees of the Peiping Union, Medical College, Peiping, should be read by every medical man and medical student. His message that "it is not enough to be merely good doctors" deserves to be widely broad casted also in India. It is the absence of the missionary spirit in the medical profession which is the cause of the extreme over-crowding of the practitioners in the large cities and towns in India. An eminent American Parasitologist is stated to have once remarked "China is mataphorically speaking 'riddled' with parasites." So is India. Diseases due to parasites are of daily occurrence among us and the subject of Parasitology should be adequately taught in our medical colleges by properly trained teachers who have made a special study of this subject.—*T. S. T.*

"Leprosy Review" for October 1931. [British Empire Leprosy Relief Association, 29, Dorset Sq., London, N. W. 1]. 2 sh.

This number of the "Leprosy Review" is also of great importance, inasmuch as it deals with the principles of Prophylaxis, formulated by the "Leprosy Commission" of the League of Nations Health Organisation, in the special conference held at Bangkok (Siam), simultaneously with the 8th Biennial Congress, of the Far Eastern Association of Tropical Medicine in Decr. 1930; a detailed account of which, is given by Dr. E. Burnet, the secretary of the said commission. This Bangkok conference, can now, be considered as a fore-runner, or as a preliminary to the later "Leonard Wood memorial conference," held in Manila, in Jan., 1931, which adopted, in principle, the essentials of the recommendations concerning the prophylaxis of leprosy formulated by the previous conference.

Needless to say that all leprosy workers, whether medical or lay, and administrators who have to vote funds for Leprosy work, should study this article of Dr. Burnet, if they are to conscientiously carry out their duties to the public and to their afflicted leper brethern.

Dr. Burnet makes it quite clear in his article, that the leprosy commission of the League of Nations, is *not* an International study association, nor, a Society for Scientific Medical Research and social action like the B.E.L.R.A; nor is it a mission, inspired by the religious spirit; but, it is just an International Society, brought into being, to serve as an authoritative clearing house of information, whose advice would be available to all administrative authorities of different countries, who have to tackle the problem of leprosy prevention, in their own countries. Collaboration of leading experts from different countries, is secured by the commission; and this, places at its disposal, a collection of the views of such experts, on the basis of which, a general line of action to be adopted in dealing with the prophylaxis of leprosy, is formulated. In pursuance of this object, for the furtherance of which, the com-

mission has been brought into being, the secretary Dr. E. Burnet, undertook a rapid tour through all the leprosy affected countries and collected much valuable statistical and other data from the leading experts and leading Health and administrative authorities in each country, visited; and on the basis of such data, the commission has formulated the general principles of prophylaxis and technical suggestions, which have been published in the form of a report in two parts the 1st, dealing with the general principles and the 2nd, with the technical suggestions. This report should be read in the original by all leprosy workers, whether medical or lay, and by all administrative authorities of this country.

Interesting articles dealing with the anti-leprosy activities in Kenya, Zanzibar, Tanganyika and British Guiana, follow. The article on "Metabolism in relation to Leprosy," serves as a reminder to those who are apt to forget the chief part played by the natural resistance in the production of cure in leprosy, and so, is rather timely. From the point of view of experienced medical workers and Research workers in leprosy, the most important article in this number of the Review, is an extract from the chapter on Leprosy, contributed by Dr. E. Muir in Vol. V of "A System of Bacteriology in Relation to Medicine." (Privy Council, Medical Research Council Publication).

Needless to say that the publications of the Medical Research Council of England are the most authoritative, and the chapter on leprosy, contributed by Dr. E. Muir, will ever remain as a standard authoritative literature on "Leprosy." In the extracts published in this number of the Review, the Histopathology of the different lesions of leprosy are lucidly described and the pathological basis and mechanism, of lepra reactions, together with their effects under different conditions, are very clearly set forth. Salient points in the treatment of leprosy and a brief description of the essential principles of Prophylaxis, conclude this extract.

As this extract is itself very brief, the reviewer finds it very difficult to summarise it still further, and therefore recommends those medical workers in leprosy, who wish to have an adequate knowledge of the Pathology of leprosy, to apply to the secretary of the B.E.L.R.A. for a copy of this number of the Review. For the benefit of the widely scattered medical workers in leprosy, it would be much better, if *reprints* of this extract can be supplied free. It is hoped that the secretary will kindly take note of this humble suggestion of the reviewer.—*G. R. Rao.*

The United Fruit Company, Medical Department—Nineteenth Annual Report, 1930. [Pier 3 North River, New York.]

"In line with the general programme of economy made necessary by the world-wide economic depression" we are told, "it was necessary to reduce" both the size of the Report, and the reproduction of the illustrations inserted annually to show the activities associated with the sanitary welfare, preventive and curative work of this great organisation. Yet there is a very interesting record of the results of plasmoquine, yatrine and Anayodin and several other specifics in the many ills to which that region of the Tropics is exposed. The papers on malaria control measures are particularly instructive, while the paper by Dr. Salisbury entitled "The Malarial Index in the Costa Rica Division as affected by control measures" brings up by means of graphs and statistics to the very root of the problem. "Will malaria disappear automatically from a locality when the carrier index reaches a certain point; and what will that point be?". Personally this Reviewer feels following as a result of pure mathematical reasoning the argument developed by Ross "Report of Malaria in Mauritius" (1908) and by Waite ("Biometrika", VIII. 1910) that in the course of morbidity rates in successive months the factor of parasitic number or virulence is of less importance than the factor of the hosts' susceptibility—and this was further developed in a paper he reported to the Indian Science Congress, 1932 and still unpublished. To malaria workers the special reviews by Drs. James and Thonnard-Neumann (pp. 181-188) will be specially helpful. As regards Beri-Beri Dr. Jantzen has contributed an article to this Report (p. 96) in which he states that Vitamin B deficiencies in the diet will not explain as is commonly supposed—all the aetiological factors in the beri beri syndrome observed in the cases treated in the Truxillo Division and that he believes there are still unknown factors in some typical cases of beriberi. Colonel McCarrison's recent Memoir on Beriberi in this country, we believe, takes us much closer to this problem. Section VI dealing with organisation and vital statistics and covering nearly 75 pages of statistics produces by the very typesetting and display a pleasing effect of what would sordinarily have been a great strain even to the sight. Altogether as a record book it is a very useful compilation revealing a large measure of human misery and suffering that has been saved by this Company in the year of Grace 1930.—*K.B.M.*

Notice.

VIII ALL-INDIA MEDICAL CONFERENCE.

The eight all India Medical Conference will be held in Calcutta during the ensuing Easter holidays. Subjects concerning the vital interest to the medical profession in India and the formation of Indian Medical Council will be discussed in the Conference. Scientific Section of the Conference and the Exhibition will no doubt afford every medical man a good opportunity to know the advancement made in this country in medical science. In order to make this Conference thoroughly representative of the medical profession of India it is requested that all members of the profession should join the Conference and take part in the deliberation. For particulars regarding accommodation etc., please write to the Secretary, 67, Dharmatala Street, Calcutta. Delegation fee has been fixed at Rs. 5/-.

MEDICAL EXHIBITION.

In connection with the All-India Medical conference a Medical Exhibition will be held in Calcutta during the next Easter holidays. It is expected that Medical men from all parts of India will attend the Conference. It will afford a very good opportunity to dealers and manufacturers of medical requisites to exhibit their products. Those who are willing to take stalls at the Exhibition will please write for particulars to the Secretary, Exhibition Committee, 67, Dharmatala Street, Calcutta,

PREPARATION FOR THE VIII ALL-INDIA MEDICAL CONFERENCE.

The Reception Committee of the All-India Medical Conference formed by the members of the medical profession of Calcutta is astir to make the Conference a success. The Corporation of Calcutta has very kindly lent the use of the Town Hall for the Conference and the medical exhibition. The exhibition will be opened on the 24th March at 5 P.M. The following provisional programme has been made :—

25th March—12 A.M. to 2 P.M, opening ceremony; Welcome address of the Chairman of the Reception Committee; Presidential address and formation of the Subjects Committee. From 2 to 5 P.M. Scientific Section; 5 to 7 P.M. Tea; 8-30 P.M. to 10-30 P.M. Subjects Committee's sitting. 26th March 8 A.M. to 10 A.M. Visits to Institutions and meeting of Subjects Committee. 1 P.M. to 4 P.M. Conference. 6 P.M. to 9 P.M. Scentific Section. 27th March 8 A.M. to 10 A.M. Visits to Institutions and meeting of Subjects Committee. 1 to 4 P.M. Conference. 4 to 6 P.M. Tea. 6 to 8 P.M. Annual meeting of the Indian Medical Association.—8 P.M. Dinner. 28th March 8 A.M. to 10 A.M. conference—conclusion. It is expected that a large number of delegates from all over India will join the Conference. Arrangements have been made for free accommodation for the delegates. A nominal charge may be made for boarding.

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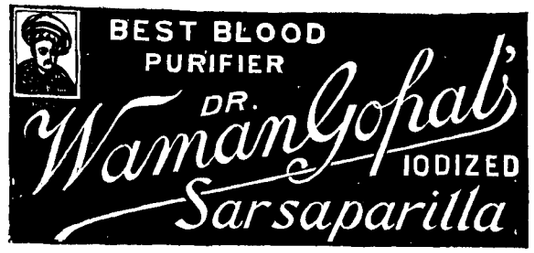

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The Antiseptic

A Monthly Medical Journal

EDITED BY
Dr. U. RAMA RAU & U. KRISHNA RAU, M.B., B.S.

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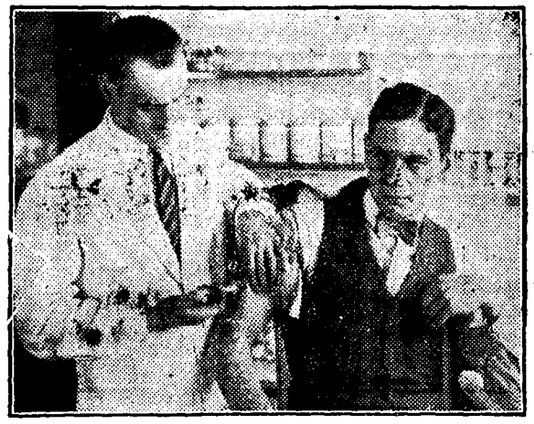

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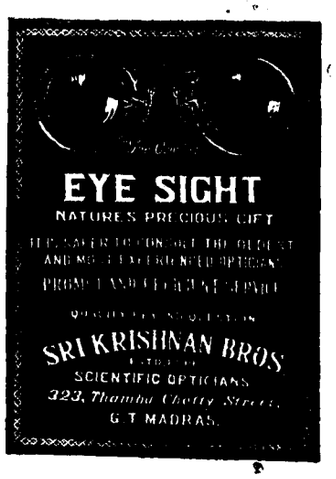

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Original Articles.

THE TREATMENT OF PNEUMONIA*

BY

DR. JAMES BURNET, M.A.,M.D., F.R.C.P. (EDIN.),

Lecturer on Diseases of Children and on Practical Medicine, School of Medicine of the Royal Colleges, Edinburgh.

In spite of many reputed advances in medical treatment pneumonia continues to be a very fatal disease. Various methods or lines of treatment have been suggested from time to time. None of these methods have, so far, proved infallible. The latest in vogue, namely treatment with antipneumococcus serum, is stated to reduce the death-rate and to lessen the severity of the symptoms and to shorten the period of high temperature; but be it noted these results are not got in every case so treated. Deaths still continue to occur, so that serum treatment after all cannot be regarded as a safe or certain cure.

A great deal is made now-a-days of the "typing" of the case. There are, as is well-known, four groups of the diplococcus concerned in the causation of pnuemonia. Most cases are due to Type I, and it is important that we should know to what type any particular case belongs before carrying out the treatment by means of antipneumo-

* Specially contributed to the 'Antiseptic.'

coccus serum. So far, so good; but we prefer to leave such treatment to others. So far as the writer himself is concerned he prefers to carry out the treatment according to certain fundamental and commonsense principles which have hitherto proved highly satisfactory in practice.

The first thing to realise, when face to face with a case of pnuemonia, is that this is a febrile affection of a self-limited nature. The crisis, in cases which recover usually, occurs on the seventh or eighth day. Serum treatment may bring about an earlier crisis, but with this we are not at present much concerned. There is no known drug which will abort the disease. The next important fact to bear in mind is that death is practically always due to heart failure, and not to failure of the respiration. The third matter to which great attention should be given is that it matters little, so far as treatment is concerned, whether one lung or both may be affected, whether the whole or only a part of the lung is involved. The treatment will be exactly the same in any case. These three fundamental points lie at the root of successful treatment. Neglect of them may prove fatal. Our treatment, therefore, is entirely based on the three following facts:—

(1) No drug will influence the course of the disease.

(2) The heart is the important organ, not the lung in pneumonia.

(3) The degree of involvement of the lung or lungs does not affect the treatment.

Bearing these facts in mind our golden rule is that once a diagnosis of pnuemonia is made we need not worry the patient by examining his chest again. At any rate he must never be allowed to sit up for such examinations owing to the great risk of heart failure. The heart is the organ we must watch, not the lung. With a hand more or less constantly on the patient's pulse we will be able to tide him over the crisis, whereas another with his stethoscope constantly on the patient's back will often have to sign a death certificate. Watch the pulse! The chest will take care of itself if allowed to do so.

Watch the heart! Stimulate it from the very outset. For this purpose nothing succeeds so well as good brandy. Don't believe the pharmacologist, who probably never treated a case of pneumonia, when he tells you that alcohol does not affect the heart and that it is not a cardiac stimulant. There is none better in the sick-room. It may be otherwise in the laboratory, but with that we have no concern. Time and again, the writer has proved the value of brandy in such cases. It often turns the scale in favour of recovery Don't be afraid of giving it; push it judiciously in every case,

Then, again, care must be taken not to overload the stomach, as a dilated stomach may cause cardiac embarrassment. Attend to the bowels, giving calomel from time to time. The writer has seen a pneumonia patient absolutely toxæmic owing to his bowels being loaded, and his stomach distended with gas. The modern young medico, with his laboratory findings, his up to date sera, and other paraphernalia is the one who is most liable to overlook such important matters as feeding, sleep, and the condition of the intestinal tract. He rarely looks at the patient's tongue, or if he does so, he cannot interpret what is plainly written there for him to read. For sleeplessness a drahm or more of paraldehyde or thirty grains of sodium bromide will usually improve matters. On no account must such drugs as veronal or sulphonal be employed in these cases. If the temperature is very high, and the patient restless tepid sponging may be tried. It is utterly useless, and often harmful to administer drugs under such circumstances. Thirst is often troublesome. Do not overlook this. Give patient vichy water or orange drinks from time to time.

Finally, do not allow the patient to sit up too soon after the crisis. Time and again patients die, just after the temperature has become normal, owing to sudden heart failure; so be careful, more especially if nurses without experience are about. Keep the patient at absolute rest for at least a week after the crisis. On no account allow the patient to exert himself or to sit up. Do not fuss too much about examining his chest. That can wait a little longer. Give your patient the chance which nature wishes him to have. That is how a case of pneumonia should be treated. The method is simple, but it is sure. The oxygen cylinder was almost overlooked. If you give oxygen watch it. Don't leave the funnel over the patient's face if some competent person is not beside him.

How successful this method has proved in the writer's hands is evidenced by the fact that when resident in a large hospital thirty-three years ago, not a single case of pneumonia died. For reasons, which need not be stated here, he had full charge and responsibility of these patients, and the assistance of a most able ward sister and nursing staff who loyally carried out the treatment outlined above. Such a record is the best testimony to the correctness and practical nature of these therapeutic measures in cases of pneumonia.

THE ROLE OF THE SANDFLY IN THE TRANSMISSION OF DISEASE.*

By

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Consequent on the demonstration of the role of the mosquito in the transmission of filaria and malaria by Manson and Ross, respectively, every blood-sucking arthropod began to be looked upon with suspicion as a potential carrier of disease. The experimental researches that followed in the wake of these brilliant discoveries were helpful in confirming many of these suspicions and in drawing up a long list of arthropod carriers of disease in which many were definitely convicted of crimes and others declared to be positively suspicious. To this list has been added within recent times the name of the phlebotomus or sandfly and it is seen to occupy a place certainly not less in importance than that of the mosquito, the muscid or the tick. It was therefore considered interesting to enumerate and discuss the crimes of which the sandfly is accused and to determine the extent of its contribution toward human morbidity and mortality.

Before taking up for consideration the diseases which are known or suspected to be transmitted by sandflies, it is necessary to say a few words about the insects' bite itself for often the inconvenience and suffering caused by it is much worse than some of the diseases that the insect carries. The truth of this statement will be best appreciated only by those who have had the experience of being badly bitten by the sandflies; they can never forget either the stinging nature of the bites or the intolerable itching that results therefrom. In every endemic area during the sandfly season, it is easy to find a large number of cases with abrasions all over their body produced by intense scratching of the sandfly bites. Some of these show evidence of infection with pyogenic organisms and sores resembling impetigo are often produced. Recently Hoffman has reported several cases of a peculiar papular eruption resembling urticaria resulting from the bites of sandflies in certain parts of Russia. In this condition the itchiness and pain of the bites is said to persist for several days, and if it is so, then the bite of the sandfly in itself constitutes a great nuisance to be reckoned with.

The first important disease which the sandfly is definitely known to carry is papatasi or phlebotomus fever. Although this disease was recognised in Malta by Pym as early as 1804, it was not until 1905 that Taussig first suggested that sandflies were probably the carriers

* Specially contributed to the 'Antiseptic.'

of the disease. It was noticed in Dalmatia that phlebotomus fever occurred only in localities where sandflies were present and that it was absent in places where the flies were not found. MacCarrison in 1906 as a result of his study of this disease in certain parts of India also made a similar observation. In 1909 Doerr, Franz and Taussig on the one hand and Birt on the other, proved conclusively by independent experiments that papatasi fever could be transmitted to man by the bite of phlebotomus papatasi. These workers fed sandflies on patients suffering from papatasi fever, removed the infected flies to a distant locality where this fever was unknown, and there let the insects bite healthy human volunteers, with the result that a good percentage of the volunteers developed the disease. Subsequent to this Graham in 1915, Patton in 1920, Bassett Smith in 1922, all showed that several species of sandflies other than papatasi were also capable of transmitting the disease. It is now known that P. papatasi, P. minutus, P. sergenti and P. perniciosus can carry the disease. Recent experimental work has brought to light that dissemination of the virus of this disease by the sandfly is not a simple mechanical act but that a biological cycle of development takes place in the insect before infection results from its bite. To put it briefly then the following sequence of events takes place before papatasi fever results. A female sandfly belonging to one of the species mentioned gets infected by feeding on a patient suffering from papatasi fever on the first day of his illness, as it is only on that day that the virus circulates in the peripheral blood. The virus in the fly then takes a week to ten days to complete its cycle of development and to produce infective forms which remain alive in the fly for a few days. An infected fly containing these forms bites a healthy person, and he developes phlebotomus fever within a period of eight days. In the case of phlebotomus fever the accusation against the sandfly has thus been proved conclusively.

At one time the sandfly was suspected to be the carrier of dengue fever. The reason for this supposition was that the clinical manifestations of dengue and phlebotomus fever are more or less similar. But now, the experiments of Graham in Syria and of Cleland, Bradley, and MacDonald in Australia have definitely shown that the virus of dengue is conveyed by Culex fatigans and Ades egypti. Their experiments, however, do not in any way exclude the possibility of other insects, including the sandfly, acting as carriers of the disease. For unlike the virus of phlebotomus fever, the virus of dengue does not appear to have any biological cycle of development in the mosquito. It is possible to infect man directly from a case of dengue by inoculating him with the infected blood. Therefore for all theoretical purposes every blood-sucking insect will have to be

considered as a potential carrier of the disease until the contrary is proved.

Verruga peruviana is another disease which the sandfly is suspected to carry. This disease is chiefly confined to certain areas in South America and is characterised by fever and nodular eruptions which resemble somewhat the eruptions of Yaws. Its aetiology is unknown but the disease appears to be transmissible to monkeys by scarification of their skins and rubbing in of material from the nodules. Townsend who worked with this disease in 1916 claimed that it is carried by the sandfly P. verrucarum. He based his supposition on the fact that the disease is readily conveyed by inoculation of material obtained from the nodules and that sandflies are abundant in the endemic area. Although these may be true, they are not in themselves sufficient proof for convicting the sandfly of the crime.

A very important disease which the sandfly is accused of carrying is Oriental sore. This disease was first recognised in 1864, in Delhi, where over 40% of the residents were reported to have been affected at the time. In 1885 Cunningham first described certain parasitic bodies in mononuclear cells derived from these sores which is now regarded as identical with Leishmania tropica the aetological agent of this disease. Twenty years after this discovery, in 1905, Pressat and Sergent suggested that cutaneous leishmaniasis might be carried by some member of the genus phlebotomus. Following this suggestion, several workers produced epidemiological evidence in support of it. In 1911 Wenyon reported the existence of a flagellate resembling cultural forms of L. tropica, in the sandflies caught, in Aleppo an endemic centre of oriental sore. Later in 1921, Sergent, Parrot, Donatien and Beguet showed that the phlebotomus could transmit oriental sore.

They produced the disease experimentally by rubbing into skin abrasions of a healthy volunteer an emulsion of sandflies, collected from an endemic area of oriental sore. But this experiment was not in itself accepted as complete proof, as the possibility of these flies having fed just before being caught on leishmania sore, was not excluded. In 1925 and 1926, Adler and Theodore published a series of experiments in which they claimed to have demonstrated the presence of flagellates in the stomach, buccal cavity and proboscis of a large number of sandflies belonging to the species *P. papatasi* and also to have succeeded in infecting a few volunteers with emulsions of such infected flies. This was followed by their report of successful transmission of a strain of flagellates, isolated from a sandfly to man, then back to laboratory-bred flagellate-free sandflies and again to man thus carrying the infection through a complete cycle. But as this claim has not yet been fully substantiated, the

proof of transmission of oriental sore by these flies is still incomplete. Adler and Theodore claim that the parasite of cutaneous leishmaniasis is not mechanically transferred by these flies but that the parasite undergoes a cycle of development in the flies before they become infective. They find the flies to be most infective seven or eight days after a feed on an infected case; about this time their alimentary tract and proboscis are completely filled with enormous numbers of flagellates. Although the work is quite suggestive, the final proof that the sandflies are the carriers of oriental sore is yet to be produced. For no one has conclusively shown that the disease is transmitted by the *bite* of phlebotomus papatasi or any other sandfly.

As regards the role of the sandfly in the transmission of American leishmaniasis, very little is known. It is suspected by some that phlebotomus lutzi may act as a transmitter, but there is little or no experimental evidence in support of this. Recently Nicolle from a study of a few cases of American leishmaniasis has suggested that infection probably takes place by direct inoculation from man to man, either by contact or through the agency of a "heavy biting insect". The chief argument on which this view is based is that American leishmaniasis has a tendency to involve margins of the nostrils and the upper lip and that the sandflies generally do not select these points on account of the inconvenience caused them by the air current due to breathing. This argument is indeed very ingenious, but cannot by itself be accepted as proof positive against the sandfly theory.

The last and perhaps the gravest charge against the phlebotomus is that it is probably the carrier of kala-azar. This disease, as is well known, was first recognised in India about 1875. It was not, however, until 1903 that the causative agent of the disease was discovered independently by Leishman in Germany and by Donovan in Madras. Although various insects were suspected to be the transmitters of the disease, the first suggestion incriminating the sandfly as a possible vector was made in 1915 by Mackie, in India, who after investigating the possibility of various insects, acting as carriers of kala-azar, wrote, "the only insect which has given any return for the work spent is the sandfly and I am of opinion that the relation of this insect to the disease would repay further investigation." This observation was made at a time when Patton's bed bug theory of transmission was at the height of its popularity, and therefore, except for the small amount of experimental work done on the phlebotomus by Mackie himself, no other work was conducted. In 1922 Mackie again produced very sound arguments in favour of his view. But in the same year Patton reported that as the result of his study of kala-azar in Madras, the sandfly cannot be considered as

the invertebrate host of the parasite. He wrote, "the evidence in favour of the sandfly being the invertebrate host of the parasite of kala-azar is not very convincing. It is true the sandfly tends to remain in houses near its breeding grounds and is localised to certain areas but in George Town (a hyper endemic foci in Madras) the number of sandflies is very, very limited, the only species being phlebotomus minutus. I have made many attempts to collect these flies but have never been able to get them and the people do not seem to know them. They must therefore, be scarce and could hardly account for the many cases of kala-azar which occur annually in this area". This statement of Patton has since been proved to be incorrect by the writer who in 1925 conducted a sandfly survey of the same area in George Town and found not only large numbers of P. argentipes, but also four other species including P. minutus, all the flies being particularly numerous in kala-azar houses. Following Patton's report, Napier and Muir in 1923 stated "that from an epidemiological point of view it can hardly be said that the facts are as much in favour of the sandfly as of the bed bug or fleas." Observations such as these by eminent workers of the times undoubtedly chilled the enthusiasm for the phlebotomus theory and delayed the further investigation of it. In the latter half of 1923, however, Sinton made a systematic study of all available species of sandflies in India with a view to determining whether any relationship could be made out between these insects and kala-azar and he in a private communication to Knowles is said to have stated that there was a very close correlation between the recorded distribution of kala-azar and phlebotomus argentipes. About this time the results of experiments of Sergent and his collaborators (1921-22) accusing phlebotomus papatasi as the transmitting agent in cutaneous leishmaniasis were also published and these helped a good deal to strengthen the case against the phlebotomus and to provide the necessary stimulus for an intensive investigation of the sandfly theory.

In 1924 a whole series of experimental studies began with a view to finding out whether the phlebotomus could act as the transmitter of kala-azar, and very soon the first and perhaps the most important discovery in this connection was made by Knowles, Napier and Smith, in the Tropical School at Calcutta. They showed that development of L. donovani took place in the sandfly and that nearly 30 to 50 per cent. of laboratory-bred sandflies could be infected by feeding them on kala-azar cases. This was followed by the researches of Christophers, Shortt and Barraud (1925) and Shortt, Barraud and Craighead (1926) who successfully worked out the developmental cycle of L. donovani in P. argentipes and demonstrated massive infections in the insect's buccal cavity and the infective nature of the flagellates present there. Furthermore in the

same year they also reported having found specimens of P. argentipes (8 out of 345 caught) in nature in an endemic area infected with flagellates identical with the parasite of kala-azar, the infection with flagellates being as heavy as in the laboratory-infected flies. Every evidence, epidemiological, and experimental, obtained between 1924-26 was in favour of phlebotomus transmission. Fortunately about this time the difficulty as regards the lack of suitable experimental animal had also been overcome. Smyly and Young (1924) had discovered that the Chinese hamster (Cricetulus griseus) was highly susceptible to infection with L. donovani and these animals were available in India for experimental purposes. The only confirmatory proof required was actual transmission of kala-azar either to a susceptible animal or the human volunteer by the bites of the infected flies, and it was thought that this final proof would not be long in being established. The Indian Kala-Azar Commission between the years 1927-31 carried out a large number of transmission experiments with susceptible hamsters as well as human volunteers but obtained only one positive result in a hamster. Although this is not claimed to be conclusive evidence of sandfly transmission it certainly helps to strengthen the case against the insect and it is hoped that the work that is being done at present by the Kala-Azar Enquiry in Calcutta will soon produce tangible results.

From the foregoing discussion it will be evident that the phlebotomus is an important transmitter of disease having to its credit not less than three major and a few minor diseases. The charge with regard to papatasi fever has been thoroughly proved, the charges with reference to kala-azar and oriental sore will in all probability be substantiated very soon, and as for the others of lesser importance the phlebotomus may well be considered as being still under suspicion. From this one may conclude that the diseases which the phlebotomus carry, have a fairly world wide distribution and are the cause of a large amount of morbidity and a relatively lesser amount of mortality amongst the human race, and that it is a dangerous insect well deserving of a severe and critical scrutiny by all medical men interested either in the prevention or cure of disease.

DIFFICULT SURGICAL PROBLEMS IN CHILDREN.*

BY

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I

SWELLING ON THE CHEEK.

Acute swellings need not be considered as they are easy to diagnose. There would be a history of injury, insect bite, infection etc.

Swellings of some duration offer material of interest. They are painless and such patients are brought by their parents for disfigurement. A follicular odontome or dentigerous cyst has to be borne in mind. A periodental cyst is usually due to a chronic apical abscess. A dentigerous cyst is a very interesting phenomenon. It expands the upper or the lower jaw; if in the upper jaw there may be a nasal obstruction on the same side. The child presents an enlargement of face on one side. Some necessarily black teeth are seen at the corresponding alveolar arch which the average dentist pulls out. These teeth come away very easily because they being diciduous teeth, should come away in any case. Diagnosis should not be difficult in these days of multiplying X-ray institutes. The permanent tooth which may be a canine or an incisor is beautifully seen in the X-ray plate. I have known a radiologist miss such a tooth in his report, diagnosing a mycloma. Such a tooth may be found obliquely, horizontally or irregularly set in the jaw. Once the cystwall could be definitely marked off from the antral cavity. In a girl aged nine years the left upper canine was found at the level of the roof of the corresponding antrum. The eyeball did not show bulging. This should serve as a very useful point in differentiating from a malignant growth. The walls of these cysts are sometimes so hard that they may not give eggshell-crackling and they especially if growing rapidly may clinically simulate sarcoma. I know at least one case where a child had a cyst in the lower jaw which was thought to be a sarcoma by some surgeons.

These cysts do very well if they are operated upon from inside the mouth. Oral infection can be kept in abeyance by every day careful plugging and repeatedly curetting the wall. Healing is very slow but personal efforts at dressing and cleansing the cavity would ultimately result in a cure. Diathermy should be discouraged as it may produce necrosis and a persistent sinus.

* Specially contributed to the "Antiseptic."

Cysting swellings in the cheek arising from Parotid duct obstruction is a definite group. Stones in the Parotid Gland are very rare. The nature of obstruction is not known. Perhaps it may be due to insufficient canalisation of Steno's duct. In this respect, it may bear close analogy with congenital Hydromphrosis.

Such cystic swellings in the cheek may be Sebaceous, Dermoid, Lymphatic or cystic Hygroma.

Parotid duct cyst has been once seen by us. It was the size of a lemon on the right side of a girl nine years old. The skin was freely moveable over it. It was drained by Mr. A. K. Dalal and a thin watery fluid escaped. This was sent to Physiological laboratory where salivary enzyme was detected. Enucleation of the cyst wall should have invariably resulted in a parotid sinus and a Facial Palsy. The healing was protracted but complete.

"THE PROBLEM OF 'CONFLICT' IN SCHOOLGOING CHILDREN."*

BY

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It has been almost a daily experience with us in the Mental Hospital, Bangalore, to see some child or other regarded as a mental defective by its parents, brought for examination and advice. In many cases it is only too true that the child's metal development has been poor but in not a few cases the child possesses more than average intelligence, and the causes for the symptom complex complained of by the parent-unruliness, sudden outbursts of temper, fits of crying, destructiveness, purposeless lying and stealing, impossibility of control at home or at school must be sought for elsewhere than in mental deficiency. It is increasingly being recognised that these symptoms are merely symbolical representation of mental conflicts, or solutions of conflicts in children analogous to that in adults, and it is my object in the present paper to discuss in brief the nature and scope of such conflicts, with a few suggestions as regards prophylaxis and treatment.

At the outset, it may not be irrelevant to touch briefly upon some salient points in developmental psychology. Starting with the baby in its mother's uterus, every function, eating, breathing etc., being performed by its mother, the child can have no unfulfilled desires and is in a state of unconditioned omnipotence. But from the moment of birth when the child has to eat, breathe, and perform

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many other functions for itself, desire begins to play a large part in the baby's psychology. The discrepancy between desire and attainment however, is not very great because all through the first months and even years the family try to provide for all the child's needs, but the discrepancy tends constantly to increase as the days go by, and as the growing individual comes to touch reality at more and more numerous points. This conflict between desire and attainment is at the very basis of mental life and the fundamental fact of consciousness. The problem of discrepancy between desire and attainment may be solved in one of two ways; either by actually undertaking to do the various things which will bring about a satisfaction of the desire or by merely phantasying that it is satisfied. In the second case the effort necessary is avoided by wish fulfilling fantasies. Growing up however involves the relinquishment of immediate satisfaction, or more technically its repression and the substitution of a more complicated proceedure.

One of the earliest problems presented by this conflict with which the infant must busy itself is learning to distinguish itself from the environment. It takes a long series of experiments to effect this distinction between the "I" and the "not I," a series in which numerous painful contacts with the objects surrounding it play a considerable part. In the course of learning this distinction however, there goes along a tendency to give personal qualities, its own, to every object until experiment proves this unwarranted, and so the child's interest is led from person to person, in a manner that makes for an ever increasing knowledge of the environment, objective and personal. This tendency to personification which is maximum in the doll period, later sinks into back-ground but is never wholly given up; at least it comes up prominently in the state of anger when the individual will break furniture, dishes etc., as an expression of his feelings. The most important of the objects which arrests the attention of the child is its parents. Hence we see the importance of happy homes and well balanced parents because on the first experiences of love and affection the child's all future love experiences will be shaped.

The result of mental functioning in the most general terms is to adapt the individual to his environment, each acting and reacting on the other. The most complete mental life is that which adjusts the individual both passively and actively to the conditions of his environment. A mental disorder represents a lack of capacity for efficient adjustment. And inasmuch as it is the individual's adjustment to others who make up his social environment that constitutes his reactions as essentially human, it is disorder at this level of adjustment, the social level, that characterises the mental disorder. The psychosis is the resultant, the issue for the time being of a conflict.

The conflict is between unsatisfied instructive desires, which have been repressed into the unconscious, and the conscious voluntarily directed tendencies of the individual. There are several hypotheses to account for the psychosis on the basis of such a conflict. I will briefly indicate them.

Freud believes that the tendencies that are repressed in the unconscious are directed by the pleasure pain motive to conduct and the pleasure sought is of a sexual nature. In the course of development certain forms of pleasure seeking have received undue emphasis. The child has for some reason continued to derive pleasure from some activity, such as nakedness, sexual curiosity, inflicting pain on self or others, sexual yearnings for the parent of the opposite sex, pleasure in its own sensations, love of children most like itself or of the same sex, activities which should as sources of pleasure have been relegated to their historic past, and that therefore the necessity for deriving pleasure in this way is greater than normal and tends constantly to find expression. Such ways of pleasure seeking are incompatible with the conscious ideals and so can come into expression only in disguise. The way in which these tendencies are satisfied and the disguises they assume produce the symptoms of the psychosis.

Jung on the other hand emphasises the importance of the present difficulties, to the impossibility of the libido or sex energy finding an adequate outlet because of some obstacles. The libido is thus blocked in its efforts to attach itself to a suitable object and the conflict brings into the foreground ways of using the libido which had been efficient in the past.

Adler however deals more with the self preservative instinct rather than with the sexual, and sees in the psychosis a conflict due to the desire to dominate which is frustrated by a feeling of inferiority based upon some inherent organic defect. A man, say who has a defect of speech feels that that is his weak point and he therefore directs a surplus of energy to overcome it. He may thus become a great speaker or he may break down with a psychosis, or develop an oversensitiveness, thinking that people always refer to it etc.

Kempf has more recently correlated all these factors relating to the unconscious tendencies to conduct based upon unsatisfied instinctive desires and has laid particular emphasis upon the study of the motor sets of the individual paths of discharge—emotional, ideational muscular, glandular etc., for the different instinctive tendencies. His approach to the problem tends to completely eliminate the distinction between the mind and body. Emotions, muscular tensions etc., are understood as belonging to actions which are not permitted to occur. The symptoms of neurosis and the psychosis are thus a symbolic language of the unsatisfied instinctive desires translated into motor sets which are appropriate for fulfilling them, but when

owing to their conflict with the conscious personality are not permitted to gain their ends by being translated into conduct.

With successes in adjustment we have nothing to do, with the failures we must deal. In the efforts at adjustment the mental functions develop many ways of reaction. They defend the individual from disagreeable experiences often by making him forget them, that is by thrusting them into the unconscious. For certain experiences that cannot be adequately adjusted to, certain compensatory reactions are evolved. The young woman disappointed in love is compensated by a life devoted to the service of others, or perhaps if the conflict is too severe she may develop a wish fulfilling delerium and thus by a vicarious psychosis cause all her desires to be realised, or if the conflict reaches deeper, she may deteriorate and develop delusions which express compensations more or less adequate in proportion to the degree of mental disintegration.

I have found it necessary to dwell at length upon these well known facts of abnormal psychology to make what follows clearer. The mechanism of successes and failures of adjustment with resulting neurosis holds good in children. The results of failure may manifest themselves in many ways. Compulsive tendencies, which usually hide a sense of guilt, fits of destructiveness and temper which show clearly the child's tendency for personification, pathological lying and stealing, stealing especially being symbolic of distorted sex knowledge, these are some of the commonest. If the child is sensitive and be bullied by youngsters at school or by older children at home or is only too conscious of an inherent organic defect, in its helplessness it may develop fantastic delusions of strength and power as a means of compensation. The problem of the only child is often more complicated. Want of suitable companions to play with, too much indulgence by fond parents may make it selfish with an extraordinary sense of its importance, and later when it has to knock at hard realities of life, tragedies are only too common. Day dreaming is a very common symptom of a neurotic child. It is flight from reality in which all of us at times indulge. But what is a luxury in a healthy individual becomes an obsession with neurotic children. Their thoughts and personifications have a power over them which the adult can rarely conceive. The story of Cinderella and most of the Fairy Tales fascinate the children because instinctively they feel that their inmost wishes are gratified in them. Professor Blueler one of the greatest of modern psychologists characterises the type of thinking manifested in day-dreams "Autistic thinking" meaning thereby purposeless thinking which characterises the thinking of dementia præcox. He quotes instances to show that the dangers of day-dreaming are so grave that they lead even to murder.

When a child is first brought before us the first procedure is to examine it completely for its physical and mental development, a general idea of its intelligence being thereby gauged. After excluding mental deficiency and physical causes for the mental trouble one has to concentrate on the purely psychological issues involved in the disorder. We have developed a series of questions which embrace many fields of child's psychological activity and the answers are examined carefully to obtain an insight into its personality.

Anna Freud one of the foremost exponents of child analysis has perfected a technic which is bound to be of interest to every one, She summarises the difficulties as attendant on the hostility with which the child regards any stranger; to establish confidence with the child she gives an account of how in many cases she had to actually play with children, entering into their interests, help them in every way till they came to regard her with trust and have faith in her powers. This depends on the tact of the individual and there seems to be a great scope for trained women psychologits in this direction.

The adult is a mature and independent being. The child, an immature and dependent one. The decision to be treated never arises from the little patient but always from others in his environment. The child is not asked for its consent. Even if the question be asked, he would have no possible way of forming an opinion or finding an answer. The physician is a stranger, the illness in many cases is not the concern of the child. He himself often feels nothing of the trouble; only his environment suffers under his symptoms or burst of temper. Thus every thing is lacking in the situation of the child, which seems indispensable to that of the adult, insight to his illness, the voluntary decision, and the will to be cured.

So far as the actual methods of analysis go free association and interpretation of dreams, special stress being laid on day-dreams are the methods of choice. Dream interpretation is simpler in the case of children than in adults. Their experiences being fewer, environmental content being smaller, there is not the same degree of distortion we find in adult dreams. Mostly they take the form of wish fulfilment dreams. A child crying itself to sleep for want of a chocolate might dream of a great entertainment in a palace where it was the guest of honour. A child longing for a doll might dream of a trip with Santa Claus or Father Christmas. A child with a sense of guilt or of desire for revenge for a fancied wrong might dream of terrific punishments such as burning alive, chopping off of limbs and so on. The content of the dream depends upon incidents familiar to the child, the nature of it however depending upon the psychical make up at that time.

But even when the associations of the child dreamer are missing an interpretation is often possible inspite of this. It is so much easier to know the situation of the child, to over see the day's experience, and the number of persons in his environment is ever so much small. Often one may venture to insert the missing association in the interpretation from one's own knowledge of the situation.

It is usually very easy to induce children, whose confidence has been won in other fields to tell their day dreams. The simplest type would be the day-dream as a reaction following some experience of the day. For example, a little dreamer, struggling for supremacy against her brothers and sisters reacted with the following dream. "I wish I had never been born. I want to die. Sometimes I imagine I am dead and born again into the world as an animal or a dog. But if I come back as a doll, then I know to whom I want to belong, to a little girl who is very nice and good. The little girl would love me best of all." It may be suggestive to add that her brothers and sisters against whom her jealousy was most strongly directed, were younger than she.

A complicated second type is the continued day-dream. One such depicts a teacher who punishes and strikes the children. Finally the children surround and overpower the teacher and bit him to death. Beneath all these fantasies lies the defence and revenge for a severe threat.

But voluntary associations in a child are the exception rather than the rule. This lack of voluntary association has caused all who have thus far occupied themselves with child analysis to seek some sort of substitute. Madame Klein replaces the association technic of the adult with the play technic of the child. She starts with the supposition that action is more suitable for the child than speech. For that reason she places a number of small toys, in short a miniature world at his disposal, and thereby creates for him the possibility of acting in this play word. All actions which the child carries out in this way she places on a par with the spoken associations of the adult, and accompanies them with interpretations. This toy environment is managable and subject to the will of the child. It may thus carry out all its actions upon it, which in the actual world because of their superior magnitude and strength in contrast to the child, remain limited to a fantasy existence.

But unfortunately Madame Klein endeavours to discover behind every playful action the symbolic value which lies at its root, which is not always warranted. There is a good deal of controversy about her interpretations. I have no personal experience of this method. I wish that some of you who are engaged in kindergarten work may take up this problem seriously, as it is wellworth the

trouble. Another analytical method is to examine any orderly irregularity in the drawings of neurotic children. It is suggested by some that these children tend to emphasise one particular aspect of the physiological make up dependent on their moods.

Those of you who have read 'This Freedom' by Hutchinson will have noticed how the home crumbles down like a pack of cards where system is substituted for love. A child is keenly sensitive to kindness, and where there is judicious sympathy and discipline, and where the child feels that it is loved by its parents, in that home are all the elements for the happy and healthy development, mental and physical of the child.

It must have been within the experience of most of you that many children feel shame and disgust only in the presence of elders. The ordinary excretory processess do not evoke any disgust in them unless when an adult is near. This sense of shame often depends on the respect which the parent induces in the child. If one of the parents is a drunkard, or an idiot, if there are prepetual quarrels at home, or if any of the elders is continuously being ill-treated or joked about, the child loses all respect for him. If in addition this person is responsible for the upbringing of the child, the result is sure to be a failure.

So for as Indian conditions go, preference to one child by its parents, usually the male child to the female, the mother-in-law trouble at home reacting on the children, intense bigotry and orthodoxy or in the other extreme the loose principles of the mother, intense poverty, continuous bickering or quarrels at home, superadded to a sensitive temperament form the nucleus of future neurosis which may even take the form of dementia or regression. The jealousy factor is so great in children, that at the present moment we have a girl patient in the hospital in whom presumably the cause of neurosis is the intense attachment between her father and mother and her fantasy of being neglected in consequence.

Judicious home and school discipline, a knowledge of biological principles which prevents the certain accumalation of distorted sex-knowledge will go a long way to prevent neurosis in children.

In almost all cases of neurosis, it is advisable to have the child isolated from its parents, and investigate and treat the case at first hand. It means considerable patience and time on the part of the physician or the teacher. But the result is almost always worth the effort.

PRESCHOOL CHILD.

By

Dr. Mrs. Anna Thomas

(Continued from Page 174, March, 1932)

7. Preschool Wives and Widows.

In this connection it may be added that the social customs in India are such that owing to prevalence of the custom of early marriage, the census of 1921 shows that 5% of the preschool girls are married and that there are 96,929 preschool girl widows in India. This is a situation peculiar to India. The plight of the widows are so pitiable. While they should be playing with toys, they are doomed for perpetual widowhood by the customs of society. They are doomed to stay in the corners of their homes where light and air are denied to them and even their near and dear relations look upon them as unlucky human wretches whose very appearance is considered as an ill omen. How can these grow up to the perfect standard? Under the tight grip of a custom from the clutches of which they have no way to escape those preschool girl widows live a miserable existence and the preschool girl wives are hastened into maternity duties before they are fit physiologically and mentally and consequently they give birth to weak and sickly children to suffer the same fate as theirs.

8. Want of proper attention and proper facultties to prevennt or treat common infantile diseases.

The preschool children are depending on others for care and food and owing to the ignorance of those who look after them, the children are subjected to many diseases and owing to want of facilities to check those diseases, many children grow up weak and unhealthy and thus do not reach the proper standard when parents fail at any vital point in his care, he has no way of protecting himself from the results of such failure. We see physical and mental defects in children all around us. We do not recognize them so quickly in our own children because of our affection and of our having grown accustomed to them. In the United States, an examination of 22 million school children revealed the fact that 19 million were defective physically and of these 18 millions were defective for *preventable* reasons. These defects did not suddenly develop within the school gates. They began a long way down the road. If these children were properly attended to during preschool periods at least the 15 millions could have been saved as they were defective for preventable reasons. The results of studies that have been made of

2,000 children from 1 to 6 years of age from 1914 to 1917 at some of the Baby health stations by Sobel of the New York Bureau of Child Hygiene are given as follows:—

Mental defects	...	1 per cent.
Tuberculosis	...	3 do.
Defective hearing	...	2 do.
Defective sight	...	4 do.
Diseased tonsils and adenoids	...	25 do.
Defective nasal breathing	...	25 do.
Orthopedic defects (deformities)	...	7 do.
Defective nutrition	...	27 do.

From 8 to 16 percent examined were found to have defects of teeth only and from 58 to 66 per cent had general defects. This study showed that defects must be recognized and corrected in the preschool period.

Therefore, eye defects, nose throat and ear defects, defects of the bones, spines and joints, defects of teeth, defects of nutrition, faulty postures, defects of nervous system etc., must be carefully noted during the preschool period and attended to then and there.

The child is growing, his bones and his tissues of all kinds, his organs and his various systems are all in a stage of growth with its consequent instability and the little child is therefore much more readily "pushed off the tract" than the grown up whose consititution has become more stable. Certain tissues are especially susceptible, such as the lymphatic glands (such as those in the neck) the bones and the respiratory tract. Tonsils are one of the most commonly known causes of infection. Some children are easily susceptible to changes in temperature. Sudden chilling of their body is dangerous. But these various factors are all valuable indications of trouble if it exists. Any interruption of growth of any kind must be carefully noticed. Eternal vigilance is the price of life in our modern world. The same symptoms can end in a varied assortment of complications so that our neigubour's child is no guide for us and even what our own child did a month ago may be a false leader. In the preschool child, that is just after a year and a half, respiratory diseases predominate. Acute infectious fevers, especially diphtheria, are common. Owing to this same instability in the instance of the nervous system, children of this age have various symptoms of irritability, night terrors, bad dreams, convulsions and other exaggerated nervous conditions. Improper feeding generally brings about Rickets in the 2nd year. Dr. Josephine Baker has proved by statistics that 81 per cent. of deaths in United States are resulting from contagious diseases and 85 per cent. of these diseases from contagious diseases occur under 5

years of age, i.e., among preschool children. Therefore great care ought to be taken not to expose the preschool child to contagious diseases. The common ailments of the preschool children are the following, viz., broncho pneumonia, diphtheria, measles, whooping cough, influenza, cold, tonsillitis, cereberospinal meningitis, tuberculosis, mumps, chickenpox, infantile paralysis, adenoid growths tape worms, and diseases of the heart. Eminent doctors have declared as follows regarding these diseases. Broncho—pneumonia is the most frequent disease of children under 4 years of age and during this early period causes more deaths than any other disease of childhood. Thousands of healthy persons carry diphtheria germs in their throats and mouths and they transmit germs on common drinking cups, etc., and therefore separate cups must be used for children and the children must be protected from kissing on the mouth by grown-ups. Measles is among the first ten causes of death during the preschool age of the child and causes more deaths than typhoid, small-pox, etc., and 80 per cent. of the measles deaths occur under 5 years. Whooping cough is as prevalent, as contagious and as dangerous as measles and this disease is highly fatal under 6 years. Colds and influenza, if neglected, bring about dangerous complications and they are also contagious. Tuberculosis among children under 5 years claim the highest death rate. Tuberculosis of the bones begins most frequently from the 3rd to 8th year, and there is special liability to Tuberculous Meningitis during the 1st five years. Apart from the diseases mentioned above, children suffer from many congenital diseases, but they could be detected in infancy and will make the preschool child unhealthy if not treated in infancy. The preschool child up to the age of 4 generally suffers by swallowing things picked up from the floor, but though this is not a disease is more dangerous than illness sometimes and therefore that bad habit should be stopped from the very beginning. Owing to negligence, indifference and illiteracy of the parents, many preschool children do not grow up to the proper standard as they are not protected from infectious diseases and not scientifically treated during the attack of common ailments such as those mentioned above which carry away the preschool children in large numbers.

9. Want of Scientific Mental Training.

Dr. Cameron has said that the character and health of a child depend upon his management. To give a proper mental training to the preschool child, one should know a great deal of the child he deals with and his psychology. Prof. Stanley Hall says that the key-note of education of to-day is 'Paidocentricism' which means we have to study the habits and needs of the children we have to deal with. Many parents have neither the time to watch a little child as

he experiments during this period nor knowledge to understand or interpret the signs seen. Consequently, the parent's mistake or lack of knowledge falls heavily upon the child. Many parents spoil the health and proper mental development of their children by dealing with the preschool children without adequately studying the conditions of the children themselves. Many people think they are teaching a child obedience, by threats, punishments, deprivations or sheer physical overcoming of the child's will. A too rigid discipline which makes a child dull and subservient or later in adolescence, it might lead to open rebellion and dislike of his parents. As physical habits of food, play and sleep are taught best at this period, so the mental and moral habits must be a part of his early education. If we want to understand our child's behaviour, we must know all we can of the make up of his body and of the way in which all the organs of his body work, the way his mind works and the way in which he is influenced by other people. In watching him we learn that he behaves this way or that way in response to stimulus. He does things instinctively and by force of habits. These two devices are the thinks we are handling when we love, train, discipline, spoil, preach to or quarrel with, feed, put to sleep or bathe our little child. At this early age, the nervous system is plastic and therefore we can mould and change the brain cells, that there are certain proper times for bringing certain brain centres into action and that if the time passes without being used wisely by us those centres may remain unused for ever and our child be the poorer. Many people think that if they do not strike a child over the head with a club, they avoid injury to his brains. Little do they realise that any injury to the central organ of his mind will stop all currents of energy running over his nerve wires and thus there will be no response to stimulation. Obedience is perhaps the most necessary habit for a child to form if he has to live in a world of law and order, with any peace and happiness. His first lessons in obeying are the child's first knowledge of adapting himself to others and it is the basis of his moral life, of the life he must lead in the world around him. Self-control is another great fundamental habit that these early years must bring and it is dependant upon the parents. The cherishing of a little child's spirit of loyalty is the best groundwork for forming his habits, physical, mental and moral. The habits of service ought to be encouraged in the preschool child. Children differ widely in the various appeals necessary to interest them. Some need the intellectual, some the emotional but all little children need an atmosphere of love, trust and harmony. Miss Brownlu, the Principal of La Grange School of Tobdo, Ohio, maintains from practical experience that "it is just as feasible to teach children justice and kindness as to teach them arithmetic and geography." If a child is

persistently naughty, it might be wise first to investigate our own attitude towards it. Some parents give 'bluff' promises to their children and the unfortunate result is the child is trained to be untruthful. Some children scream for everything and the unwise parents yield. The result is the child will show a strong determination to have his own way by wilful disobedience, crying, holding the breath. But a decided victory on the part of the parent for the first screaming will often practically end the matter. The victory on the part of the child means constant trouble to father, all his teachers, and perhaps he may find himself in the end in the reformatory or penetentiary. Some parents exact obedience from the children by creating fear of ghost etc. This is very bad and will eventually make the child a coward. Some parents correct the mistake of a child in the presence of others. A child is full of pride and strongly resents this. Dr. Hector Cameron says "with younger children of nursery age, it was not so much what was said to them that mattered, but what was said of them and even thought of them. It was not enough to avoid discussion of his failings in a child's hearing; we should be quick to encourage him by making helpful suggestions. He must be presented with the reputation of the good qualities we wished him to acquire. In general, the greatert virtue a mother could possess was optimism. All good habits ought to be formed during the preschool period of the child, because good habits are easier formed at that age when his mind is most impressionable. If we can succeed in getting the child to follow a safe and sure schedule during the preschool age, there is a pretty good chance for his keeping it. Refusal to eat, refusal to go to sleep, always waiting to do the opposite of what was expected—such negativism is a symptom of unrest caught from the unrestful atmosphere of the house. Children of such temparament must be gently and carefully treated. By want of scientific and careful mental training during the preschool age, many children do not grow up to the proper standard. The causes of idiocy, imbecility, delinquency and laziness noticed in school children could have been checked or erased if those children were properly handled during the preschool age. For example, the psychologist declares that stealing in the boys in later days is the result of starving the instinct of ownership in the preschool period. Psychology teaches that every child is our individual with individual intelligence quotient with an individual capacity and most important of all with individual mental limitations. But in addition to the mental limitations which govern the progress of a child there are many physical disabilities which interfere with smooth and rapid acquisition of knowledge. No children are naturally lazy. It is said laziness will creep in children as a connective measure to eye-strain. This kind

of laziness is wholly protective assumed sub-consciously to give relief to the eye-strain. Such a child will not complain of eye sight and therefore it requires vigilance to diagnose the cause of laziness. Lazines may be due to various other causes and it is not advisable to burden the child with more work without correcting the cause for such laziness. Laziness in any case is a symptom and every case should be considered as being a manifestation of some underlying abnormal condition. Some parents and teachers unwisely attempt to change human nature by caning or punishing instead of changing the method of approaching the child through the heart rather than "breaking into" his mind by force. A child's faults are often the results of the unnatural way he is treated during preschool period.

WHAT ARE THE REMEDIES FOR THE FAILURE?

While dealing with the reasons why the preschool child does not attain the proper standard, remedies for the particular reasons noted are then and there given. Under this heading we have to find out the general remedies. The proper care of the preschool child bears the same relation to the school child as prenatal care bears to the infant. Having passed through the danger of infancy with the protection against environment afforded by his mother's milk, the child is suddenly forced to face new dangers and a wider environment dependent upon his increased activities. The child in the womb gets attention at the Prenatal clinics and the infant gets attention at the infant-welfare centres or post-natal clinics. The school child gets attention at the medical inspection in schools. Thus we see in India, the preschool child has been neglected as all attention was bestowed on the infants and the school children. Thanks to the efforts of Dr. Young, Mrs. Bhore and others in inviting the attention of the delegates who attended the recent Maternity—Child Welfare Conference held in Delhi to the importance of this subject. The preschool child is now left in the hands of the ignorant and mostly illiterate parents. In England, America, and other Western countries attention was paid on the preschool children and efforts in that direction were found very successful. By the establishment of preschool nurseries, a link was established between Infant Welfare Centres and Schools and therefore a child coming under the care of the Welfare centre and preschool nursery could enter a school with a regular history and record about his life, which will be of immense help to the teacher and medical Inspector. Before dealing with the special remedy as far as the preschool child is concerned, a general remedy has to be suggested. The economic condition of the parents ought to be ameliorated and their illiteracy should be removed. Every baby has a right to demand trained parents and a healthy environment. It is

strange that the State has no law against an ignorant parent controlling the child's life every day and every night, while the State controls by law, the Doctor who treats the child and the teacher who teaches him by prescribing certain standards of efficiency for them. So long as legislation is impossible in such matter under existing social conditions, the State and the nation have to educate the parents by intelligent and organized propaganda work teaching the parents to bring up their children as healthy and strong citizens. Secretary Hoover says "our responsibility for children is based not above our human aspirations, but it is also based upon the necessity to secure physical, mental and moral health and the economic and social progress of a nation. Every child that is delinquent in body, education or character is a charge upon the whole community as a whole and a menace to the community itself. The children are the army with which we march to progress." Therefore as an auxilliary to the Infant Welfare work speical centres ought to be organized to teach "Mother-Craft" and "Father Craft" to parents by giving particular lessons on scientifically rearing children. As a continuation of the existing Infant Welfare work Play and Nursery Schools for the Preschool Children ought to be started and a record should be maintained for every child that passes through those centres and which record should be presented to the school when the child enters the school for academic education. One eminent authority on Child Welfare work in America writes that "Infant welfare has been relatively standardised and its value in positive health-promotion work shown because the babies that have received care from such centres exhibits the effects in a very marked superiority over the others in strength and resistance they have in meeting the diseases incident to childhood. The health centres are doing well to extend their supervision of the health of the Baby to children from 2 to 6 years of age." The aims of the Nursery Schools as published by the Board of Education in England are as follows :—"A Nursery School or Class is an Institution providing for the care and training of young children aged from 2 to 5 years whose attendance at such a Nursery is necessary or desirable for their health, physical and mental development. It has therefore a twofold function : first, the close personal care and medical supervision of the individual child, involving provision for its comfort, rest and suitable nourishment and secondly, definite training—bodily, mental and social—involving the cultivation of good habits in the widest sense, under the guidance and oversight of a skilled and intelligent teacher and the orderly association of children of various ages in common games and occupations. The child is first and foremost a growing organism. the Nursery School will, on the one hand liberate the growing child from the influence of environ-

ment of constitution which retards, confines and distorts its growth and, on the other hand, will stimulate and direct its growth. It is much more than a place for 'minding' children. The need for Nursery Schools is greatest in the most congested areas of larger towns. The influences which an adequate supply of efficiently managed Nursery Schools could exercise upon both children and parents in such areas can hardly be over-estimated." The above is quoted from the Child Welfare Movement in England by Dr. J.E.L. Clayford. The Nursery School is not intended to teach reading and writing, but it has much to do in the way of preparing the preschool children for the Elementary School work. Adequate provision is made in Nursery Schools in England for the development of motor and sensory experience, sense training and social training. A child in England is not only its parent's care but also that of the nation. In New York, the supervisor of the Walf Nurseries is under the Governmental authorities. The Nurseries have been well standardised and have become a powerful force in the community. The National Kindergarten and Elementary College and the Mary Crave Nursery of Chicago have worked out a co-operative plan whereby the kindergarten students direct the occupations and play of the nursery children with gratifying results. The latest effort for the preschool child by public is the Habit Clinic formed at Massachussets Psycopathic Hospital for the purpose of giving to the preschool child a chance to form the proper habits of mind and body during the golden period. Thus a new type of school devoted exclusively to build up the bodies of preschool children and to safeguard them from the infection of tubercular germs or other fell diseases is established all over the progressive Western countries and thereby they check human misery and add to the comfort and happiness of thousands of parents and their children. The Mill and Factory Laws, the Day Nurseries for the children of the working classes, the Nursery Schools and Houses for convalescent children, compulsory school education and facilities both from an education and health point of view provided in the West are all based on producing a healthy generation in the present, and the future. It is reported that not less than 160,000 houses were built on modern lines last year in that country and many more are still being built. Bad housing is considered a disgrace to modern civilization, the Government does a good deal because it is backed up by public opinion and by the active propaganda of public spirited ladies and gentlemen. Therefore in India the community and the State should co-operate for opening enough number of Day Nursery Centres for the preschool children. Recently, Faber and Ritter of the Department of Pediatrics in the Leland Standford Junior University School of Medicine, after

careful investigation of various groups of children have declared that for the normal boys, improved environment, improved personal hygiene and health and general education would have made useful citizenship possible and taken as a whole, the physical defects were those common to any group of children whose hygiene has been long neglected. It will also be profitable to establish a Child Welfare Research Station at Delhi on the model of the Iowa Child Welfare Research Station with a preschool Laboratory for observation of the habits and faculties of little children, where opportunities may be given to child-welfare workers all over the country to attend for a prescribed period and get scientific training to deal with the preschool children considering the scarcity of the well-trained Indian workers in this line, it will be advantageous to induce philanthropic rulers or leaders of the country to organize a scholarship fund in the name of Lady Willingdon the noble wife of our popular Viceroy to send an Indian Lady Medical Practitioner who is enthusiastic in the Child-Welfare work, every year, or once in two years to go to Europe and America to take special training in the handling of the preschool children. Enthusiastic voluntary work coupled with adequate State support to do all that can be possible for the preschool child by organizing the various remedies suggested above will always ensure a glorious future for the Indian Nation.

CONCLUSION.

If India is truly striving for a place of equality among the civilised nations of the world, she has to build up a generation of healthier and finer children than there have been ever before. Because, it is a disgrace to any civilized nation when a large number of their young people die premature or grow feeble and frail and thus "live in death" every day. A strong healthy race of men and women will do far more to make a country great and prosperous than a race of weaklings and therefore if India wants a healthy nation, she must look after her Preschool children and check all kinds of waste of national health by adopting effective scientific preventive measures.

May Providence richly bless all those who are engaged in the furtherance of this great cause of India's children and may our India be roused to work whole-heartedly for this great National cause so that Mother India may always become proud of her who will be strong, healthy and vigorous mentally, morally and physically is the humble prayer of my humble self who has been devoting herself for this cause in her own humble way for several years now.

Cases & Comments.

THE TROUBLES OF A RARE CASE OF PATENT URACHUS

BY

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It is not often that one comes across cases of abnormalities of the bladder. Of those that are described are .—

1. Absence of bladder
2. Ectopic vessica
3. Diverticula of the bladder.

Amongst the diverticula one variety is in the bladder and the other variety in the Urachus. In the Urachus it can be in the form of a blind diverticula of the bladder or in the form of a fistula communicating the bladder with the umbilicus.

Developmentally, the Urachus is the upper part of the urinary bladder. The bladder itself is formed partly from the entodermal cloaca and partly from the Wolffian ducts. The cloaca divides into two parts—the dorsal and the ventral. The dorsal portion subsequently forms the rectum while the ventral becomes subdivided into three portions :—

1. An anterio-vesico-urethral portion
2. An intermediate narrow channel, the pelvic portion.
3. A posterior phallic portion.

The vesico-urethral portion absorbs the ends of the Wolffian ducts and gives rise to the Trigone of the bladder and part of the prostatic portion. The remainder of the vesico-urethral portion forms the body of the bladder and part of the prostatic urethra. The apex of the vesico-urethral portion is prolonged to the umbilicus as a narrow canal. Later on in the development of the embryo the canal becomes obliterated and forms the median umbilical ligament called the Urachus. Even before birth the lumen of the Urachus becomes obliterated and at birth it lies as a fibrous cord extending upwards from the fundus of the bladder to the umbilicus. The peritoneum gets folded over this ligament and forms the median umbilical fold. To put it briefly the Urachus is the fibrous embryonic vestige extending from the umbilicus to the apex of the fundus of the bladder and is made up of a fold of peritoneum encasing the obliterated canal of the apex of the vesico-urethral portion of the

cloaca from which the urinary bladder and its channels are develpoed in the embryo.

After birth the obliterated urachus serves as a suspension cord of the fundus of the bladder. Physiologically its function after birth is negligible. Rarely the Urachus is patent even after birth. Any obstruction to the discharge of urine per urethra might be a causative factor for this abnormal condition or it might be a developmental defect. In either case this sort of non-obliteration gives rise to a series of distressing symptoms.

The case under report is one of patent Urachus—the urinary bladder communicating with outside both ways, through the umbilicus and through the urethra. This sort of easy access to the bladder through the umbilicus has been the causative factor in setting up an infection of the bladder. Normally the bladder is infected either through the urethra or through the ureters from the kidneys. But in this case the umbilicus being a convenient place for the micro-organisms to lodge, has been responsible for the recurrent attacks of cystitis commencing from childhood and persisting all through adolescence to the time of surgical intervention. The fusiform shape of the Urachus with a constriction at the apex of the fundus of the bladder, which on contraction of the muscle of the bladder when empty and acting like a valve shuts out the Urachal cavity from the bladder. The urine encased in the urachal cavity becomes decomposed on account of stagnation and sets up an inflammation, and infection, the channel for infection being the pin point opening in the umbilicus. When the bladder again gets distended with urine, the constriction at the junction of the bladder and urachus relaxes, admitting regurgitation of the infected urachian urine with the sterile urine in the bladder, thus causing cystitis and all the attendant symptoms with which we are all so familiar. This sort of vicious circle has been going on for the past twenty years.

Case History.

Patient :—Mr. V. Male.—Aged 21 years.
Complaint :—Discharge of fluid, like urine through umbilicus.
Duration :—From infancy.

Family history :—Parents alive and well—Brothers and sisters, all younger to him, died immediately after birth.

Past history :—During the fifth month of his infancy, his parents noticed a discharge of pale looking fluid, smelling like urine, through the umbilicus. Sometimes it used to be more profuse and sometimes less and at times almost non-existent. It was during one of these profuse attacks a medical man, prescribed a powder for dusting and the opening closed up for a number of years. About two years ago,

a thin fluid discharge again began to appear through the umbilicus. It used to come on spasmodically once or twice in about four or five days. During the intervals of attack the umbilicus looked as though puckered in. During the days of discharge, the patient had frequent micturition and burning sensation at the tip of the penis at the time of micturition. He also had a heavy feeling and dull pain in the lower abdomen.

The patient sought admission in the Clinic on 1-6-1930 for treatment. On admission no history of any specific infection was found There were no traces of gonorrhœa or syphilis. His urethra was normal. A soft rubber catheter went in very easily. There was no discharge. There was a little oozing at the umbilicus. In all other respects the patient was healthy and normal.

Urine.—

Specific gravity	...	1014
Reaction	...	Acid
Sugar	...	Nil
Albumin	...	Nil
Pus cells	...	Present
Staphylo and B. Coli	...	Present in moderate quantity.

Treatment.—He was given injections of B. Coli and Staphylo—vaccines and internally Hexamine by mouth. He improved, there was less pain during micturition, the urine came on less frequently and the heaviness in the lower abdomen diminished appreciably. After ten days treatment his urine was again examined and was found to contain B. Coli and stray Staphylococcus. He was put on alkaline mixture and six injections of vaccines were given. Although the symptoms abated, the urine was not completely free from organisms. He was advised radical surgical operation at that stage. Since I was then undergoing incarceration at the Central Jail, Vellore, the patient was inclined to postpone operative treatment.

Present History.—The patient has had three attacks since he discontinued treatment last year. It was the same old story every time. He was admitted in my Clinic on the 23rd November 1931.

He is a healthy looking youth. Habits regular. Tongue clean; no pyorrhoea; Bowels regular.

Physical examination.

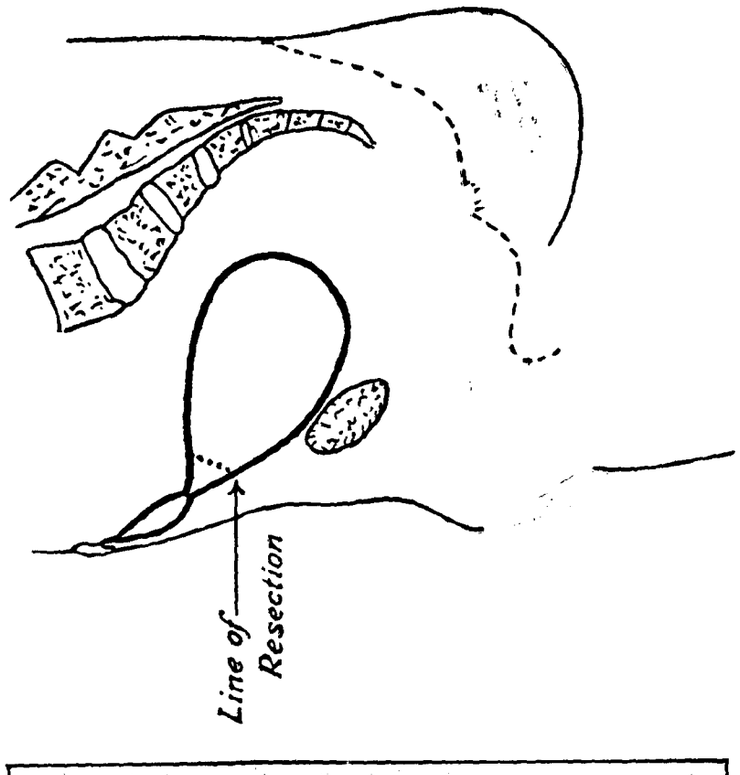
Heart and Circulation :—	...	Normal
Repiratory System :—	...	Normal
Digestive System :—	...	Normal
Liver and Spleen :—	...	No enlargement
Bladder :—	...	No distention

Urine :—Sp. Gr. ... 1016
Reaction ... Acid
Albumin ... Nil
Sugar ... Nil
Pus cells ... Present
B. Coli ... Numerous
Staphylo ... Numerous
Blood :— ... Normal
Blood pressure :— ... 120 systolic
80 diastolic

Skiagram of a 20% Sodium Bromide filled bladder :—Shows a pear shaped instead of more or less spherical normal shadow, communicating with a fusiform shadow of filled Urachus.

Treatment. Preliminary treatment :— A course of six injections of intravenous Cylotropine were given at intervals of three days. Alkaline mixture was given by mouth and the bladder was washed with Condy's fluid. During the course of the treatment the urine was examined almost every day. There was diminution in the number of pus cells, B. Coli and Staphylo. Bladder washing was again done with Mercurochrome solution in place of Condy's fluid. Even after three washings the bladder cavity could not be made bacteriologically sterile but the organisms had diminished considerably.

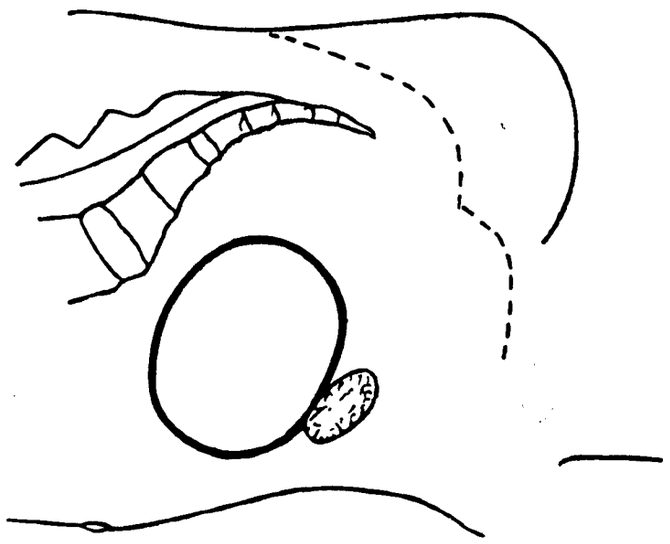
Operation :—The operation was done partly under infiltration anaesthesia and partly under chloroform. The bladder was distended with mercurochrome solution before operation. A median incision was made extending from the Symphisis pubis to the umbilicus terminating in a circular incision around the opening in the umbilicus. The abdominal wall was opened in the usual way. After the skin and deep fascia were dissected up the opening in the umbilicus was clamped by means of artery forceps and any regurgitation of the bladder fluid into the field of operation was thus effectively prevented. The Urachus was dissected out and the elongated portion of the apex of the bladder. After reflecting the visceral peritoneum for over an inch and a half over the upper and posterior wall of the bladder, the apex of the bladder was caught by two gastro-jejunostomy clamps and cut through between the clamps. The bladder rent was sutured water-tight in the usual way of bladder stitching. A continuous drain by means of rubber catheter in the bladder was used for four days subsequent to the operation to relieve the tension on the bladder stitches. The abdominal wound was closed up layer by layer and the skin incision approximated by Mitchel clips.



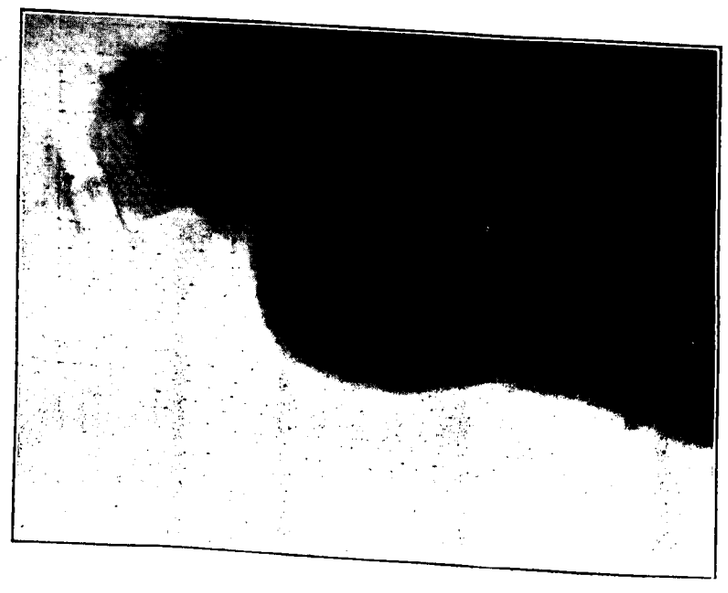
Schematic diagram of the altered shape of the bladder.

20 % Sodium Bromide filled bladder—before operation. Note sphincter like constriction at the junction of bladder and urachus.

To face page 246.



Schematic diagram of the contour of bladder after operation.



Filled bladder after operation showing normal contour.

To face page 247.

The post-operative course has been entirely uneventful. The skin clips were removed on the eighth day and the patient was discharged from the clinic on the 18th day. He has had three intravenous injections of urotropine during the post-operative period. The day previous to his discharge from the clinic the urine was examined with the following result :—

Sp. Gr.	...	1014
Reaction	...	Slightly alkaline, phosphates present.
Albumin	...	Nil
Sugar	...	Nil
Pus cells	...	Nil
Micro-organisms	...	Nil

As far as the condition of the bladder goes, it has been made bacteriologically sterile. The focus of infection has all along been the distended Urachus with a valve-like opening and after that was removed, the bladder condition became normal.

To sum up :—

1. A patent urachus is always a potential source of infection and is liable to give trouble even after 19 years.
2. The trouble it gives rise to is cystitis—the symptoms varying with the nature and presence of micro-organisms especially the B. Coli group.
3. It is next to impossible to get rid of the infection even after vigorous treatment both local and general.
4. Surgical operation offers the only chance of cure.
5. The operation could be performed safely provided the peritoneum is saved from infection by proper dissection and careful technique.
6. The wound in the bladder unites well without trouble provided the general rule for suturing hollow viscera is adopted—namely the stitches should pass through the muscular and sub-mucous layers without running through the mucus membrane and that the serous layer should be united to serous layers.
7. A continuous drain in the urethra for a few days relieves any possible tension in the stitches by keeping the bladder empty and the walls relaxed.
8. The bladder could be rendered sterile by this procedure.
9. The general contour of the bladder is altered by this condition as shown in the diagram 1 and X-ray plate 1.
10. Restoration to its normal shape after the operation as shown in diagram 2 and X-ray plate 2.

NOTES ON A CASE OF KALA-AZAR.

By

Dr. S. K. Basu, M. B..

Chaukamba, Benares City.

Patient—a Hindu child of about 3 years had been suffering from fever for over 6 months and was diagnosed and treated as Infantile cirrhosis of the liver. When I first saw the case the condition of the child was as follows: Temperature ranging between 96 to 103·6; Pulse 150 per minute, soft, regular.

Liver.—Almost reaching the iliac crest in the iliac region. Two fingers above the umbilicus in the umbilical region.

Spleen.—Unless carefully palpated was not distinguishable from liver enlargement, the two meeting together a little to the left of the middle line. One could feel the line of separation only after a very careful palpation. Both liver and spleen indurated.

Tongue.—Fairly clean. Appetite: not bad. Constipation: moderate anaemia and emaciation. Conjunctiva: tinged lemon yellow. Otorrhoea (recent) Stool: yellow, rarely soft. Having seen a very similiar case previously and reflecting upon the character of the temperature and other conditions, I diagnosed the case to be one of K. A. and asked the guardian to get the blood examined. The blood examination report showed Dr. Chopra's test for K.A. positive (1 in 20) and the blood picture also was that of K.A. Treatment was accordingly begun with I.M. injections of "Neo-stibosan" 693B (Bayer) in graduated doses every 5th day, and the temperature began to subside gradually. On going over the temperature chart, I noticed that the temperature came down gradually from the day of the injection till the end of the 3rd day but began to rise slowly from the morning of the 4th day. So I decided to space the injections a day earlier *i.e.*, every 4th day instead of every 5th day, and accordingly I gave the 4th injection of 1 grm. 'Neo-stibosan' on the 4th day and the temperature responded nicely and did not rise beyond 98·8 on the 3rd day after the injection. Owing to some superstitions on the part of the patient's relatives, the day for the next injectition was deferred for a couple of days and as a result, temperature went up above 101°F. when the 6th injection of 1 grm of 'Neo-stibosan' was given with very favourable effect upon the temperature. I had noticed slight œdema of the legs and ascites after the 4th injection although the fever gradually subsided, the conjunctival tinge was gone, the liver and spleen were diminished and the patient was better in every other

respect. So the injections were continued and the following mixture was given :—

℞

Diuretin	grs vi
Digifortis	ms xv
Mag. Sulph	drs iii
Sodi. Sulph	drs iii
Aqua Chloroform	ozs ii.

ft. mist. Put 6 marks. T. D. S.

But in spite of the profuse and frequent urination (20-24 times per diem) produced by the above mixture, when I saw the case after the 6th injection, the dropsy increased considerably and I had to call in a senior physician in consultation but in spite of our best efforts, the case went on from bad to worse and the guardian of the child decided to take the child to Patna for treatment, where he died soon after arrival there. The remarkable feature of the case was the enormous enlargement of the liver making the enlargement of the spleen proportionately small and the presence of sugar in the urine. I am inclined to think that in children of three years and below, K.A. affects the liver more than the spleen.

Can this be a case of Infantile cirrhosis of the liver inspite of the fact that the temperature subsided so nicely with Antimony compound injections, and the blood test (Chopra's Urea-stibamine test) and the blood picture pointed towards K.A.?

TWO INTERESTING CASES.

BY

Capt., Shyam Lal B.A., M.B.,

Civil Surgeon, Ballia

1. A case of congenital mal-formation.

A female child two months old was brought to the Female Hospital, Ballia, for treatment. The child was weak and poorly nourished, abdomen distended.

History.—On birth no anus was found, a meconium-like black substance came out from the vaginal opening.

Present condition.—Anal opening was found absent, external genital organs normal, hymen present, but yellowish faecal matter was found coming out from a small opening in the posterior wall of the vagina behind the hymen.

This was a case of malformation of rectum and anus, anus was absent and the rectum opened by a small narrow fistulous opening into the vagina.

One has frequent chances of coming across cases of absence of rectal opening in one's practice, but cases of the type recorded above are rare.

2. A CASE OF VICARIOUS MENSTRUATION.

A Hindu female aged 24 years admitted in the Female Hospital, Ballia on 12-2-32.

Complaint.—Pain in the lower part of abdomen and thighs.

Duration :—2 years and 3 months.

On examination uterus was found somewhat retroverted for which she was being treated in the Female Hospital. During the course of her treatment she mentioned that her periods were irregular and instead of passing blood from the private parts during the course of periods she had been passing blood from the anus.

Duration of this trouble.—One year and a half.

History.—She had her first menses on 15th July 1926, and was married on 24th May 1926. Since the beginning of the periods, menses been more or less regular. Two years and a half ago she gave birth to a male child who is still living and is healthy. The delivery was somewhat tedious. For one year after the delivery she had no periods. However one year after, menses began, but were irregular, sometimes coming on 20 or 25 days after and sometimes after one month and a half.

The curious thing was that during the periods she instead of passing blood through private parts passed blood from anus.

Examination on 25th and 26th February 1932 revealed nothing particular. Uterus was found slightly retroverted and somewhat deflected towards the left. Examination of the rectum with speculum revealed nothing, no piles or other cause of bleeding found. The case was one of vicarious menstruation in which the bleeding instead of occurring from the uterus as in normal cases, occured from other cavities or sides, in the present case from the rectum.

GASTRO ENTERITIS IN MALARIA

BY

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Vaniyambadi, North Arcot.

Malaria is a very common disease and we cannot but think of it in the case of each and every patient that we come across in our daily clinic. In fact it is the first disease that we have to eliminate from others in arriving at a definite conclusion in diagnosis. It may be complicated by or associated with any disease a man is liable to suffer from. It does not materially alter the course of the original disease but may mask its signs and symptoms.

We have noticed that surgical operations, injuries, childbirth, diseases of lungs, heart, kidneys, etc. are likely to cause the development of malaria in individuals who were previously infected with it, but showed no signs of it till then. There appears to be a tendency for the parasites to produce symptoms of malarial fever in addition to those of the disease that coexists. There are very many malarial parasite carriers who are enjoying good health without showing any sign or symptom of the disease. It appears to be more than likely that these persons have acquired a certain amount of immunity to this disease and when by any disease or factor the power of resistance is lowered or decreased the parasites take the advantage to produce the characteristic fever.

In many cases simple malaria passes away under suitable treatment without producing any complication. Generally any complication is easily accounted for but sometimes it is so peculiar and rare that we cannot easily comprehend the cause of it unless either by chance or by a regular and painful search.

I have had the privilege of treating a large number of patients in this hospital. I have found that the common complaints made by the malarial patients generally are gastralgia, distension of the abdomen, entritis, diarrhœa, dysentery and very rarely bleeding from the stomach. Many of the above symptoms, I consider, are the complications of malaria and we often over-look them or take them very lightly, consequently, these are not described in our text books.

I shall here cite a few peculiar cases that have come under my notice and the total number of patients treated in the past 5 years.

Year	No. of patients treated	Malarial patients.
1926	26173.	3096.
'27	33816.	3052.
'28	28346.	2374.
'29	29807.	2452.
'30	34415.	2920.
Total.	152557.	13894.

Case No. 1. Miss G.S. aged about 14 years, was getting fever accompanied with rigors, every alternate day and followed by vomiting of blood from a few ounces to about half a pint in quantity at a time. She was a chronic malarial subject. One thing that was peculiar in this case was that she would vomit blood soon after the "Chill-stage" of the fever. On the day that I saw her, she was cold and clammy, pulse quick and thready, tongue dry, respiration about 38 a minute and shallow, temperature about 97·2 and her mouth full

of blood. Her spleen was slightly palpable. Her heart, liver and kidneys negative. Her monthly course I was told was regular and normal. I at first suspected gastric ulcer but there were no other signs and symptoms of it. Her blood was positive to B. Tertian malarial parasites. In the way of treatment I gave her 7 grains of Quinine by vein and 7 grains T.I.D. by mouth for a few days. Since after the 2nd day of the intravenous injection her fever and vomiting of blood disappeared. After about four months she came to me for treatment for the same troubles and quinine only cured her again. This time she continued taking quinine for about a month and since then she was quite free from the disease.

Case No. 2. Mrs. A.B. Muslim, aged about 28 years returned from Mecca, last year. She contracted malarial fever in the Arabian desert and returned to Bombay with high fever. In steamer she developed dysenteric-diarrhœa, and was passing 15-20 motions a day. She was detained in a hospital at Bombay for treatment. Suspecting it to be a case of tropical dysentery 9 emitine and 2 anti-dysenteric serum injections were given to her with no beneficial results. Later on she developed acute nephritis with marked anuria, albuminuria and oedema. As a result of continuous high fever and starvation she went down-hill rapidly. When she was very bad one night she was given a hypodermic Saline Injection in the lateral part of her right thigh, with the result that the whole lateral portion of the skin sloughed away leaving a big and dirty ulcer which took a considerably long time to heal. She was brought here i.e. her native place against medical advice. On the day I saw her she was very bad and her heart was failing, pulse was nearly imperceptible. Her liver was enlarged by about 3 fingers breadth, her spleen was palpable, heart very much dilated, lungs were full of moist rales. Oedema of the lower extremity present. Her stools were negative to Entamoeba histolitica and her blood positive to M.T. Malarial parasites. As she refused to take any more injection I was compelled to give quinine by mouth only with a little Dover's powder. Within a week her temperature disappeared, œdema decreased and her motions stopped altogether.

Case No. 3. Abdull Sattar, aged about 19 years was getting repeated attacks of malarial fever for about 3 months. The peculiarity in this case was distension of abdomen and acute pain in the appendicular region. I suspected acute appendicitis and 3 days prior to the operation, I examined his blood and found B. Malarial parasites. 7 grains of Quinine by vein and 15 grains by mouth educed his fever on the 2nd day. For a week more he was under my treatment and never again he had the rise of temperature. The distension of abdomen and appendicular pain disappeared. No operation was performed.

Case No 4. Mastan, aged about 24 years had fever and dysentery for about 23 days. Emetine and Kurchibine were tried elsewhere with no good results. He was passing about 10-18 motions a day and his temperature was ranging between 100-105. His stools were negative to Entamoeba histolytica and blood positive to B. Tertian malarial parasites. 7 grains of quinine with a little Dover's powder reduced his temperature and the number of motions on about the 5th day.

From the above cases we see that Quinine acted specifically in all cases in whom malarial parasites were found, irrespective of the main symptoms and signs exhibited. We come across such cases practically every day. Diarrhoea, dysentery and distension of abdomen with pain are the most common complaints made by the patients. Chronic gastritis is a painful accompaniment of chronic malaria, leading perhaps to Gastric Ulcers.

The stomach contents are not altered in ordinary cases of Malaria, but on the other hand, in malignant and more especially in pernicious malaria the acidity is probably decreased giving rise to imperfect digestion whether this condition is due to toxins or to the direct action of the parasites on the stomach walls, is not yet understood. In some cases there is a certain amount of inflammation in the stomach and intestines, resulting in haemorrhage sometimes in sufficient quantity to cause alarm, as in Case No. 1.

In pernicious malaria the number of parasites present in the vital organs is great, as for instance in skin. The pigment deposited in it is sufficient enough to give a pigmented and brownish-yellow appearance. In these skin coloured cases we often find a certain amount of itching sensation present. This is probably the result of the irritation of the free pigment deposited. It may be that the same pigment produces irritation, hyperaemia and inflammation in delicate membranes of stomach and intestines. Much would be made easy if we could know whether this pigment is irritant or not. Here is a point that requires serious discussion and careful investigation. I am only pointing out the probability and much remains to be done before arriving at definite conclusions.

Though such a lot has been done to add to our imperfect knowledge of this disease, there are very many things yet to be learnt by our daily efforts. We must admit that our knowledge about this malady is very poor and limited and the mortality continues to be very great, which is I suppose mostly due to the innumerable quacks and hakims who administer drugs that have no direct action and lethal bearing on the malarial parasites. Some try their mystic power and some who still believe in the humoral causes of the disease—there being 4 humours, the blood, the phlegm, the gas and the yellow

bile—like the originators of the theory viz. Hippocrates and Galen,—have their own explanation and ways of treatment. Many of our patients are afraid of the "needles" of the present day doctors and they would rather submit themselves to be scarred with hot irons of a quack than take injections that would cure them.

BETA—NAPHTHOL IN BACILLARY DYSENTERY.

By

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Mancotta T. E. Hospital, Dibrugarh, Assam.

In the February 1927 issue of the Medical Review of Reviews a note appeared on the treatment of bacillary dysentery with beta-naphthol from which the following portion is abstracted :—

℞

Beta-naphthol	Grs. 5.
Ol. Olivae	Dr. 1.
„ Cinnamomi	M. 1.
Mucilage	Q. S.
Aqua Menth Pip	ad oz. 1.
Mft. Mist.....t. d.	

In mild cases 2 days' treatment is enough, while in severe and more chronic cases a 4 days' course is usually required. (Cure 80% without a grain of ipecac or emetine.)

Since the above came to my notice, I have treated half a dozen cases strictly following the formula. In treating all of my cases, except one, I had to depend upon clinical diagnosis. A specimen of stool of this particular case was sent for a bacteriological examination with positive result. It was at first treated with bacteriophage, but as there was a relapse shortly afterwards, I deemed it proper to try beta-nahpthol which had the desired effect and prevented a further relapse. Two other cases which were in the beginning treated with beta-naphthol relapsed within two months. So they were suspected to have mixed infection and were given a course of emetine injections each and the result was satisfactory. The other three cases were purely treated with betanaphthol without any relapse.

In conclusion, I request my fellow-brethren to give a fair trial to this easily available remedy whenever any opportunity favours them in preference to costly medicines—mostly proprietary drugs—and in view of the fact that a great majority of the Indian people is proverbially poor and can hardly afford to pay for the same.

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THE ART OF ANAESTHESIA.

The administration of a general anaesthetic is not a responsibility to be undertaken lightly or carelessly. It is an art. To drop ether on an open mask or to hold an inhaler in position appears simple enough, but it must never be forgot that the patient is being led down to the border-line between life and death and any mistake may be attended with fatal results. The margin of error is not large.

The principal drugs used for the induction and maintenance of anaesthesia—Ether, Chloroform, Ethylchloride and Nitrous oxide—are all volatile and can be given by inhalation, which method has therefore come to be generally used. Ether, Hedenol, Paraldehyde, alcohol, avertin have all been injected, but they have never been considered as rivals to the volatile anaesthetics.

The whole art of safe anaesthesia consists in carefully adhering to some cardinal points, disregard of which will sooner or later lead to disaster. (1) The first thing is that one must be absolutely certain that the right drug is being given. Nothing must be taken on trust. Fatalities have occurred due to the administration of chloroform under the impression that it is Ether and vice versa. Oxygen, Carbon-dioxide and Nitrous oxide have been given one for another with fatal results. (2) The second great point is to avoid overdosage. Signs of deep anaesthesia resemble light narcosis that it often puzzles the novice. In all cases of doubt, the golden rule is to stop and wait for a few minutes when indications will enable one to get one's bearings. This danger should always be borne in mind especially with chloroform. (3) The condition of the patient must always be

carefully observed from start to finish. Diabetics should have preliminary treatment with insulin, as acidosis and coma may otherwise result. Pregnant women who are toxaemic should also avoid chloroform. Gas and oxygen is the safest anaesthetic for these. Open Ether is also useful. Old people with a bad bronchitic chest do well with less chloroform and more of Gas—oxygen—ether mixture. Heart murmurs are of little importance provided that the lesion is compensated. We would like, in this connection, to remind our readers of two elementary precautions-- to look for false teeth and to be wary of focal infections. A good rule for the beginner is to decline all cases of doubtful fitness, and confine his attentions, in the best interests of all concerned to those in good health. When the patient is under the effects of the anaesthetic every breath should be seen, heard or felt and the pulse and colour should be constantly watched. (4) A free airway must be maintained. It is not our purpose to discuss in detail the many causes which interfere with the breathing of an unconscious patient. It is sufficient to remember that if the airway is kept freely open and if the respiration is unimpeded, at least half of the anaesthetists' troubles will never occur. (5) The fifth point worth remembering is that chloroform must never be given to a patient in the sitting posture, that ether must not be given near a naked light, red-hot cautery or any electrical apparatus producing a spark and that Nitrous oxide must not be given in the presence of respiratory obstruction.

We shall next consider the essentials of a well conducted anaesthesia. The first important essential is that it must abolish pain entirely. The anaesthesia must next give the maxmium of safety and be as pleasant as possible, both at the time and afterwards. In this connection it must be noted that to the practitioners the administration of an anaesthetic is merely a part of the day's work, but to the patient it is an ordeal which is awaited with apprehension or even terror. The process should therefore, in all humanity, be made as pleasant as possible. There is another and even more important reason. It has been conclusively proved that nervous patients who struggle and resist when going under, are always badly anaesthetised. The explanation for this lies in the psychological beginning having a physiological contamination. Fear is always accompanied by excessive out pouring of adrenalin and this is the cause of the harmful effects of fright and excitement. The third essential is that the anaesthesia must fit in with the surgeon's requirements as regards duration, immobility and muscular relaxation. The surgeon, as all anaesthetists must know, is a necessary and unavoidable evil, who has to be considered in many ways. The depth of anaesthesia, and the position of the patient have both to be regulated to suit his con-

venience. For all abdominal and Pelvic surgery deep anaesthesia with smooth, shallow breathing is the ideal. Straining and muscular rigidity are anathema to the surgeon especially when opening the abdomen and when closing it. In a perfect anaesthesia the surgeon should be able to pick up and stitch the peritoneum without interference from the viscera, which are lying quietly below and without putting in a swab to restrain them.

Coming to the individual anaesthetics, Nitrous oxide gives a rapid and pleasant induction and a quick recovery with very slight after effects. It is non-toxic and very safe and is not inflammable. It is especially suited to short operations upto half a minute in duration such as opening abscesses, extraction of teeth and removal of adherent dressings. It is unsuited for long operations in adults requiring immobility and relaxation and for operations where respiration may be obstructed such as in enlarged tonsils or goitres, tonsillar abscesses and cardiovascular disease. In pregnancy it should be used very cautiously as it may injure the foetus. In America and other places these disadvantages are to a certain extent removed by the use of gas with oxygen or ether.

Ethyl chloride is a gas at ordinary temperatures but is stored under pressure and sold in ampoules or in glass bottles fitted with trigger controlled spray nozzles as a colorless liquid with an ethereal smell. It also can be given either in the sitting or lying posture and gives a rapid and pleasant induction with quick recovery and very slight after—effects. It is also very safe and no special apparatus is needed. It is very suitable and convenient for the minor surgery of general practice. Its disadvantages are that it is unsuitable for prolonged administration and immobility and muscular relaxation cannot be guaranteed and it should not be given to patients with a tendency to spasms of the larynx as in whooping cough, rickets, tetany or calcium deficiency disease.

Ether is a clear, colorless mobile liquid which is very highly inflammable. It may be given in either lying or sitting position. It is suitable for a very large percentage of cases especially for those where there is considerable shock. It is very useful for Toxaemia cases like eclampsia and diabetes and also in septic and collapsed cases. It can be given as a routine anaesthetic for all cases requiring longer or deeper narcosis than that of gas or Ethyl chloride. It however has certain disadvantages. It is especially unsuited for chesty subjects suffering from Bronchitis and Tubereulosis. It is very inflammable and should never be used where a cautery or any electrical apparatus likely to give sparks is being used.

Chloroform is a clear, colorless mobile liquid which is non-inflammable. It must never be given in the sitting posture. It gives

a quiet, pleasant, peaceful anaesthesia with good relaxation and with no tendency to any severe pulmonary complication afterwards. But it has certain dangers. It is unsuited for toxaemic cases and also for septic or badly shocked patients. Sudden heart failure both in the early stages as a result of adrenalinaemia and consequent ventricular fibrillation and in the later stages due to overdosage is common. Delayed chloroform poisoning is a rare but fatal condition. To obviate some of these difficulties chloroform was mixed with ether in various proportions A.C.E. (Alcohol 1; chloroform 2; ether 3 parts) C.E. (chlorofom 2; ether 3 parts) and C_1 E_{16} are well known mixtures.

It will not be out of place here to study the phenomena of anaesthesia. The bodily changes produced by anaesthetics are of great importance inasmuch as they enable the administrator to guage the depth of narcosis and prevent either inadequate anaesthesia or dangerous overdosage. They are usually divided into four degrees but it must be remembered that these stages are not clearly demarcated. In a gas administration they should merge into each other so smoothly and gradually that it is difficult to say exactly where one ends and the next begins. The first degree is the stage of disordered consciousness and anæthesia. In this stage subjective symptoms are more prominent than objective signs. This first stage is much the same with all anaesthetics the main difference being in duration. While in gas and ethyl chloride it is very short twenty to forty seconds, in ether and chloroform it lasts upto two minutes. The second degree is the stage of excitement or of unconscious reflex activity. The third degree is the degree of surgical anaesthesia which can be light with partial relaxation and suitable for non-abdominal operations or deep with complete relaxation and suitable for abdominal and pelvic surgery. The fourth degree is one which should never be attained—the stage of overdose, where the breathing becomes shallower and irregular, the pulse weaker and rapid, the blood pressure falls, finally resulting in death.

A reference to Avertin will not be out of place at this stage. Avertin (Tribromethyl-alcohol) is a solid substance but is sold for convenience as a solution containing 1 gr. in each cubic centimetre. It is given by rectal injection in strict proportion to the body weight of the patient. The calculated amount (·1 gram per kilogram) is dissolved in distilled water at 40°C to form a 3 per cent solution. The rectum is washed out 12 hours before the operation and Morphine and Atropine or scopolamine injected an hour before. The avertin is then slowly run into rectum through a funnel and catheter. The patient becomes sleepy in a few minutes and is ready for operation in about half an hour. It is sometimes advantageous to

supplement the action of avertin by a small amount of gas and oxygen or ether. Sometimes also the fractional administration method is employed. Here the standard dose of 0·1 gm. per kilo is first given and if sensitiveness to pain persists, after quarter of an hour 0·025 gm per kilo is added. A third dose of 0·025 gms may be given if required, but the maximum of 0·15 gm must never be exceeded.

The last variety of anaesthesia to be described will be the Local and Regional anaesthesia. The analgesic properties of certain substances when applied locally or injected into the tissues is taken advantage of in carrying out operative procedures painlessly and without general anaesthesia. Freezing is one method of local anaesthesia. Here a small localised area of anaesthesia may be produced by directing a spray of ethyl chloride on the skin or mucous membrane. The application of cocaine to mucous membrane is another method. Local infiltration with novocain is a third method. Field block anaesthesia is a fourth method. Here a wall of anaesthesia is created round the part to be operated by infiltrating the entire thickness of soft tissues with novacain solution. In this way the nerves to the operation area are blocked. Nerve block anaesthesia is the last method. In this variety injection is made into or around a nerve and it may be into the sub-arachnoid space (spinal anaesthesia) or into the tissues around the sympathetic nerve ganglia (splanchnic anaesthesia) or around the nerves as they leave vertebral column (Paravertebral anaesthesia). Of these spinal anaesthesia is the one commonly practised and requires special mention. In this form of anaesthesia one of the three drugs is used—Novocaine (2 c.c. of 5% in normal saline). stovaine (2 c.c. of stovaine 5% and glucose 5%) or Pitkins soln (either as 1 c.c. of Ephedrine hydrochloride 5% and Novocaine 1% or as Spinocaine in 2 c. c. of which is contained Novocaine 200 mgms. trychnine sulphate 2.2 mgm. in a special solvent consisting of 14·5% alcohol and sterile water with the addition of an amylo-prolamin combination). The details of the technique for special injection can be had from any text book. Special anaesthesia can be given to patients unsuited for a general anaesthetic and for all chesty subjects. It gives excellent relaxation and obviates vomiting. It is however unsuited for children and its use is limited to operations below the umbilicus, the anaesthesia can only be relied on for an hour and it may be useless in fat and nervous patients.

In concluding we would once again stress the importance of considering anaesthesia as an art and of the necessity for the anaesthetist to be thorough and uptodate and to remember that in his hands lies the success of the surgeon and the life of the patient. It has not been possible for us to deal at greater length on this very

important subject. We have only attempted to touch the general principles. For anyone who wishes to dive deeper we would heartily recommend the book on "Anaesthesia" by Sykes (in the Modern Treatment series and published by Jonathan Cape) from which we have taken the materials for this short article.

Gleanings from Medical Press.

SURGERY.

A Case of Dupuytren's Contracture.—In June, 1930, I was consulted by a single woman of 65 on account of the condition of her right hand. The ring finger was bent so much that the tip was level with the base and the little finger was flexed to about half this extent, the other fingers being normal. Neither of the affected fingers could be straightened, and two small tender nodules could be felt beneath the skin to the ulnar side of the middle of the palm. The patient attributed her condition to the use of a chopper in cutting wood. It was a typical Dupuytren's contracture. Wishing to try the effect of local treatment before advising operation, I prescribed a thorough inunction of the palm twice daily with ung. iodi. denigrescens. After about 10 days the treatment had to be suspended on account of a local dermatitis of the palm with the formation of blisters. Movement was already returning in the affected fingers, and after a second course of inunction, which also resulted in blisters, they could be fully extended. The nodules in the palm had also nearly disappeared, but the grip, however, was weak, and when flexing all the fingers to form a fist the tips would not quite touch the hand. Subsequent exercises have rendered the hand quite useful, and in appearance perfectly normal. The patient states that she still notices a slight weakness of grip when wringing clothes. It seems to me doubtful whether the improvement noted in this case was due to the iodine absorbed, or to the hyperæmia which accompanied the dermatitis. In either case it suggests a possible method of treatment for a troublesome condition—W. A. Trumper, M.R.C.S., Eng., in *The Lancet*, 1931, 2: 17.—*The Canadian Medl. Association.*

Hypertrophic Pyloric Stenosis in Adults.—G. L. Laporte and T. Scholz (Med. Jour. and Record, Nov. 4th, 1931, Pp. 442) consider this disease a localised form of linitis plastica—a condition of the stomach characterized by a marked increase in the connective tissue elements of the submucosa and the subserosa with subsequent

thickening of the gastric wall, corresponding dimunition of the lumen, and hypertrophy of the muscularis. Metastases do not occur. This process usually starts at the pylorus; it may remain confined to it, thus giving an anatomical picture similar to that of congenital pyloric stenosis, or it may spread until it gradually involves the entire stomach, producing the anatomical picture of diffuse gastric fibrocarcinoma. The diffuse form as in now recognised to be invariably malignant, though a very careful and extended search for small dessiminated nests of cancer cells is often necessary. With regard to the localized form the question of malignancy is still undecided, but its interest is academic, since all cases end fatally unless an operation is undertaken. The authors report the case of a man, aged 48 years, seen in January, 1930, for "pain in the stomach". The onset seven years previously, had been marked by vomiting, slight eructation, occasional heart burn, and epigastric pain. These attacks lasted about seven to ten days at a time with periods of complete relief for weeks and even months. The condition became worse in October, 1929, when the pain was more intense, and came on two or three hours after meals; it was not relieved by food. There was some loss of weight, but the clinical examination was negative. The pathological findings were: HC1, 80; total acidity, 190; no blood sarcine, or Boas. Oppler bacilli in the stomach contents; and a negative wasserman reaction. The stomach was comparatively small, as viewed radiologically, with almost complete obliteration of the distal two or three inches, but it emptied well within six hours' limit. There was marked gastric hyperperistalsis. At the operation in February, 1930, a rather a soft tumour was found, which looked benign; there was no gross lymph-node involvement. The tumour was resected and a short loop gastro entrostomy was performed. Pathologically, the condition was typical, with no evidence of malignancy, and the paiient regained full health, (*B.M.J.*) Jan. 30, 1932.

Impeticgo Contagiosa Neonatorum:—Irwin Rubell, M.D., Chicago (*Arch. Ped.*, Dec., 1931, Vol. XLVIII, No. 12). The lesions observed in our series grouped themselves into three types: The bullous, the pustular and a third group for which the term sebaceous would seem appropriate. All three types of lesions frequently occurred simultaneously in the same patient.

Labhardt and Wallart, in their cases of congenital impetigo, obtained the staphylococcus, and occasionally the streptococcus or diplococcus.

The course in most cases was benign and the outcome favorable. However, complications may occur and be very severe or even fatal.

One patient suffering from an extensive pemphigoid eruption with much exfoliation, developed bronchopneumonia to which he succumbed.

Prophylaxis: All babies received a daily sponge with 1,5000 bichloride of mercury which was rinsed off with clear water within two minutes. The scales were washed daily with a 1: 1000 bichloride. In order to avoid excessive handling and possible contamination of babies' clothes, the following technic was carried out: Upon delivery from the laundry, the various articles of infants' wear were sorted into separate bundles, labelled and sent through the operating room sterilizers. The nurses would then use sterile forceps to remove the articles needed. No one was permitted into the nursery except the nurses actually on duty there. Attending physicians had to wear gowns and gloves when examining infants.

A baby once removed from the well nursery was never returned there. A mother suffering from an infection of any kind was transferred to another floor, and the baby removed to the children's ward. Visitors to the mothers were limited to two a day and were excluded from the room when the baby was brought in for nursing. Overcrowding of the nursery was an important factor in spreading the infection.

Treatment: In response to a questionnaire, the Society of the Lying-In-Hospital of New York states that exposures to the alpine sun-lamp gave the most satisfactory results. In the author's cases, the lesions were opened as soon as discovered, touched up with 95 per cent. alcohol, followed by the application of two per cent. ammoniated mercury ointment.—*Minnesota Medicine.*

Diagnostic Inaccuracy In Tuberculosis of Bone, Joint and Bursa.—Joseph E. Milgram, Iowa City (Journal A. M. A., July 25, 1931), reviews the clinical impressions that he obtained in the study of 142 cases of tuberculosis of bone, joint and bursa which were verified in the pathologic laboratory. Although the classic picture emphasizes particularly the insidious onset of joint tuberculosis, in 29.5 per cent. of the cases the onset was sudden. As to the relation of trauma, nothing definite could be adjudged save that the appearance of symptoms after an unusally severe injury followed often by prolonged incapacity for labor was a frequent observation. Thirty-nine, or 26.7 per cent, of the entire group stated that the pain was severe at the onset whereas 103, or 73.2 per cent. presented the classic picture of mild to absent pain. The insistence on mild pain in "closed tuberculosis" is not justified in this material. The variability of signs was marked, and statistical analysis of factors such as the degree of muscle spasm, muscle trophy and functional limitation

was not found possible. The anatomic location often modified signs considerably. So, diaphyseal lesions exhibited considerable local tenderness. Thus, synovial lesions confined to distant recesses of the knee joint presented minimal signs, whereas articular destructions of function was characterized by obvious limitations of function on examination. The rapidity of appearance and the extend of abscess of formation for examble depended not only on fascial plane relationships but also on the personal equation of the patient and on the organism, a quantity not susceptible of mathematical expression. The monarticular or local character of surgical tuberculosis appears to be overstressed in the classic description. In this series of proved cases thirty-five, or 32.7 per cent, presented two or more lesions. In several cases this was responsible for a diagnosis of chronic infectious arthritis, corrected only after biopsy. Roentgen examination, while usually helpful, was often the reverse. In fifty-three cases, such examination was of no aid or was misleading. The appearance of free bodies in the knee, or local bone formation in uncomplicated tuberculosis of the spine, for example, resulted erroneously in the diagnosis in the one case of esteochondritis dissecans, in the other case of hypertrophic arthritis. The value of a negative tuberculin test in excluding tuberculosis in a moderately ill subject appeared to be amply confirmed in the series. However, the necessity of not accepting a report of a single dose of tuberculin as a negative report was apparent. Of all the simple diagnostic aids, a carefully controlled and repeated intradermal tuberculin test, if negative, is of great value in excluding tuberculosis. Experienced pathologists frankly admit their frequent inability to recognize tuberculous tissue grossly, particularly in the early cases that are being submitted to operation in these years. Unless the typical tubercle or caseating focus is visible, the tissue is grossly indistinguishable from that in a half dozen other chronic inflammatory conditions. A frozen section helps as a rule. In the author series, it had not been utilized in many cases. But even with microscopic section, errors may frequently be made. In twelve cases of this series, section of a tissue removed for biopsy failed to reveal the nature of the lesion. "Chronic inflammation" alone could be diagnosed. Inoculation of guineapigs, however demonstrated the organism in each of these twelve cases. Microscopic study alone is not reliable. The isolation of the organism is only conclusive evidence.—*Journal of the Oklahoma State Medical Association.*

Amaurosis in Epidemic Encephalitis.—Irving J. Sands, New Yourk (Journal A. M. A., April 13. reports an unusual case of epidemic encephalitis. The diagnosis was arrived at after a careful evalution of all the presenting signs and symptoms. The definite history

of exposure to infection, the rapid onset of impairment of vision, the multiplicity of lesions and the changing signs and symptoms led to the conviction that the disease process was of an inflammatory, disseminated, irritative nature, rather than of neoplastic type. While the roentgenogram showed a calcified pinral shadow, Sands felt that he was not dealing with a true internal hydrocephalus caused possibly by an enlarged pineal gland. The presence of papilledema was an annoying symptom. It is not commenly encountered in cases of epidemic enbephalitis. The duration of amaurosis in Sands' patient makes the case particolarly unusual. She was totally blind for twelve days. The administration of typhoid vaccine in epidemic encephalitis, especially in the presence of only a slight elevation of tenperature, has proved helpful.—*J.O.S.M.A.*

Exfoliation of the Lens Capsule:—It has recently been established that chronic glaucoma in old people is sometimes caused by a degenerative change primarily affecting the anterior capsule of the crystaline lens. Vogt, of Zurich, first drew attention to the condition in 1925 as a result of his observations with the then recently introduced slit-lamp. Other observers, both of his own clinic and elsewhere, followed him, and now Dr. Mohamed Sobhy Bey, of the Cairo Opthalmological school publishes a paper on the subject. It appears that in certain cases in old people fluffy whity-blue masses are observed adherent to the pupillery border of the iris or loose in the anterior chamber. These were connected by Vogt with certain changes on the anterior surface of the lens only visible under strong illumination. The changes consist in a faintly opaque central disc and a more peripheral ring of finely granular opacity not continuous with the afore-mentioned disc but connected with it by faint radial lines. Nine out of the 12 cases observed by Vogt were glacomatous, and he put forward the hypothesis on clinical grounds that the observed deposits were not inflammatory but degenerated portions of the lens capsule which when they are present in the anterior chamber are apt to produce glaucoma by collecting in the angle and blocking it in the same way that the inflammatory deposits of cyclitis do. During the last six years a certain number of cases showing Vogt's syndrome have been published both from his own clinic and by observers elsewhere, but the subject is somewhat new to English readers. Dr. Sobhy who was himself a worker in Vogt's clinic at Zurich has collected over 20 cases seen either by himself or by others of the Egyptian ophthalmic school. He publishes pathological sections of two eyes excised for glaucoma which show the conditions to be just as Vogt described them. It is noteworthy that in one of them although the eye was excised for glaucoma the optic disc showed no typical glaucomatous cup. Exfoliation of the anterior capsule

appears to be not very rare in old people-17 per 1000 of those over 60 according to the figures of Zurich Eye clinic. Of these a considerable number, though by no means all are affected with glaucoma. It must therefore be recognised as a true occasional factor in causing that disease. *(Lancet. March, 12. 1932. pp. 581)*

Stricture of Rectum: Consideration of some unusual Causes.—Vernon C. David and C. A. Lauer, Chicago (Journal A.M.A., Jan. 2, 1932), state that lesions primarily involving the bowel wall are responsible for the great majority of strictures of the rectum, and scar tissue following operative trauma or inflammation heads the list. Post-operative stricture of the rectum most frequently follows operations for hemorrhoids. The removal of too great an amount of anal skin is the most important factor. Narrowing of the anal outlet following a Whitehead operation for hemorrhoids has been observed when the line of suture between the mucosa and skin has separated because of tension on the suture line or because of infection. Operations for fistula in ano may result in narrowing of the rectum, especially when large soft part defects are made and the entire sphincter muscle is divided. The point of the stricture is at the upper limit of the scar tissue in the bowel wall. Several strictures of the rectum have followed sloughing of the mucosa succeeded by contraction of the scar after the use of diathermy or injection treatment of hemorrhoids. Scar tissue resulting from injection is a very common cause of rectal stricture. Chronic granulomas of the rectum (usually called syphilis of the rectum) are seen in a large numbers, especially among Negro women in charity hospitals. Gonorrhea of the rectum may result in stricture from the fibrosis developed in the healing of the ulceration caused by the disease. Organic narrowing of the anal opening, due to fibrosis of the external sphinoter muscle resulting from a long standing chronic fissure of the rectum, has been seen. Three instances of stricture of the ampulla of the rectum have been observed, resulting from contraction of scar tissue from healed ulcers of amebic dysentery. Long standing ulcerative colitis and proctitis may result in a marked narrowing of the entire rectum. Three cases of hyperplastic tuberculosis of the rectum have been observed. Chronic diverticulitis of the rectum resulted in marked tubular constriction of the rectum in a patient of Dr. D. B. Phemister's. One instance of typical leukoplakia of the rectal mucosa with marked narrowing of the rectum has been observed in a young man over a period of three years. Carcinoma of the rectum of course accounts for many strictures of the rectum. Carcinoma in the region of the rectosigmoid, often being scirrhous and occurring in a normally narrowed

portion of the bowel, causes stricture and obstruction early. Carcinoma of the ampulla, however, usually being medullary in type and ulcerating early, takes about a year to encircle the bowel completely. Occurring in a normally wide portion of the rectum, obstruction takes place late. Unusual types of carcinoma of the rectal ampulla may cause constriction of the bowel very early. Four cases of extensive colloid carcinoma of the rectum in young persons (aged 16, 22, 24 and 26) were seen, in which the ampullar portion of the bowel was converted into a long tubular stricture with very little ulceration. Epidermoid carcinoma of the anus naturally causes early narrowing of the anal orifice. A papilloma of the rectum which reached the size of a large adult fist caused marked narrowing of the bowel in the hollow of the sacrum in a woman, aged 70. Of great interest to the authors because of their unusual clinical manifestations, are the instances of narrowing of the rectum from a lesion primarily developing outside of the bowel. One of the most interesting causes of almost complete occlusion of the rectum is the occasional case of carcinoma of the prostate. Another type of tumour pushing into the rectum from the hollow of the sacrum is a chordoma or a sarcoma of the anterior border of the sacrum. Chronic inflammation outside of the rectum may by encroachment on the rectal wall cause marked narrowing of the bowel. Still another type of pressure from without causing a stenosis of the bowel is due to Hodgkin's disease. The authors present briefly the history of a patient having this condition.—*Journal of the Oklahoma State Medical Association.*

Diagnosis and Treatment of Tuberculosis of Small and Large Intestine.—Lawrason Brown, Saranac Lake, N. Y., and Homer L. Sampson, Trudeau, N. Y., (Journal A. M.A., Jan. 2, 1932), enumerate the suggestive symptoms of beginning intestinal tuberculosis thus: any digestive disturbances, marked constipation, failure of the pulmonary condition to improve, an irregular temperature with subnormal fluctuations, possibly decrease of pulmonary symptoms while the patient is no better, alternating diarrhea and constipation, and marked nervousness. As symptoms are so often absent and the abdominal and proctoscopic examinations are so often negative one must turn to the study of the barium meal and enema by roentgen rays to exclude intestinal tuberculosis. The roentgen method of diagnosis reveals the presence only of intestinal ulceration, but, when associated with pulmonary tuberculosis, especially if the pulmonary disease is at all advanced, it is safe to make a diagnosis of intestinal tuberculosis. Heliotherapy, natural or artificial, relieves the symptoms in a large proportion of early cases. In a certain number apparent recovery follows its use. When desired results are not obtained by this method, roentgen or other forms of treatment should be carefully followed. The dietetic treatment, consisting of cod liver oil, 1 ounce (30 c.c.), and tomato or orange juice, 4 ounces (120 c.c.), ice cold, when taken immediately after meals has apparently cured many cases. Surgical intervention is practised less frequently now than formerly. The roentgen technic may not reveal the whole extent of the involvement. Patients with advanced pulmonary tuberculosis do not do well under operation and should not be operated on, nor should those with advanced intestinal lesions except to relieve symptoms. In early localized lesions, excision is the operation of choice, but it may be necessary to short-circuit, which in advanced cases may make the condition and symptoms worse. The establishment of one or two mucous fistulas, from one or both ends of the affected portion of the intestine, may prolong life and help recovery but is most trying to the patient. Medical treatment, when diarrhea is absent, is of little avail. For diarrhea, drop doses of creosote in a capsule with one-fourth grain (0.016 Gm.) of iodoform, may be tried after meals. Phenyl salicylate and Tully powder (pulvis morphinae comp., consisting of morphine sulphate 0.5 Gm., and glycyrrhiza 10 Gm.), 2½ grains (0.16 Gm.) each, every four hours, may have to be resorted to in terminal cases.—*Journal of the Oklahoma State Medical Association.*

MEDICINE AND THERAPEUTICS.

The Treatment of Leprosy.—A recent paper by Dr. Canann, of the German Leper Hospital at Jerusalem, is largely a warning that extreme care is required when giving potassium iodide to lepers. Leprosy he describes as a chronic general disease with a long incubation period and an onset so insidious that cases are rarely seen in the early stages. In 10 percent of the cases the clinical course is interrupted by remissions giving a false appearance of cure, apt to mislead an inexpert observer, but not before a patient has been three years under observation can a cure be declared. Treatment, as usual, is general and specific. An attempt is made to improve the patient's resistance by good hygiene, generous diet, open-air exercise and judicious exposure to sunlight. As a tonic, in Canann's opinion nothing is better than neosalvarsan. This, not because syphilis is present or yaws: in fact clinical syphilis has not been found in the hospital in the last 10 years, nor have spirochaetes been seen, though the Wassermann reaction may be positive because of leprosy. Neosalvarsan, he states does not good for ailing and exhausted patients, especially after relapses. Specific treatment attacks the pathological

lesions and the bacilli, and the earlier it is begun the better; but its use must be very cautious at first. He recognises two stages of reaction—namely, the early, toxemic, and the advanced septicaemic. Reaction begins with a feeling of illness, pyrexia, pain in the limbs, headache, and anorexia. Up to this stage antitoxin is being formed and the patient is being helped; but treatment must now stop and there must be a period of rest before it is cautiously resumed; for reaction may easily go too far, and enter the harmful second stage with increasing fever and a rash appearing especially on the extensor surfaces and the face, followed by formation of small tubercles, showing that the stage of septicaemia has been reached. If the process goes further it merges into disastrous miliary leprosis.

Potassium iodide is said to be of use, but according to Canann, it has in 18 months never done anything but harm at the Jerusalem hospital, and its advocates are always reducing the recommended dose. The tubercles that form under its influence show an altogether exceptional crop of bacilli, more even than those of miliary leprosis. He thinks it is far too dangerous to be employed at all. of the specifies the best, he considers are chaulmoogra (HYDNOCARPUS WIGHTIANA) oils. He uses I part of their ethyl esters, 1 of camphor, 1 of creosote (twice distilled), and 2½ of olive oil. Treatment must go on for at least a year before any conclusion can be drawn, and must continue for three years, with a clinical examination every month, even if the patient has been discharged, before a cure can be stated.

Diet and Diabetes.—After all has been said and done on the treatment of diabetes, food remains, as before the introduction of insulin, the main factor in the treatment of diabetes. More than that even, since insulin came into vogue more attention has been paid to diet than ever before. Already in editorials dealing with the disease the principles which govern its treatment have been mapped out. The subject, however, is so important that a recapitulation of these is quite in the order of things: 1. The blood sugar of the patient when fasting should be within the normal limits of 0·08 percent, and 0·12 percent, and should not rise above 0·19 percent at any time of the day. Thus it will be gathered that the urine should never contain any sugar. 2. The urine should contain either no aceto-acetic acid or a mere trace. 3. The patient should understand that a large portion of the reserve power of the islands of Langerhans has been lost, and that he must arrange his life so that the surviving islands of Langerhans are never overworked, *i.e.*, the insulin requirements should be as small as possible. Moderate restrictions of the carbohydrate may be sufficient to prevent glycosuria in the mild type of case which occurs among elderly people, but in the great majority

When writing to advertisers, please mention the "Antiseptic."

of cases this is quite inadequate. Removal of carbohydrates from the diet without reduction of the fat and protein of the diet is a dangerous practice and has in the past precipitated the onset of coma. Treatment should be begun as soon as the diagnosis has been made.

The above are the principles laid down by George Graham, the British authority on diabetes, in F. W. Rice's "Textbook of the Practice of Medicine."

Fasting should be resorted to in serious cases once a week even when there is no glycosuria and all cases do better with a monthly fast. It is advised that when the carbohydrate tolerance is over 20 gm. order a half day fast a week, and it must be borne in mind that cases always do best when they are well below the normal weight. It may be pointed out that prolonged periods of starvation are no longer necessary. Again it should be insisted that diabetic foods should only be eaten when their exact composition is known. Some of the diabetic foods have had only a comparatively small portion of the starch removed and of course, are not adapted for the diabetic—in fact will do more harm than good. The diabetic bread should be eaten as a part of the protein and fat ration, and never as an addition. Jellies and jams made for the diabetic consumption contain 20 percent of glycerin which is burnt as sugar and must, therefore, be included under the carbohydrate ration.

Another point of extreme importance in the care of diabetics is the after-treatment. The patient should be instructed, as to the disease and the necessity for a proper diet. It goes without saying that if he understands the principles involved, he is so much the more likely to carry out the treatment in accordance with these principles.

Improvement in the condition of a person suffering from diabetes mainly rests on appropriate diet. Insulin is valuable in combination with diet when necessary and essential to ward off diabetic coma or to render an operation on a diabetic safe. But diet in diabetes provides the chief hope of enabling a sufferer to live in comparative comfort and often to carry on his or her work. Diet is the mainstay.—*I.J.M.S.*

Is Hyperpiesia the Result of Renal Lesions?—This question which is of paramount importance can be expressed in other words, namely, Is there any evidence on which we can affirm that a renal lesion can by itself produce an elevation of the blood pressure? Physiologically, an answer of "yes" would be expected. In order that the glomerular filter is to remain effective a certain pressure is necessary in the renal arterioles. Incapacity or destruction of some glomeruli due to disease would look on an increased blood pressure so that those remaining may carry on their work effectively. In the classical experiments of Rose Bradford it was demonstrated that the

removal of three-fourths of the total kidney substance was necessary before renal failure could be established. A continuation of these experiments by Janeway and others has tended to demonstrate that continuous reductions in the renal tissue are accompanied by a moderate elevation of the blood pressure. Although Anderson failed in similar experiments on rabbits, we may still assume that further evidence produced by ingenious investigators will finally bring to light that removal or destruction of sufficient renal tissue is followed by a rise in the blood pressure. The weighing of evidence is probably in this direction even to this day.

In spite of this fact we are still far from understanding the mechanisms by which such hyperpiesis is produced. It is not necessary to delve further into the negative results of many investigators; suffice it to say, that none of the nitrogenous constituents of the urine has shown to increase the blood pressure when present in excess in the blood. Observations of many medical researches can testify to the fact that such substances as urea, uric acid, creatinin, chlorides, phosphates and so on, can persist in excess in the blood stream for months or years without producing high blood pressure. In this connection, cholesterol has been the subject of similar inquiry. Presently, it is generally agreed that although atheroma and other degenerative changes in the arteries can be produced by cholesterol an excess of this substance in the blood is more characteristic of hipoid nephrosis with normal blood pressure than of renal failure with hypertension.

The discovery of a new pressor substance in the kidney itself will be a new page in the history of medical investigation which up to this time relates a tale of failure. Experiments and investigations however, are pressing forward, making it a point that in some future time they will be able to demonstrate that hypertension in some degree can be a direct result of nephritis and renal disease. At present we must recognize that when a patient exhibits an extreme degrce of hyperpiesia with a systolic pressure around 200, it is a strong evidence for the presence of an extra-renal factor. Consequently, such renal impairment as may be in existence is the result and not the cause of the pathological vascular change to which the high blood pressure is due.

CONCLUSIONS.

It is deeply regretted that my investigations have to be closed at an early date. I am fully aware of the fact that observations on nephritis should be carried on for a very much longer time to enable the student to follow up its different phases and to perform the different tests and urine and blood-chemistry determinations at proper intervals. The conclusions derived from a research of six cases had to be

reinforced by finding of more complete results of previous works, These are as follows: —

1. The sound kidneys are able to eliminate about 1000 c.c.s. of water in about 5 hours. With destruction of the glomeruli the time of excretion is prolonged in direct proportion to their damage.

2. The normal kidneys are able to vary the concentration of the urine up to to about 13 points, depending on the stimulation of increased water intake or its suppression. The normal figures oscillate between 1.017 to 1.030. With destiuction of the glomeruli this function is lost and the specific gravity is fixed at about 1.010 or 1.012 which means that the kidneys have lost their ability to properly eliminate waste substance.

3. There is a close relation between functional tests. persistent albuminuria, casts, and retention of metabolic products in the blood.

4. High creatinin values (4 or 5 mgrms), arteriosclerotic retinal changes and persistent systolic pressure of 200 or higher are signs of bad prognosis.

5. In early and suspicious cases a determination of uric acid should be made since this substance is the earliest to be retained in the blood even in slight renal impairment.

6. An increase in the N. P. N. and urea N in the blood signifies serious loss of flexibility and reserve capacity of the kidneys.

7. There are cases of nephritis in which retention of chlorides in the blood is present, but such cases do not always exhibit œdema. Those cases with evidence of chloride retention in the subcutaneous tissues always exhibit external œdema.

8. Izod Bennet said, "Oedema in nephritis is at once suggestive of pathological changes in tissues other than the kidney, and that such pathological change is not the result of nephritis, although it is more than probable that the renal and extra-renal damage have a common cause.

9. An excess of cholesterol in the blood is an outstanding character of lipoid nephrosis.

10. Hypertension always precedes, oftentimes by many years, all clinical signs of renal damage. Hypertension as a rule becomes associated in the later phases with all grades of renal insufficiency. It is still unknown whether hypertension or hyperpiesia is the cause or the result of renal disease.—*The Bulletin* S, *Juande Dios. Hopl.*

Note on Migraine.—E. C. Hartley, M. D. Saint Paul—Clendening refers to a number of writers who comment upon duodenal and upper intestinal tract stasis during attacks of migraine. He himself says: This condition of stasis, however, has long been known and the feeling is peculiar to all sufferers of the disease. A fair pro-

Bombay the incidence is from 35 to 50 per cent. and in the United Provinces it varies from 15 to 25 per cent.; in the drier parts of India like the Punjab and Rajputana, though the incidence is less than in the parts mentioned above. it is in no way insignificant. The develeopment of the santonin industry will, therefore, be very beneficial to all concerned.—*Indian and Eastern Druggist.*

Protein In Asthma :—Van Leeuwen says that "the causative agent of allergic attacks is seldom revealed by skin reactions" though the allergic state may be revealed. Even when skin tests reveal definite hypersensitiveness, attempt to produce specific desensitisation frequantly fail, though subsequent treatment with tuberculin may produce good results. These reports led to careful investigation by van Leeuwen, who was led to use tuberculin in asthma as a routine measure for a number of reasons. He found that most sufferer from allergic diseases are hypersensitive to tuberculin, and therefore chose this substance for the experiment. About 50 per cent. were "completely or almost completely cured, while about 25 or 30 per cent. were distinctly or considerably improved and 15 to 20 per cent. remained absolutely uninfluenced! After a year's work Thomas Nelson and Arthur D. Porter conclude that the system of injecting old tuberculin in high dilution had a very marked effect upon asthmatics of all kinds.

It seemed much more probable, to these physicians, that it was the portion in high dilution which was really the effective agent rather than the old tuberculin. So they decided to study the action of a simple solution of the protein. The substance selected was the "Tabloid Broth" made by Messrs. Burroughs, Wellcome and Co. A standard broth solution is made according to their directions and diluted from one in a hundred thousand to one in a hundred million. They start with a dose of O. 1 c. cm. of one in a million. Nearly all cases were selected for this treatment, i. e. they were extremely ill or suffered very severly from asthma and no other treatment had any effect. The authors conclude that small weekly doses of broth in high dilution given to an asthmatic person have an extremely marked effect on the course of the attacks, and where the patient is relatively slightly affected especialy in children, the result for the most part is dramatic and immediate. But th chief point and the main difficulty is to find the right dose for the individual, because this dose may vary between O. 1. c. cm. of 1 in 100,000,000, to 0. 75 c. cm. of 1 in 1,000.000. This system cannot be exactly advanced as one of treatment in the ordinary sense of the word, but as a system of short-time prophylaxis.—(*Thomas Nelson and Arthur D. Porter. The Lancet Dec. 19, 1931.*)

Correspondence.

To

THE EDITOR

The Antiseptic, Madras.

Sir,

Ref. Query pp. 116 *Antiseptic Feb. '32.* Chyluria is not a very rare disease, nor is it true that it is not described in text books. I draw attention of 'Query' to any text book on diseases of tropical climates. Manson Bahr's book gives a good account with a beautiful picture of collateral circulation following lymphatic obstruction by the adult worms F Bancrofti. Let 'query' give a good trial to "Neostibosan injections". I shall supply him further details if necessary.

Yours faithfully

P. V. KARAMCHANDANI, M B.B.S. (Bom.)
M.R.C.P. (Edin.) F.R.S.T.M. & H. (Eng.)
Major A. I. R. O.

Devi Villa,
Dadu, Sind.
13-3-'32.

Proceedings of Societies Conferences &c.

SUBSIDISED MEDICAL RELIEF SCHEME

Dr. S. Ramasubbu, L. M. & S., Secretary, Rural Medical Practitioners Association writes :—A deputation of the subsidised medical practitioners of this Presidency waited on the Honourable The Chief Minister at the Secretariat on the 4th and 5th inst. for the purpose of discussing the defects in the working of the scheme and rectify the same. The deputati on consisted of Dr. S. Ramasubbu. L. M. & S. Provincial Secretary of the subsidised practitioners' Association Dr. K. Vittaldas Pai, M. B., B. S., of Pallavaram and Dr. B. K. Shenai, L. M. P. of Acharapakkam, and was led by Dr. V. Ramakamath in the unavoidable absence of Dr. U. Rama Rao who was the first nominee appointed by the president of the Third Provincial Conference of the Association, to lead the deputation. The Surgeon General, The Director of public Health and Deputy Secretary, Local Self Government Department, were also present.

2. A memorandum was presented by the Assaciation on the occasion but the Honourable Chief Minister desired that, for the

purposes of initiating discussion, it would be advisable to take up first the resolutions passed at the third provincial Conference held at Madras on 31-12-30. The first item of discussion was about the increase in the subsidy which, the honourable Minister said, was not possible under the present stringent financial condition. Regarding the transfer of control of the scheme to a District medical Council, it was the opinion of the Honourable Minister that the Taluk Boards might not contribute their share of the expenses of the scheme, especially when they would not have any share in the management thereof: all the same, the question of payment of the subsidy to the practitioners would be examined in making the D. M. Os. the agency responsible for the payment, the Taluk Board Presidents sending the bills to them, as this change would very likely lessen the complaints of the practitloners againt the Presidents and ensure better supervision by the Government. It was the considered view of the Minister that the Taluk Boards should provide uniform and suitable buildings for the running of the subsidised dispensaries and also quarters alongside, if possible, for the residence of the practitioners with or without rent for the latter, depending upon the view taken by the individual Taluk Boards. Honourable Minister accepted the principle that the Taluk Boards should invariably give preference to a practitioner of the same village, Taluk or District in the matter of paying subsidy and said that Government had already passed orders that they would not allow any subsidy in respect of a place where a qualified practitioner already existed. Regarding the appointment of the midwife by the subsidised practitioners, the Honourable Minister said that he would not accept the proposal of the Association, but would agree that the midwife should coordinate with the practitioner in his professional work whenever she had the time to do so. It looked as if the proposal that the drugs and other requisites necessary for midwife should be supplied separately by the Taluk Boards, was acceded to. In respect of the supply of drugs to the subsidised practitioners the proposal that an amount more than Rs. 360—a year—which is now reckoned on an average of 30 patients a day—should be made proportionate to the attendence when it exceeds 30, was not acceptable to the Minister but he was sure that in special cases where there was a large attendance from poor patients, the Taluk Board concerned was likely to help the practitioner with supply of additional drugs.

3. Regarding Public Health duties which the subsidised practitioners were called upon to do, it was agreed that in cases of fairs and festivals they should get a daily allowance of Rs. 5 plus the usual travelling allowance if they were to be on duty in any place beyond 5 miles of their villages. With regard to inoculation duties, the Honourable Minister said that, in addition to the travelling allowance, practitioners should be paid at the rate of 9 pies per inoculation, subject to a minimum of Rs. 2 and a maximum of Rs. 5 a day and that, in either case, the subsidy would not be deducted for the days they were so engaged.

4. As regards the leave, the Honourable Minister said that he would examine this question and showed an inclination as if 30 days of absence from duty in a year with full subsidy might be reasonable though the Surgeon-General expressed it as this view that 15 days would be enough for the purpose. The Honourable Minister added that whatever decison regarding absence from duty with full subsidy was arrived at a practitioner could absent himself from duty for the maximum period allowed without any restriction as to the period of such absence at a time and that subsidy might be cut down only when the total period in a year exceeded the number of days allowed therefor. It was also agreed that the Taluk Boards might be given the option of terminating the agreement of the subsidised practitioners for continued absence from duties for over three months at a time and that within that time the old arrangement of the practitioner putting in his substitute might continue.

5. Regarding the resolution that the subsidised practitioners should be paid batta and travelling allowances at a uniform scale for attending Law Courts, the Honourable Minister said that this question was beyond the purview of his Department and that the Association might approach the concerned authorities in the matter.

6. Medical inspection of school children and the appointment of the subsidised practitioners to teach Hygiene and Physiology in the Elementary Schools; the Surgeon General gave it as his view that that would be a legitimate duty of the practitioners: this subject however was not gone through as the Government have given up the scheme of compulsory medical Inspection of School Children.

7. Regarding the supply of Government orders, circulars, etc., connected with the subsidised medical relief scheme, to the Provincial Secretary, the Honourable Minister said the G.Os. and circulars concerning the subsidised practitioners as a whole would be supplied but not those concerning individual cases.

8. Dr. Kamath thanked the Honourable Minister for his patience and sympathetic hearing and trusted that, with the help of the Surgeon General and the Director of Public Health the Honourable Minister would be able to bring about the necessary reforms in the scheme so that real village reconstruction of a substantial nature could be brought about in the villages with the help and co-ordination of the subsidised practitioners, whose scope of services were such that they could be usefully taken advantage of for any reconstruction work in rural areas.

Book Reviews.

Manual for Guidance of Physicians.—Published by the Dept. of Pensions and National Health, Ottawa, Canada.

The time-old adage "Prevention is better than cure" is the basic principle of Preventive Medicine in the history of modern Public Health movement in all civilised countries. The small brochure of 28 pages entitled "Manual for Guidance of Physicians" compiled by the Canadian Medical Association is a timely publication with that object in view. It enters a strong plea for the periodic examination of apparently healthy individuals by the family physician. Such a procedure is in the interest of the individual, the family, the community, nation and the country, no less than for the ultimate good ethical and professional of the medical man.

The general technique of the Periodic Health Examination in the shape of "Form A" dealing with history, family and personal; and the "Form B" detailing the physical examination in the sitting, standing, and the prone positions, is set forth in a tabular form for the guidance of the physician and his client and is very helpful. Besides general directions for "Health Council" covering dietary, general nutrition, under and overweight, constipation etc., special attention has been drawn to "Mental Hygiene" the neglect or maladjustment of which is a great predisposing factor, in the present abnormal stress and strain of life, to maladies of later date.

Charts for exercise and tables for standard weight for men and women form a good reference guide. The booklet will be found useful by the family physician, Public Health authorities and those members of the public who aim at preventing the advent of the disease by early recognition of signs and symptoms of departure from the normal.—*P.A.*

A Hand book on Diseases of Children.—By Bruce Williamson M. D. (Edn.) M. R. C. P. (Lond.) 1931 Pp. 290; [Edinburgh; E. & S. Livingstone, 16 and 17 Teviot Place. Sole Agents for India, Messrs, Butterworth & Co., (India), Ltd., P. B. 251, 8 Hastings St., Calcutta], Price Rs. 7-14.

This book gives a concise yet complete account of the diseases and disorders of infancy and childhood.

Some of the rare diseases and conditions affecting the childhood are also included so as to help those seeking for a higher examination. wherever an exhaustive study is required or found necessary, reference has been compiled to other text books and monographs. The book has been divided into sections each dealing with respective systems, as respiratory, circulatory, alimentary &c. A short summary of each chapter is given at the beginning, an arrangement which at a glance provides a rapid method of revision. The chapter on deitics is useful. The illustrations are good. The book is lucidly written, handy and well worth reading.—*V.C.S.*

An Introduction to Practical Bacteriology (A. guide to Bacteriological Laboratory work)—By T. J. Mackie, M. D., D. P. H. and J. E. McCartney, M. D. D. Sc. 1931. Third Edition. Pp. 421. [Edinbourgh: E. & S. Livingstone. Sole Agents for India Messrs. Butterworth & Co., Calcutta.] Price Rs. 7-14.

The authors have thoroughly revised the book and most of the newer additions and developments in Bacteriological knowledge have been included in this new third edition.

A distinct feature of the book is the novel method adopted by the authors, "the use of large and small types" to stress some of the important portions. We doubt very much if this sort of arrangement would attract the reader.

The text contains lot of useful material and we are sure students and post graduates interested in the study of bacteriology will find it highly useful in their practical work.

The chapter on the use of microscope, will be found helpful by the student, specially in India. The section of filtrable Urises, the defects in the filters due to P H of fluids, and to absorption, are clear. It is a practical book and should prove of value to all students of Bacteriology.—*V.C.S.*

A Manual of Tuberculosis for Nurses.—By E. Ashworth Underwood, M.A., B.Sc. etc., 1931, Pp. 272: Illustrated [Edinburgh: E. & S. Livingstone, Sole Agents:—Messrs. Butterworth & Co., Calcutta]. Price Rs. 4/14.

This book contains a good deal of valuable information for the nurses presented in a concise form.

The management of the diseases in their various forms are well discussed and written in simple style so as to be understood easily by the reader: The sections on the use of Splints and various other appliances that are commonly used in the treatment of surgical tuberculosis is good and practical. Light treatment in tuberculosis is also included.

This is a good guide for all those engaged in the art of nursing.—*V.C.S.*

Aids to Medical Treatment.—By J. T. Lewis, M.D., B.Sc. M.R.C.P. (Lond.) and T.H. Crozier, M.D., D.P.H., M.R.C.P. (Lond.)

1931 P.p. vii+244. [London: Bailliere, Tindall and Cox 7 & 8. Henrietta Street, Covent Garden]. Price 3/6 Net.

This is a new addition to the 'aids' series, and contains many of the well tried and accepted methods of treatment of various diseases. This will be found as useful by students specially before their examination, as its other companions of the Aids series.—*V.C.S.*

Aids to Medical Diagnosis.—By Arthur Whiting M.D., 1931 P.p. viii+180. 4th edition. [London; Bailliere Tindall & Cox]. Price 3/6 net.

This little volume has undergone the necessary alterations and additions, and has been made uptodate. This book has been extensively used by the students since its first publication, and the fact that a fourth edition is called for is enough proof of the usefulness and popularity of this little book.—*V.C.S.*

Why We Are What We Are:—By Theodore Herbert-Larson, M.D., Pages 347, Illustrations 18. [American Endocrine Bureau, Chicoago, Illinois].

This is a very interesting book discussing the science and art of endocrine physiology and endocrine therapy. The author tries to establish that "a man is what he is" is due mainly to his endocrine glands. The bodily development and the brain capacity of an individual are interdependent on the endocrine activity. Defective glandular exchange is responsible for the changes in the working of the system of the body. The author discusses how the character, the brain capacity, the bodily form and the energy for work can be varied by the hypo or hyper-activity of the various glands. After giving a brief description of the action and influence of each gland on human system, he deals with the abnormality in the endocrine exchange and relativity and how these influence the body and the mind. He explains in relation to endocrine changes why Bloude blooms more than a Brunette and how the latter retains her youth longer, how masturbation, mental strain and business worries, result in defective mentality, impotency, and baldness, and how inferiority complex results in pessimism. He reads the character of an individual by his appearance, which is influenced by the endocrine glands. It contains descriptions of a normal man and a woman how the abnormality is produced by changes in the endocrine glands, why we are physically as old as our endocrine system, how by abuse we burden the endocrine system producing a change in the character, appearance and personality, and how by will we can develop the endocrine glands, indirectly the brain and the body. "Cigarettes as a wrecker

of feminity have hardly an equal" is a pertinent remark of the author. The book contains many more interesting and practical informations. The writing is simple and easily understandable and not purely technical. As such it will be highly interesting and instructive both to the profession and the lay-public. Though we may not agree with some of the views of the author as regards the present standard of society and marriage as a physiological failure, though some may take exception to the long list of diseases which, the author says, can be cured by endocrine therapy alone, the book on the whole contains a fund of knowledge and coming from an authoritative source pays well for any-body's careful study.—K.L.R.

Practical Methods in the Diagnosis and Treatment of Venereal diseases.—By David Lees, D. S. O., M.A. M.B., D.P.H., F. R. C. S. M. R. C. P. (E).—1931. 2nd Edition. 634 pages illustrated. [Edinburgh E & S. Livingstone. Indian Agents—Messers. Butterworth & Co., (India) Ltd. Calcutta.] Price Rs. 11-4.

The subject of venereal disease has become an integral part of the medical curriculam and an important branch of public health work. A thorough knowledge of the subject therefore is demanded of all those who are engaged in medical study and public health work and in the campaign against Venereal diseases. The book under review contains a detailed account of the methods of diagnosis and technique of treatment of the common manifestations of Venereal disease as practised by Dr. Lees in the Edinburgh Royal Infirmary. In the present edition the chapters on Neuro-Syphilis and its treatment have been re-written. The modern methods of treating by tryparsamide, malaria, and other forms of Pyrotherapy are included in this chapter. A new chapter on the diagnosis and treatment of Cardio-Vascular syphilis has been added. Short additions to the text have also been made on the use of Diathermy in the treatment of the complications of Gonorrhœa and on the treatment of chancroid. The book gives sound principles of diagnosis and practical details of modern treatment. The beautiful illustrations and coloured plates and the pharmacœpia at the end of the text add to the usefulness of the volume. We have no hesitation in saying that this is one of the best books on the subject of Venereal disease. We recommend it for the use of everybody concerned.—*U. K. R.*

Aids to Surgical Anatomy.—By R. H. Hunter, M. D. M. Ch., Ph. D., Pp. vii + 184. illustrated. [London: Bailliere, Tindall and Cox.] Price 3-6. net.

The aim of the author in preparing this little book is to draw the attention of the students appearing for the final examination

in medical degrees, to anatomical factors concerning the various surgical operations and affections of the human body

The book is divided into five sections.

The first chapter deals with the Head and Neck; upper extremity forms the subject matter for the second chapter.

Thorax abdomen and liver extremities, are dealt with in the succeeding chapters. Here and there we find a few misprints, and spelling mistakes, which we hope may be corrected in the second edition. The book deals, concisely with the subject of surgical anatomy, and may be found useful by all medical students.—*V.C.S.*

High Frequency Practice.—For Practitioners and Students. By Burton Baker Grover, M. D., Illustrated with engravings 1931. Sixth edition Pp. 625. [The Electron Press—Kansas city M. O.] Price $ 7-50.

This sixth edition has been thoroughly revised and made upto-date in keeping with the advancement made in high frequency practice.

There are twenty chapters in the book. In the first five chapters the author describes very vividly the early inventions, and other elementery principles of electricity and magnetisim, so as to prepare the reader for a thorough grasp of the subject, and practice of high frequency currents.

Chapter VI gives a good discussion on medical diathermy and its practical application ; and surgical diathermy is treated in the following chapter.

Some of the common diseases are discussed together with their modes of treatment with high frequency currents.

The book is very practical and will be found useful by all those interested in elcctro therapeutics.—*V.C.S.*

Principles of X Ray and Radium Dosage.—By Albert Bachem, P.H.D. P.p. 274 with 70 engravings and 38 charts [Albert Bachem P.H.D. Publishers—Sold by Radiation Publishing Co. 1337 Wirona street, Chicago. Ill]. Price $. 8-0-0.

This book deals with the practical problem of X-Ray and Radium Dosage. Though printed and published some years ago, the book seems to be quite uptodate, in many respects. Determination and measurement of quantity of these radiations, definitions and measurement of quality, Distribution of X Rays and Radium rays in various media, Practical Dosage and examples of treatment form the main theme of book. It is sure to be a valuable aid to all those engaged in X Ray and Radium therapy.—*V.C.S.*

The Nature of Disease :—By J. E. R. Mc. Donagh, F.R.C.S., 1931 Part 3 section 1. Pp. 391. [London : William Heinemann (Medl. Bks) Ltd., 99 Great Russell St.] Price £ 1-1-0 net.

The first part of this series appeared in 1924, and the second part was brought out in 1927. The book under review is the third part of the series published last year. This volume begins with a general introduction consisting of about sixteen pages. One gathers from these pages that the writer condemns the evil effects of conservatisim and tradition and attributes these to the faults of education and says that "education as applied to day can only lead to conventions and to the worship of institutions and personages, themselves lacking in imagination, observation and liberal thought."

The author sets forth here his view of the nature of disease ; and as he himself says "it is difficult to force asceptance of new and radical ideas, because man is essentially conservative and imitative". In accordence with his views "health is the maintenance of body's resistance and disease is its breakdown. "There can only be one disease and all the clinical signs and symptoms presented are but manifestations of the breakdown of the body's resistance. It is said that the resistance of the body resides in the chemico-physical architecture of the cells of the body, but particularly of the protein particles in the plasma and of the protein particles constituting the protoplasm of the leucocytes. During an infection the state of these protein particles in the body are disturbed and as a result the body resistance is broken-down and the disease manifests itself. During this stage the writer says that the protein particles in the plasma either get hydrated or dehydrated. "The dehydration may be pure, as in streptococcal septicaemia, for example but more often there occurs with it a varying degree of hydration. "As every invader causes dehydration when it first attacks, it comes to pass that dehydration is the prevailing abnormal chemico-physical change in the acute stage of the disease and hydration in the chronic stage. Hydrated protein particles undergo three cyclical changes (1) dispersion, repersented by immunity ; (2) gelation which causes venous thrombosis ; (3) uneven dehydration, giving rise to what has been called "acidosis."

Some blood pictures illustrating the abormal chemico physical changes and the dynamic resistance of the blood are given; the suspension stability of the red blood corpuscles, the refractive index of the serum, percentage of blood sugar, percentage of blood urea and the ultra microscopic pictures of the protein particles found in cases of moderate dehydration, severe dehydration, acute concomitant dehydration and hydration gelation glycosuria sine hyper-glycaemia are also given. Malcordination and disease, disease and the nervous system and the disease and intestinal tract are then fully discussed. This is the outcome of the author's orignal research and thought and deserves to be read by all medical men and well discussed. No bookshelf can claim to be be upto date without this volume.—*V.C.S.*

The Practical Treatment of Diabetes.—By T. Izod Bennett, M.D., (Lon.) F.R.C.P. (Lon.) 1931 Pp. viii & 107. [London, Cons-

Experiments in the use of bored-hole latrines are being conducted in the Phillipine Islands, East Indies, Burma, India, Ceylon and other places. "A comparison of the hookworm infestations of Indians and non-Indians of Panama showed a striking difference in worm burdens corresponding with the differences in defecation habits of the 2 groups and the extent of contact with infested soil." During 1930 the Foundation contributed as usual funds for the investigation and prevention of hookworm in a number of foreign countries.

The diseases investigated by the financial aid of the Foundation were the common cold, tuberculosis, undulant fever, pellagra, etc.,

"In addition to the work in the specific diseases already mentioned aid was given for fellowships; for the work of local health departments, statistical bureaus and bureaus of epidemiology, for public health nursing, sanitary engineering, districts health work and general health surveys, to institutes and school of hygiene and toward the health work of the League of Nations." "During 1930 the Rockefeller Foundation assisted 24 States in the United States and the governments of 17 foreign countries to develop modern local health organizations by providing funds to supervisory or consultant services, to field representatives and facilities for practical field training of personnel."

Various branches of public health services, such as, sanitary engineering, public health nursing, laboratory services, school and dental clinics school, hygiene demonstrations etc., in different parts of the world were given financial aid. The sanitary engineering department of the State of Mysore in India came in for share in such help. The midwifery school at Peiping, China, the Medical school at Suva, Fiji, and various schools and institutes of hygiene and public health received financial support during the year.

44 officers of the health department were enabled to inspect the public health activities in countries other than their own. During the year 173 public health fellowships were held by medical graduates. These fellowships are given to selected graduates in medicine who are assured of employmet in the public health services of their own countries after their period of training. 8 fellowships out of these 173 were held by persons selected in India. Considering the extent of the country and its poverty and the large number of public health problems which can be investigated in this country, it may be possible for the Foundation to allot a larger number of such fellowships for India if the provincial governments will undertake to have such trained men employed suitably afterwards. 102 fellowships administered directly by the foundation in the medical sciences were granted for post graduate training of young medical men to fit them for definite positions in research or teaching institutions. Funds were allotted to the Medical Research Council of Great Britain and to similar bodies in Germany and in Hungary. The lion's share of the fellowships went to the Peiping Union Medical College, to which 127 fellowships and 9 scholarships were allotted for study in that college and 24 fellowships for the staff of the college for study in other countries.

Aids for research were given to a number of institutions in different parts of United States, Denmark and Germany. As usual

the teaching institutions in many countries were given financial aid. Towards the funds of the All-India School of Hygiene and Public Health in Calcutta payments were made. Schools of nursing continued to receive help. Fellowships in nursing were held by 34 fellows from 11 countries. The natural sciences and the social sciences continued to receive the usual attention given to them by the Foundation in previous years. Capital grants were given to a number of laboratories and institutes of sciences and grants-in-aid were given to research funds and research projects. In all these sciences fellowships were provided for and aid was given to publications.

From the above rather brief and superficial account of the extensive world-wide activities of the Rockefeller Foundation in all branches of medicine and public health, in the medical, natural and social sciences, it would be seen that the report for 1930 is a splendid record of the achievements of the Foundation and that it is a record of the widening work of the foundation in the increase of the sum of human knowledge in all branches of sciences and the increase of human happiness by attempts at alleviating their sufferings due to disease. By keeping up the high traditions for which the Foundation was established the Rockefeller Foundation will continue to command the admiration of the world and its gratitude.—*T. S. T.*

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. A.].

The Danger and caution signs of Disease.—A Scotch Doctor: St. Catherin. Press, Stamford St., Waterloo, London S.E.I. 2 sh.

Children's questions in the first five years.—Len chaloner: Noel Doughlas, 38, Great Ormond St., London W.C.I. 3 sh. 6 d.

***Birth Control*—A Key to unemployment and a way to married happiness,**—Worsley Boden. Noel Douglas, London. 3 d.

The Sex factor in Marriage.—Helena wright, Noel Douglas, London. 3rd Ed. 3 sh. 6 d.

Better than cure.—D.M. Connen & J.H.W. Bush. Noel Douglas, London. 6 sh.

Suppleness.—L. Henslowe. Noel Douglas, London. 4 sh. 6 d.

The hygiene of Marriage.—I.E. Hutton. William Heneimann (Medl. Books) Ltd., 99, Great Russell St., London W.C.I. 3rd Ed. 5 sh.

An introduction to Tropical Pathology.—T. Bhaskara Menon. Thacker Spink & Co. Post Box 54, Calcutta. Rs. 10.

The relative susceptibility of some Malayan Arophline Mosquites to experimental infection with Malarial Parasites—Bulletin No. 4 of 1931.—R. Green and B.A.R. Gater. Institute for Medical Research, Kuala Lumpur F.M.S.

Laboratory Experiments on the Larvicidal properties of mineral oils—Bulletin No. 5 of 1931.—G.H. Corbett and E.P. Hodgkin. Inst. for Medl. Research, Kualalumpur.

Medical Science harnesses one of Nature's rarest forces for Health.—North American Radium Corpn. 300 fourth Ave, N.Y.

Collected papers on Eugenic Sterilization in California. The Human Betterment Foundation, Pasadena, California. 1930.