

A POST-RECTAL TUMOUR. (See page 353.)

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INVESTIGATION OF THE CAUSE OF DYSENTERY.\*

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My object this afternoon is to put as clearly as I possibly can the present position of the investigation of the causes of dysentery as far as bacteriology and protozoology have gone in the matter. Much of what I shall say is already known to most if not all of those here, but it is probable that in the discussion which I hope will ensue some further points which I have not had time to put down, or of which I was not aware, will be mentioned.

We must bear in mind all through our meeting this afternoon that dysentery is not a *disease*, but a *symptom*. The word was originally used in a clinical sense to designate a form of intestinal flux accompanied with pain and tenesmus. The word then came to be used in an anatomical sense and was applied to any form of ulceration of the large intestine, accompanied with pain and tenesmus and the passing of bloody mucus. On account of this an attempt was made to bring all such diseases under one category, and they were all styled dysentery, and one cause was sought for all the various manifestations.

In our student days the teaching in regard to dysentery was something as follows: "It is probably contagious in the same way as cholera and typhoid, i.e., not directly from man to man, but only through the medium of the dejections by which water or air is contaminated. There is still much to learn about the cause of this disease. Some forms at any rate appear to be due to the *Amœba coli* which has been discovered in the stools, in the walls of the diseased intestine, in associated hepatic abscess, and in the sputum." Such a statement as this found in Taylor's Medicine may form a starting point for us this

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afternoon. *No definite knowledge as to the cause, but a probable statement that the A. coli may be one of the causes.* We here get a hint that many were beginning to differentiate between the various dysenteries and were seeking no longer a universal cause but for special causes for special forms of the disease. In a Johns Hopkins Hospital Report issued some few years ago the writers say "that it is probable that in the future we must recognise a number of different organisms as the causes of the various forms of dysenteries, for it is impossible that conditions so varying in both their anatomical and clinical aspects, as are the various forms of dysentery, could be due to a single organism, or even a single group of organisms."

The first step in the differentiation of the disease called dysentery into several diseases was made when in 1859 Lösch discovered the *Amœba coli*. Little has been added to the description which he gave in those early days. I shall, however, defer the description of this organism until a later period in my paper. Lösch succeeded in infecting a dog in proof of his contention that the *Amœba coli* which he found in the mucous discharge from a patient with dysenteric symptoms was the cause of the disease. He injected one or two drachms of infected fæces into the rectum of four dogs. In one of these dogs he first produced a condition of acute inflammation by injecting croton oil. This case and two others were negative. In the 4th case, however, in which three injections were made on subsequent days the dog became sick for two or three days, lost its appetite and then apparently recovered. On the 8th day, however, a small lump of mucus was passed with otherwise normal fæces, and on examination *Amœbæ coli* were found. The dog was killed on the 18th day after the last injection and the mucous membrane of the large intestine was found to be reddened and swollen and superficially ulcerated in three places.

From this time on many observers found the *Amœba coli* in undoubted cases of dysentery, but alongside of these discoveries it was shown that the *amœba* also existed in normal stools, as well as in the stools of patients suffering from other bowel diseases, e.g., cholera, typhoid, etc. Some have gone so far as to say that any simple irritation of the intestinal tract favours their development, and one observer has found *amœbæ* in the loose stools of 10 out of 20 healthy persons to whom he had administered a dose of Carlsbad salts. The appearance of the *A. coli* in healthy stools after the administration of saline purgatives, is due to the fact that the usual habitat for the *A. coli* is the upper regions of the colon, and it usually dies out as the fæces become firmer in their passage down the bowel. However when they are

hurried down as by the saline purgative they reach the rectum alive, and hence appear in the stool. Other species of amœbæ too have been found in healthy stools, e.g., *A. guttula*, *A. oblonga*, *A. spinosa*, *A. diaphana*, *A. vermicularis*, *A. reticularis*. As the result of these discoveries some doubt was not unnaturally cast on the theory that the *A. coli* could be the cause of dysenteric symptoms. It was then urged that even the *B. coli* commune was known to become virulent under certain conditions, so it was possibly the case with the *A. coli*. Finally it has been pointed out that dysentery is caused not by the ordinary *A. coli* but by the *A. dysenterica*, which differs from *A. coli* in some important particulars.

The existence of amœba in the fæces of healthy individuals and in-patients suffering from intestinal diseases other than dysentery was thus explained and the value of such discoveries as contradicting the theory of an amœbic dysentery was considerably weakened. So much so that it is now practically reserved on all hands that whatever may be the causes of other forms of dysentery there is certainly an *Amœbic dysentery* with peculiar and definite diagnostic symptoms.

I intended to give a description of the *Amœba coli*, but we are all so familiar with it that it would be waste of time to go into details in such a paper as I am trying to give this afternoon. The manner of finding it, of distinguishing it, and of staining it, are matters we are familiar with from our laboratory work. Here it will be sufficient to point the most recent discoveries in connection with it and the evidences adduced in support of the theory that the pathogenic amœba differs very essentially from the non-pathogenic form *A. coli*. Schaudinn in 1904 as the result of his work on the amœba came to the conclusion that there was a distinct form which he called the *Entamœba histolytica* to distinguish it from the non-pathogenic form *Entamœba coli*.

The differences between these two classes of organisms may be briefly stated as follows:—

*Entamœba coli.*

1. Met with in the normal intestine.
2. No well marked distinction between ecto- and endoplasm; the latter, however, stains more deeply.
3. Vacuoles rarely present.
4. Red cells, crystals and bacteria rarely included in the cell.

*Entamœba histolytica.*

1. Met with in cases of dysentery.
2. The ectoplasm is always distinct, of hyaline material, more refractive, always sharply defined from the inner zone, stains more deeply.
3. Usually contains one or more vacuoles.
4. Large numbers of red cells, crystals and bacteria are frequently present.

*Entamæba coli.*

5. Nucleus nearly always visible and subcentral in position and stains deeply. It shows a well marked rather thick and very refractile nuclear membrane and contains a nucleus and a large amount of chromatin.
6. Motility very sluggish.
7. Multiplies by simple fission and spore formation. The latter is preceded by reduction in size, by division of the nucleus, and then conjugation of the daughter nuclei takes place, followed by mitotic division and 8 daughter nuclei result; the protoplasm finally divides into 8 and so 8 amœbulæ are formed.

*Entamæba hystolitica.*

5. The nucleus is usually eccentric in position and indistinct, stains only feebly, has little chromatin and no marked nuclear membrane.
6. Motility more marked and definite.
7. Regular nuclear division is not observed. The chromatin is broken up and the remnant of the nucleus is expelled and the protoplasm then arranges itself around the fractions of chromatin in small spherical masses. Schaudinn has shown that when these spores are given to cats they produce signs and symptoms of dysentery.

Schaudinn dried a small quantity of fæces from an undoubted case of dysentery in air and satisfied himself microscopically that it contained no cysts of *A. coli*, but only the small brown spores of *E. hystolitica*. The cover glasses were then removed from the slides actually examined and the fæces washed off in about one c. c. of sterile water and administered to a young cat, whose stools had been proved to be free from amœbæ. Three days later the cat began to pass slimy stools streaked with blood. These were found to be swarming with *E. hystolitica*. Next day the animal died of dysentery. The necropsy showed characteristic ulceration of the large intestine with crowds of amœbæ in all stages of penetration into the intestinal wall. Schaudinn administered large quantities of the fæces of this cat to another, but it remained healthy. He then gave a small quantity of the dried fæces first used, and within six days amœbæ appeared in the stools. This cat, which was older and stronger than the first one, developed dysentery and died in about a fortnight. From this experiment it would appear that amœbæ taken by the mouth appear to be harmless, and that it is to the dried up cyst containing fæces present in dust and water that we must look for the propagation of dysentery.

Although some observers have failed to confirm Schaudinn's statements as tabulated above, others have done so and in addition Vedder has shown that the manner in which Musgrave and Clegg carried out their experiments to disprove Schaudinn's theory, are not altogether reliable (*J. T. M.*, June, 1907). Some years before Schaudinn published his results Goldsmith drew attention to greenish bodies which are found in the fæces and in the amœbæ themselves. He pointed out that 1. these bodies are usually seen singly and never seen in rouleaux; 2. that they are about the size of a r. b. c., but vary in size and shape;

3. they are distinctly green in color with a distinct capsule, but only a questionable nucleus; 4. they are flat or biconvex; 5. and are usually within the edge of cell masses; 6. in liver abscess they are in the discharge and also in the amœbæ; 7. they possess slight amœboid movement. He regards these as products of the amœbæ, as he has seen them discharged from them, and they are present for days in the discharge of the liver abscess, whereas r. b. c. are absent. Their development is seen on careful watching, and amœboid movement is shown by changes in form. The green body enlarges and loses its distinct green colour and the nucleus becomes evident, granules and vacuoles then appearing, and when it is about twice the size of a lymph cell it becomes amœboid, and when it is full grown the greenish bodies make their appearance. He also pointed out that amœbæ disappear from the fæces about 24 hours after the stools are passed, but that these greenish bodies do not.

I cannot say what confidence we can put in such a description, but reading it in the light of Schaudinn's subsequent discoveries in relation to the difference in development between the *E. coli* and *E. histolytica* it may be that these greenish bodies are the spores of the latter, which are very resistant and develop when swallowed.

As I said above we can, I think, take it as certain that *E. histolytica* is one of the causes of dysentery and the especial cause of *amœbic* or relapsing dysentery.

Recent discoveries have also pointed to the fact that the *E. histolytica* is not the only protozoal organism which can give rise to dysenteric symptoms. The various other protozoa to which such specific action has been attributed are:

1. *Balantidium coli*: this is a small ciliated infusorian measuring 0.07 to 0.1 mm. by 0.05 to 0.07 mm. It reproduces by fission, budding and conjugation. Occasionally losing its cilia it becomes encysted. It is not known how it reaches the human intestine, but as it is a common parasite in the pig, it may be that it is communicated by that animal.

Strong has collected from other sources as well as his own experience quite a number of cases of this infection, which produced a chronic type of the disease with a mortality of about 30 per cent. Generally only one or two are found, but occasionally as many as twenty or thirty may be found in each field of the microscope. Strong demonstrated the *Balantidium coli* not only in the exudate found p. m. on the surface of the bowel, but also congregated in large numbers in the follicles and imbedded in the tissues forming the base of the ulcerations, including submucosa and muscular coat and even in the lumen of blood vessels and lymphatics.

2. *Cercomonas hominis*.—This parasite belongs to the Flagellata (mastigophora). It is one of the cercomonadidæ which are characterised by the possession of one flagellum at the anterior end without any undulating membrane. *Cercomonas hominis* is pear-shaped, elongated to a point posteriorly. It is from 0.010 to 0.012 mm. in length, and the flagellum is twice as long as the body. The nucleus is scarcely visible. That it is a parasite of the human intestine is undoubted, and its presence has been demonstrated in cases of intestinal flux, but as to whether it is really the cause I can find no definite proof.

3. The parasite of kala azar has also been found to produce a dysentery and the malarial protozoa has been found filling the intestinal vessels in cases of undoubted dysentery. (Specimen shown.)

Before going on to describe the important bacillar form of dysentery and the various bacilli credited with being the cause, I must refer for a moment to another class of organisms higher in the scale of life which produce symptoms which it is very difficult to distinguish from the ordinary dysenteries which we meet. I refer to what Manson in his last edition calls *Verminous dysenteries*, viz., those produced by

- |                                     |  |
|-------------------------------------|--|
| 1. <i>Schistostomum japonicum</i> . | 3. <i>Æsophagostomum brunpti</i> .         |
| 2. <i>S. hæmatobium</i> .           | 4. <i>Rhabdomena intestinale</i> (Strong). |

Since Dr. Logan first discovered the *S. japonicum* as occurring in China the presence of this organism, as shown by its ova in the stools of patients, has been proved to be very common in Central China at least. Logan has found it constantly in the northern part of Hunan. Taylor then found it in the province of Nganhuei. Booth and others subsequently found it in Hupeh, and recently Peake has shown its presence in South Hunan. In many of Logan's cases and in several of my own the prominent symptoms of a dysentery were present and in some cases no treatment was of avail.

The *Schist. hæmatobium* or rather the *Schist. mansoni* as it should be called, i.e., the *lateral-spined egg schistostomum*, whose habitat is the bowel, also produces symptoms allied to dysentery. Quite recently at a meeting of the Society of Tropical Medicine which meets in London, Sambon read a very interesting paper, in which he dealt with this *lateral-spined schistostomum* and said that we must no longer regard it as a mutilated or aborted ovum of the *Schistostomum hæmatobium*, but rather as a distinct species to which he gave the name *Schistostomum mansoni* in honour of Sir Patrick Manson, who some years ago put forward the theory that the two were distinct.

4. One other form of verminous dysentery has been reported by Strong of Manila. This case was due to infection by *Rhabdomena intestinale*. Mauson in his latest edition does not regard this parasite as of any pathological significance. In Strong's case it was the only parasite present.

We shall turn now to the other great division of the cause of dysenteric symptoms, viz., the microorganismal. Under this head we find that during recent years quite a number of bacilli and cocci have been isolated as the alleged causes of dysentery. I shall first name them and then pass on to consider the more important, especially those which seems to be conclusively proved to be the immediate causes.

*Cocci.* (1). Various pyogenic cocci have been credited with giving rise to dysentery, but it is now generally believed that the part they play is but subsidiary.

(2). Durham's *Micrococcus*.—Durham has described an exceedingly minute micrococcus—so minute that it passed through a Berkfeld filter—which he separated from the blood, liver, spleen, kidney, and bile in seven cases of asylum dysentery. The investigations, however, are so far incomplete, but Manson believes that there are some grounds for supposing that this microorganism may turn out to be the germ of at least one variety of the very fatal type of dysentery, euphemistically called "colitis," which is the scourge and disgrace of lunatic asylums. Should this be so, the fact that the organism occurs in the blood and organs, points to the conclusion that the dysenteric lesion must be regarded as symptomatic of a general infection.

*Bacilli.*—Under the head of bacilli a good number of organisms have been described from time to time. •

(1). *B. coli com.*—Celli and Fioca believed that the ordinary *B. coli com.* in certain environments becomes decidedly pathogenic and sets up an undoubted dysentery. The presence of other bacteria, whether streptococci or others, produces a change in the *B. coli com.* by which it acquires the power of excreting a specific toxin, and it retains this power on being transferred from one person to another. The toxin they allege can be precipitated with alcohol from cultures and has the property of giving rise to dysentery when administered by the mouth, anus, or hypodermically.

(2). However since the discovery of the *B. dys.* by Shiga, Celli has altered his opinion and believes the two to be identical.

(3). *B. pyocyaneus* has also been alleged to be the cause of dysentery. Bertrand and Baucher in epidemic dysentery in France and also in chronic dysentery in warm climates isolated this bacillus. Calmette in a case of acute dysentery in Cochin China found this organism in the stools. In New York in 1898 a very fatal epidemic was traced to infection with this bacillus. In these cases pure cultures were found present in the stools.

(4). Shiga's Bacillus. I-II.

(5). Flexner-Harris.

(6). Vaillard's.

(7). Kruse's.

(8). Duval's.

(9). Dantec's Spirillar Dysentery Bac.—Before going back to the other forms mentioned above I may as well get rid of this last. It was found in 1904 in an epidemic of dysentery in Bourdeaux; the disease differed from ordinary bacillar dys. in there being no elevation of temperature and from A. dys., in the liver not being affected. The diagnosis was made by putting a piece of mucous membrane on a slide. On examining this a grey central part is seen surrounded by a transparent white-of-egg margin. When the central part was teased out, stained and washed, bacilli appeared. Cultures on agar developed bacilli which are negative to Gram. It is possible that these may be *B. coli commune*.

(10). Bacillus Y (Hirs and Ressuele) differs in action on sugars, attacking glucose and manuite, but no effect on dextruce and lactose.

(11). Bacillus "S."

With some minor variations Shiga's No. 1 and No. 2, Flexner's, Harris', Kruse's, Vaillard's, are all evidently varieties of the same bacillus, which is allied to the *B. coli com.* and *B. typhosus*. It was thought at first that they were different one from another, but all the latest evidence goes to prove that they are identical. I shall therefore content myself by giving the description of Shiga No. 1 and point out some of the differences in culture between it and the others as I proceed.

It is a short rod with rounded ends, about 1 to 3 microns in length. It does not form spores. It is motile in recent cultures from stools, but gradually loses its motility in subcultures. It possess from 2 to 6 flagella, which are mostly terminal and are rather thick and short. Vaillard's bacillus is rather shorter, but possesses numerous fine reticulat-ed long and readily seen flagella. Flexner's bacillus is possessed of long thick terminal flagella, and Kruse's has usually only two terminal flagella.

In a growth on nutrient agar it is semi-opaque, but more transparent than typhosus. It is interesting to compare the appearances of agar cultures of coli, typhosus, and dysentery bac. We notice they have the same order of opacity. Thus coli is the most opaque, then comes typhosus, and then dys. It is easy to distinguish the three when you have the cultures present. Shiga's No. 2 differs from Shiga's No. 1 in having a peculiar odour. Flexner's, Vaillard's, and Kruse's all possess the same peculiar odour called by the Germans *spermgeruch*. In gelatine stab culture Shiga's is like typhosus, except that the film which spreads out from the puncture in the latter is usually absent. Shiga's No. 2 differs from No. 1 in not being visible for 48 hours, and then being only a slight white growth. All these bacilli differ from the *Bac. coli com.* in not producing indol in a peptone and salt culture

medium. There is also an appreciable discharge of color in the neutral red shake, whereas *Bac. coli com.* gives a yellow color and develops gas-bubbles.

With Litmus milk the medium becomes faintly acid, but no clot forms.

It is a negative Gram bacillus.

Dorr has pointed out that Shiga's *Bac. No. 1* and *2* produce a truly soluble toxin, while Flexner Harris's does not. He says the poison can be detected in bouillon cultures from the earliest stage and can be extracted from gelose cultures by means of normal saline solution. The degree of toxicity varies with the strain and in bouillon cultures with the alkalinity. The toxin is not excreted by the liver.

It will be seen from the above short comparison that there is little important difference between the various strains of dys. bac.

Chantemesse and Widal dispute Shiga's claim as the discoverer of the *Bac. dys.*, as they say they announced it as early as 1888. It was Shiga, however, who proved that dysentery could be communicated by this bacillus and thoroughly established its identity.

Shiga pointed out—

1. That it occurred in all cases of bacillar dysentery.
2. That it occurred only in dysentery patients and not in healthy people or patients suffering from other bowel complaints.
3. Its occurrence corresponded with the disease.
4. It was found abundantly in the deeper layers of the intestinal wall.
5. It agglutinated only with the blood of dysenteric patients.
6. The bacilli or their toxins produce hæmorrhagic effects.
7. It is killed by heat, and produces inflammatory effects in healthy patients.
8. Pfeiffer's reaction is well developed by convalescent dysentery serum.
9. Serum is prophylactic and curative.

Shiga inoculated himself with an agar culture killed at 60°C. Severe local symptoms set in, which ended in nine days in an abscess. Ten days after inoculation his blood gave agglutination.

He pointed out that the prognosis of a case depended on the site, and also on the method of treatment.

|                    | THERAPEUTICALLY. |         |             | SERUM. |         |             |
|--------------------|------------------|---------|-------------|--------|---------|-------------|
|                    | Cases.           | Deaths. | Percentage. | Cases. | Deaths. | Percentage. |
| Sigmoid and rectum | 62               | 6       | 9.7         | 80     | 2       | 2.5         |
| Colon descending   | 94               | 49      | 52.1        | 90     | 8       | 8.8         |
| Colon transverse   | 4                | 4       | 100         | 5      | 0       | 0.0         |
| Colon whole        | 17               | 15      | 88.2        | 8      | 6       | 75.0        |
| Large and small    | 1                | 1       | 100         | 10     | 4       | 40.0        |

Thus with serum treatment the percentage of deaths in the whole series is 10.3 as compared with 40.3 in those treated with ordinary methods.

“The above table goes to show that the prognosis depends upon the localisation of the dysentery. When the disease is confined to the rectum or the sigmoid flexure the prognosis is favourable. When it rises to the transverse colon, the ascending colon or the small intestine, the prognosis is very unfavourable. The higher in the intestinal tract the seat of the trouble, the more guarded must the prognosis be. The first principle in treating dysentery therefore is to prevent the upward spread of the inflammatory process by means of purgatives and enemata.

“Symptoms of involvement of the nervous system and other signs of toxæmia do not, as a rule, appear until the upper portion of the large bowel or the small intestine itself are attacked. These nervous manifestations are of grave significance, for such cases generally end fatally. But even under such conditions the serum treatment is not without some beneficial effects; it is at any rate more efficacious than drug treatment, as reference to the following tables will show.

| SYMPTOMS.                | DRUG TREATMENT. |         | SERUM TREATMENT. |         |
|--------------------------|-----------------|---------|------------------|---------|
|                          | Patients.       | Deaths. | Patients.        | Deaths. |
| Nervous symptoms         | 30              | 25      | 22               | 11      |
| Vomiting                 | 24              | 20      | 16               | 9       |
| Singultus                | 13              | 11      | 9                | 8       |
| Pain in epigastrium      | 12              | 11      | 15               | 7       |
| Sub-cutaneous hæmorrhage | 8               | 7       | 1                | 1       |

In the last number of the *Philippine Journal of Science* to hand on Monday, 13th instant (April), Bowman refers to another form of bacillus which he calls Bac. “S” which he isolated from cases of infantile dysentery which prevailed in epidemic form in Manila during the autumn of 1907. The bacillus is somewhat smaller and more delicate than Bac. coli. Its motility is quite marked and is of a wriggling and twisting character. Coagulation is delayed in milk and the litmus present is completely reduced. It forms no gas with lactose-litmus, and there is profuse growth. The indol reaction is negative. Experiments on guinea-pigs and rabbits proved its pathogenicity. However experiments to show the presence of toxins in the filtrate of living cultures were negative. Experiments with suspension of killed cultures were also made, and were negative. Agglutination tests were positive. Bowman's summary and conclusions are as follows: “During the past summer, especially during the months of July and August, several severe cases of infantile dysentery developed in Manila. A bacillus was isolated which

culturally and morphologically resembled in some ways *B. dysenteriae*; in other *B. coli* and *B. typhosus*. The specific agglutinins developed in animals through inoculation of this bacillus did not react with *B. dys.*, *B. coli*, and *B. typhosus*, but organisms isolated from three other cases of dysentery were agglutinated in high dilution; each by the specific serum of the other. Serum from one patient agglutinated the bacillus isolated from the same patient, yet did not agglutinate other organisms from the same patient. From the above observations and a search through the literature we are led to believe that the bacillus isolated has not hitherto been described as one of the exciting factors in dysentery. The specific characters of the serum of one of these cases and of that from rabbits immunised against Bac. "S" seems to show conclusively that this bacillus was the cause of the epidemic of infantile dysentery which has been described."

As far as I can gather there seems to be some difference of opinion as to the relation of bacillar dysentery to liver abscess. Liver abscess is usually associated with the amœbic type of dysentery, but while most observers say that you never get liver abscess with Bac. dysentery (amongst these is Shiga), others say that it occasionally occurs. Morgenroth writing in 1904 says he believes that liver abscess occurs independently of the presence of amœbæ, and also considers that liver abscess occurs more frequently in connection with Flexner's than with Shiga's Bac. dys.

It will be interesting for a few moments to consider some of the differences between the two main forms of dysentery, viz., *amœbic* and *bacillar* without, however, going into details.

They are only similar in one particular and that is the *site* affected, viz., the colon. With the exception of Morgenroth, whom I have quoted above, it is generally believed that Bacillar dysentery leaves no other lesions behind save its effect on the mucous membrane of the colon and enlargement of the neighboring glands, e.g., in acute cases where death has occurred on the 4th to 7th day the mucous membrane of the large intestine is swollen, of a deep red colour, and presents elevated coarse corrugations and folds. Spots of hæmorrhages occur scattered through the swollen mucosa. Over the surface usually is a superficial necrotic layer which can be brushed off lightly with the finger. It may be in patches or may be uniform over whole areas. No ulceration; only superficial general necrosis of the mucosa. The solitary follicles are swollen and red. The inflammation may extend through all the coats of the bowel, and the serous coat may be deeply injected. (Osler.)

When we turn to the amœbic form of the disease, however, we find a very different picture. The lesions consist of ulceration produced by preceding infiltration general and local of the submucosa due to œdematous condition and multiplication of the fixed cells of the tissue. They first appear as hemispherical swellings, which ultimately necrose, exposing the infiltrated submucous membrane as a greyish yellow gelatinous mass which at first forms the floor of the ulcers and is finally cast off as a slough (Osler). We thus see that in the amœbic form ulcers are the prominent feature, whereas in the bacillar form it is a general superficial necrosis. Liver abscess is a frequent sequence of the amœbic form and rarely if ever follows the bacillar form.

The blood of patients suffering from bacillar dysentery will agglutinate the bacillus of the corresponding strain. Whereas the blood from a patient with amœbic dysentery will have no effect on any of the bacilli above mentioned. According to Shiga the agglutination appears within two or three weeks of inoculation with the disease, and reaches its highest point during convalescence. Often, however, it is poorly marked in the course of the disease. It is, however, of some value and the blood of all patients suffering from a prolonged attack of diarrhœa should invariably be tested with several strains of the bacillus and the stools subjected to a microscopical examination.

#### PROPHYLAXIS.

With regard to the prophylaxis of this disease it is held that patients suffering from the disease, whether *amœbic* or *bacillar* in form should be isolated. All clothing should be thoroughly disinfected. I have mentioned in the earlier part of the paper in reference to amœbic dysentery that the spores are very resistant and retain vitality for a long time, and besides we gather from Schaudinn's experiment that spores in water are much more liable to give the disease than even fresh fœces. Quinine is the best disinfectant to use to kill these spores. With regard to bacillar dysentery the organisms too have considerable vitality. They will live on clothing for at least three weeks, and are said to maintain their virulence in damp soil for months. When spread on bread-crumbs, or similar articles of food, they survive for about a week. They are, however, easily destroyed by heat or by weak solutions of perchloride of mercury, or the higher phenols.

The stools of all patients suffering from dysentery should be thoroughly disinfected and if possible incinerated.

One recent investigator thus sums up his conclusions: "In the light of recent work, I submit that all cases of diarrhœa occurring in the

tropics should be treated with the same precautions as if they were manifest cases of dysentery, and in hospital should invariably be isolated and their stools sterilised in some simple form of steriliser or by means of disinfectants."

#### TREATMENT.

With regard to treatment I do not intend to say much. The ordinary medicinal treatment is known full well to all here. I shall just point out some important principles of treatment without going into details of methods. The first important thing to bear in mind is that REST is an absolute essential, whether it is the *amœbic* or *bacillar* form of dysentery we are called on to treat. *Rest in bed for the body and rest for bowel* as well. Therefore give the bowel little to do, and let that little be easily done. Hence the importance of the second principle. *Easily assimilable and at the same time nourishing food* and as little as possible. The third important factor is to keep the patient *warm* and avoid all risk of chill.

Medicinal treatment divides itself under two divisions. Medicines *by the mouth* and medicines *per rectum*. With reference to these I need say nothing. We are all familiar with the ipecac treatment, the saline treatment, the antiseptic treatment, etc. I merely wish to add that quinine enemata are a specific in amœbic dys. and I have found that tannic acid is also of great use.

*Surgical Treatment.*—In the last few years it has been advocated that a modified colotomy should be performed in Chr. dys. The method is simply to make the ordinary incision in the right iliac region for appendectomy and bring the appendix to the surface and fix it in the abdominal wound. A few days later it can be opened and a catheter put in position, through which the bowel can be flushed out with large quantities of suitable fluid. A tube is placed in the rectum so that distension does not take place.

*Serum Treatment.*—As one would expect after a bacillus, especially one allied to the typhoid bacillus, had been isolated as the cause of dysentery, attempts have been made to prepare a prophylactic and curative serum. Several such have already been brought before the notice of the profession.

In 1903 Kruse prepared a serum. He experimented on guinea-pigs which he infected and then serated with good results. In man he had only one death in nineteen cases (5.2 per cent.) He contended that "serum therapy modified the severity of the disease, shortened the

duration of the convalescence, and lessened the mortality." Shiga also prepared a serum. On heating it he found that it became inactive, but found that normal horse serum would reinactivate it, and also a much more interesting fact that normal human serum produced a similar result. It is interesting to note that this is the first bactericidal serum which has been found to be activated by man. Patients treated with this serum were rapidly cured, or the condition was markedly ameliorated. In advanced inflammatory states the number of stools was reduced and a cure effected in two or three days.

As pointed out above, in a series of his cases treated with serum as compared with cases treated in the ordinary method, the proportion was 10.3 per cent. to 40.3 per cent. deaths.

In 1907 Vaillard and Dopter produced a curative serum by subcutaneously injecting horses with living cultures and toxins of Shiga's bacillus. In experiments on rabbits the serum possessed preventive powers, but the immunity only lasted ten days. Injected twenty-four hours after inoculation with culture it exercised curative effect, so that it is at once anti-toxic and anti-microbial. They employed this serum as the only curative agent in 96 cases of human dysentery (50 of these were mild, passing 15 to 20 stools a day; 18 were severe, passing 30 to 80 stools a day; 24 were dangerous, passing 80 to 150 stools a day; 4 were looked upon as fatal, passing 150 to 230 a day.) Only one death occurred. The efficacy of the treatment was shown by the following facts:—

1. There was an almost immediate action on the local and general condition. Some hours after injection colic and tenesmus disappeared or diminished, though in the most serious cases the improvement was delayed for 24 to 48 hours. The dejecta ceased to be bloody. The number of stools diminished promptly, and the material became more natural and the general condition improved.

2. Rapidity of the cure. The mild cases were cured in from two to three days. The more severe were cured in from four to six days.

They found the effects were greater the earlier the treatment was adopted. The dose to be administered should be: in mild cases, 20 c.c.; in grave cases, 30 c.c. If not relieved in twenty-four hours repeat the dose. In serious cases 40 to 60 c.c. may be administered and repeated on successive days. If necessary 80 to 100 c.c. may be given.

I have done my best to fulfil my intention of bringing before you the most recent developments in connection with this all-important subject of dysentery, and trust that my efforts have not been altogether in vain. I hope that we shall all try and be a little more scientific in

our diagnosis of the various phases of this complaint which is of so much importance to us who practice in the tropics. Some expression of opinion as to the relative frequency of the various forms would be of advantage to us this afternoon, and also any experiences which you may have had in the most recent methods of treatment.

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## A POST RECTAL TUMOUR.

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By CECIL J. DAVENPORT, F.R.C.S., Shanghai.

The accompanying photograph, taken by Dr. Cousland, clearly depicts a very interesting case seen at the "out-patients," Shantung Road Hospital. Patient, a young man of 24, well nourished and in good health, presented himself for treatment owing to the inconvenience of having such a large swelling on the buttock. Apart from the inconvenience, and the feeling of fullness and aching before defæcation, and the fact that one or two superficial ulcers, caused by native treatment, constantly discharged watery pus, the patient had nothing to complain of.

He said that the tumour began to grow from babyhood.

The points of extreme interest about it were : (1) that he stated his father was similarly affected, (2) a very marked impulse took place on coughing. The whole mass felt like a large protrusion of the bowel, but no part of it could be replaced by pressure.

Examination by rectum showed that the bowel was normal and apparently formed no part of the tumour.

The sacral bone showed no traces of being bifid, though the coccyx was considerably everted and turned to the side. The walls of the tumour for the greater part felt thin and elastic. A thick irregular, oblong plate of bone occupied the posterior wall to the extent of about  $4 \times 3$  inches. Over this plate of bone the skin was thickened and bossy. No hair grew on the skin. Operation was thought inadvisable. The diagnosis lay between a teratoma and a dermoid, the tumour had evidently started from the inside of the pelvis, behind the rectum, within the hollow of the sacrum. I am inclined to think the growth was of the nature of a dermoid.

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**A CASE OF PELVIC DERMOID OBSTRUCTING LABOUR.**

By JAMES L. MAXWELL, M.D., Tainan, Formosa.

B., age 28, multipara, a heavy opium smoker, was admitted to the Tainan hospital on March 2nd, 1903.

Two previous pregnancies: (1) Four years before an easy labour at full term. (2) Two years before, ending in a miscarriage at the 5th month. No evident cause for miscarriage, and convalescence therefrom normal.

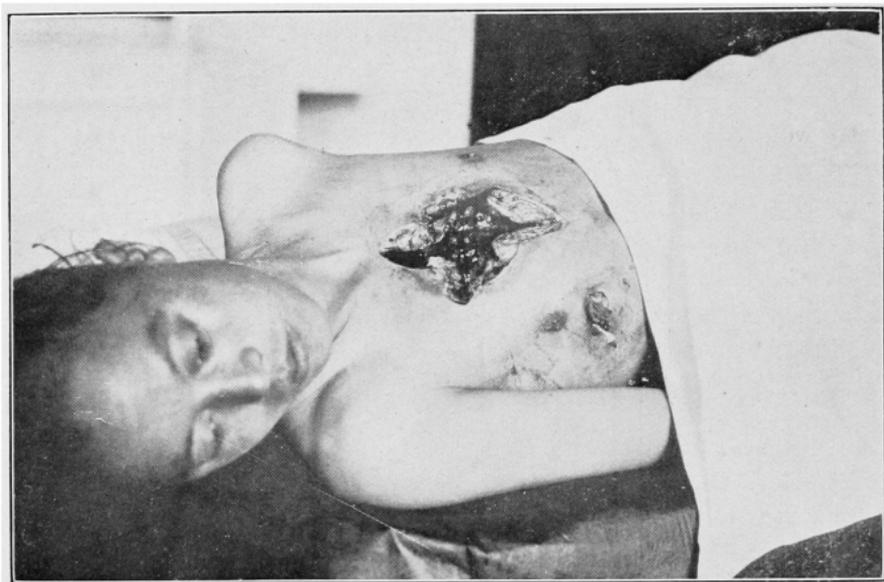
Present pregnancy appeared normal up to the last month, during which she suffered from much abdominal pain, for which she could not account. Labour commenced 24 hours before I was asked to see the case; the membranes had ruptured for 12 hours and the pains, good at first, had now become infrequent and weak. An attempt with forceps to extract the child had failed, as also had two attempts to perforate the head! No fetal movements could be felt or heart sounds heard.

*Per vaginam.*—Head presenting in the transverse position, face to mother's right, left hand by the side of the head, which was not engaged in the true pelvis. Preventing the descent of the head was a large mass, soft and doughy in Douglas' pouch, pushing the head forwards.

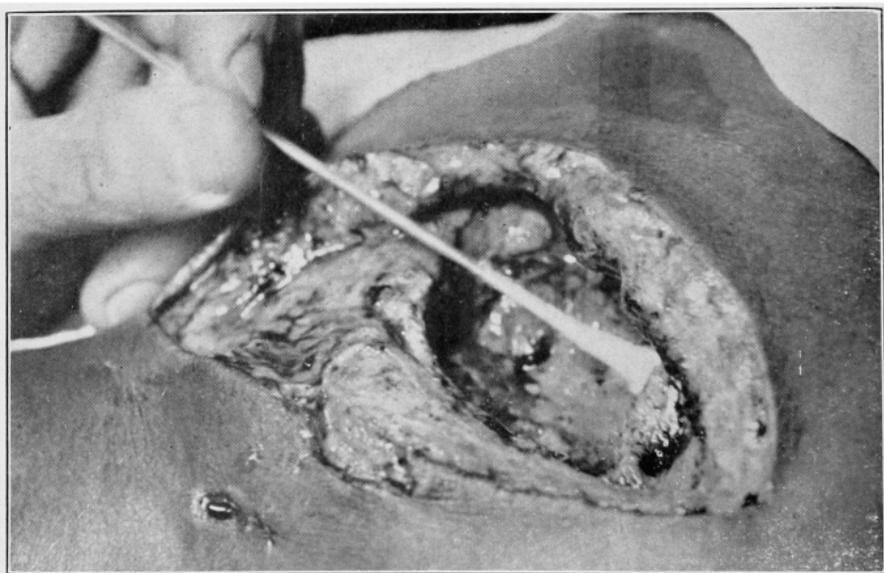
Patient was moved into the hospital and, under chloroform, a trochar was introduced through the posterior wall of the vagina into the swelling, and a small quantity of thick pus escaped through this. The trochar opening was enlarged till the finger could be passed through the opening and a large quantity of dermoid material was thus removed. By pulling on a long lock of the hair, a large mass was brought down, ligatured and cut off. This proved to be a breast-like protuberance, from the nipple of which the lock of hair grew; with this was another mass of tissue in which was imbedded bone and tooth-like masses of cartilage.

As the pains were now beginning to return and all the hair and poultaceous material had been removed, I washed out the cavity with hot lotion and turned my attention to the child.

As the arm was now right down by the head it was decided to extract by internal version, which was easily accomplished. There was no bleeding. The placenta appeared to have been separated from the uterine wall for some time, the child was quite dead. No douche was given. On the third day a vaginal douche was given, as the lochia were a little foul. Convalescence was much interfered with by an attack of



Complete resection of the Sternum, at first dressing.



Resection of Manubrium, at first dressing—Looking from the neck toward the feet. The probe is resting upon the arch of the aorta.

"opium smoker's dysentery." Owing probably to this cause there was a good deal of irregular fever and abdominal tenderness for ten days after delivery. The uterus followed the usual course of involution and was never itself tender to the touch.

Four weeks after delivery I examined the patient and found the vaginal wound healed, but a large mass still present in Douglas' pouch. Patient refused to remain longer in hospital.

On May 4th, 1903, patient was readmitted, complaining of much pain in the pelvic region and irregular fever; she appeared to be in a very weak condition. On examination a large fluctuating mass was felt in Douglas' pouch. This mass could also be felt per abdomen.

Patient was anæsthetised again and an incision was rapidly made in the mid-abdominal line to see if the cyst could possibly be tackled per abdomen. However the bowels were found to be densely adherent all over the cyst, whose actual wall could nowhere be seen. The incision was therefore immediately closed and the operation continued per vaginam. A free incision was made into the posterior vaginal wall and the cyst reopened; a large quantity of pus being evacuated. The cyst was then well washed out and a careful search made for more dermoid material; none, however, could be found. With a sharp uterine curette the whole of the inside wall was then vigorously scraped; great care being taken to reach if possible every corner of the cyst. The edges of the incision were drawn down and stitched to the vulva and a very large drainage tube inserted. The drainage tube was removed after a week and the patient left the hospital on 9th June with only a little thickening of the posterior vaginal wall to mark the site of the cyst. During her second stay in hospital the patient gave up opium, and I saw her a year or so later in perfect health and complaining of no pelvic trouble whatever.

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## RESECTION OF THE STERNUM.

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By W. H. JEFFERYS, A.M., M.D., Shanghai.

Affections of the sternum seem to make very little impression on medical literature. Among the standard text-books allusions thereto are few and far between. Certain references are made to necrosis, secondary carcinoma, gumma, and so forth; curetment, drainage, etc. are recommended in an indefinite way; but for the surgeon who is looking for help and suggestions, there is little of either. Within five years I have dealt with four cases of necrosis of the sternum: one of the

left sterno-clavicular articulation, cured by curetment and drainage; one of superficial necrosis of the manubrium, which left hospital before results could be determined. The two other cases are here reported.

Zi Pah-ling, age 27. Prisoner. Admitted 31st October, 1907, from the Municipal gaol. Patient was sent in by the Health Officer for operation. The history is as follows:—

About six months previously, patient had received several blows from the butt of a rifle on the upper part of the thorax. There was no marked discomfort at the time of the injury, with the exception of occasional coughing and slight pain over the chest. Three months later a small, fluctuating swelling was noted over the upper part of the sternum. This was incised, but no pus obtained. The incision did not heal and a sinus formed. It was afterwards enlarged and pus obtained. On admission two or three small sinuses were leading down to the manubrium, which was covered with unhealthy-looking skin. Patient had slight expectoration, but no t. b. November 5th a crucial incision was made over the length and breadth of the manubrium, which was removed in four or five large necrotic portions. The gladiolus was not involved, nor the clavicles. The posterior periosteum was necrotic and a large abscess was found in the superior mediastinum. Four or five table-spoonfuls of necrotic lung tissue were removed from the left side; the cavity was carefully wiped out, and when cleansed the finger could be placed upon the following structures: the ascending and transverse aorta, the innominate and common carotid arteries. Pulsation of the auricles could be distinctly felt, and there was a cavity in the left lung, the size of an apple. This, however, was protected by a granulating wall, so that air did not pass in and out. The entire cavity was packed with gauze, which was changed on the second day, when the photograph was taken. It shows the large wound, but gives little idea of the depth thereof. The costal ends on both sides are visible, and one of the sinuses, which pointed in the root of the neck, is seen. The bright spots in the depth of the wound are reflections from moist granulations already springing up on the aorta. Even at this early date the cavity had begun to fill, and showed every sign of doing nicely. On the 16th November an excess of scientific zeal revealed the presence of ankylostomum eggs in the stool, and in order to improve the patient's general condition the following were given:—

|           |                             |
|-----------|-----------------------------|
| 7 a.m.    | 30 grains thymol.           |
| 8 a.m.    | 20 " "                      |
| 8:30 a.m. | 1 ounce magnesium sulphate. |

The patient was taking at the same time a mixture of nux vomica and whiskey t. i. d. Within twelve hours patient developed intense headache, some cyanosis, slight wandering delirium, nausea, and, later on, stupor. These symptoms progressed for four or five days, when the wound began to show signs of glazing and drying, and the patient died on the 26th November, badly cyanosed still and with every sign of meningitis. I attribute the death to the administration of even this reasonable dose of *thymol* in the presence of the amount of alcohol contained in the whiskey mixture, and believe that, except for this accident, I should have to report the successful result of one of the most remarkable surgical conditions I have ever seen.

Tsang Zau-ding, age 23. Farmer. Admitted December 19th, 1907.

History.—About a year and a half previous, on the front of the upper sternum there appeared a moveable tumour about the size of a walnut. Its first manifestation was quite sudden; no pain or feeling of discomfort. It soon ruptured and discharged its purulent contents, and the surrounding tissues began to show signs of involvement. The skin was unhealthy and glistening, new sinuses developed, and so on. The patient was delicate looking, anæmic, had slight expectoration, but no t-b. On December 20th, under chloroform, a median incision was made the entire length of the sternum, which was completely removed, being found more or less necrotic throughout. The anterior ends of two or three ribs were also removed. Sinuses were found running behind the sternum and leading in various directions, but the posterior periosteum was not broken through. At first, and for several days, great difficulty in respiration manifested itself, until complete abdominal respiration became established. Slowly the cavity filled and the chest collapsed by contraction until the ends of the ribs came together in fibrous scar union. Respiration became entirely abdominal and remained so; the chest heaving very slightly under effort. Patient's general condition improved immensely; he became plump, with good colour, and other signs of generally improved health. There still remained the sinus apparently from the fourth rib on the right side, which will need later treatment, and possibly a couple of points at the rib ends will also need curetting. But at this time (May 14th, 1908) the patient's condition is excellent and the prospect of a cure is pleasing.

The photograph of Case II was taken also at the first dressing. The lateral extensions of the wound were made to deal with the ends of the ribs.

Whether these cases were tubercular in origin, or otherwise, is not quite clear. The Chinese farmer uses long-handled, heavy tools and may be supposed to press with his chest in the course of his labour in such a way as to bruise the bone. The prisoner has clearly the history of pre-sternal injury. Neither patient showed t. b., though both had coughs and expectoration.

There is no difficulty in the performance of the operation ; serious as it is, and in spite of the collapse of the chest following thereon, there is precisely the same indication as in deliberate collapse of the chest produced in extensive resection of the ribs in chronic pleurisy. A necrotic bone is its own indication for removal, and no matter what its site may be, if it can be reached by human means, it is better out than in. I have come to this conclusion with relation to necrosis of the pubis, which I have seen several times and which required extensive removal and was followed by collapse and mobility of the pelvis, but I cannot imagine that a necrotic pubis would by any one be considered better than none. I shall hope to develop this interesting point in a later report on necrosis of the pubis.

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### THREE INTERESTING CASES. OPERATIONS DONE IN 1898 AND IN 1899. HOPE HOSPITAL, AMOY.

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By J. A. OTTE, M.D.

Case No. 4,274. Male, age 36. Fibrous epulis involving the whole of the ramus of the lower jaw on the left side and a part of the right side. The tumor filled the cavity of the mouth, pressing the tongue back into the pharynx. It completely prevented mastication and interfered with articulation and deglutition.

On December 24th, chloroform was administered, a laryngotomy performed, and a tracheotomy tube tied in. The pharynx was now filled with a sponge, after which the tumor was removed. After making the usual external incision the right ramus was sawn through with a chain saw about one-half inch in front of the body ; the rest of the bone was then dissected with the tumor attached ; the left side of the jaw being disarticulated. A thread was then inserted through the tip of the tongue in order to draw it out in case it should fall back. The external wound was sewn up with interrupted catgut sutures, reinforced by four hare-lip pins. The root of the tongue was carefully stitched to the structures back of the chin.

The tumor had completely absorbed the bone where it was attached, except its outer plate. It measured four and a half inches in lateral diameter, four inches in antero-posterior diameter, and was three and a half inches thick. The teeth of the left side had been pushed over and lay on those of the right side.

After the operation it was deemed necessary to inject two quarts of normal saline solution subcutaneously. Rectal alimentation was necessary for two days after the operation. On the second day the tracheotomy tube was removed. The temperature never was above 99. Four days before the end of a month the external wound was entirely healed.

Case No. 6908. Male, age 25. Tumor of the naso-pharynx, probably fibro-sarcoma. History indefinite. Has noticed a tumor in the nose for two years or longer. The tumor presented in the left nostril completely filling it. It completely filled the left nasal fossæ, extending backwards and expanding, completely filled up the naso-pharynx, pushing down the soft palate and interfering with deglutition, respiration, and articulation.

On September 20th, chloroform was administered, tracheotomy performed, and three small sponges pressed down into the pharynx. The sup. max. of the left side was then resected and found to be free from disease. Then the tumor, which had a pedicle about three quarters of an inch in diameter, was removed with a chain ecraseur. After it was torn loose, there was considerable difficulty in delivering the tumor, as it was grasped by the soft palate, and being club-shaped was held as in a vise. There was at this stage a great deal of hemorrhage. By pressing the tumor back it was finally delivered and the hemorrhage stopped. If tracheotomy had not been done, I fear the patient would have lost his life at this stage of the operation. He would have been drowned in his own blood. The tumor arose by a pedicle from the body of the sphenoid. Its attachment was thoroughly cauterized. The recovery was uneventful. The temperature reached one hundred in the axilla on the fourth day after the operation. The patient was discharged nineteen days after the operation. Four months and a half after the operation there was no recurrence.

Case No. 8020. Male, age 16. Multilocular Cyst of the Inf. Max.—The patient was a well nourished lad, appearing older than he was. I would have taken him to be at least twenty-two. He had a hard bony tumor, involving the greater portion of the inf. max., viz., the lower part of the right ramus and the whole of the body on both sides up to the insertion of the second molar of the left side. The teeth were in perfect

position, and were all present, except the second bicuspid on the right side, which was wanting. The growth of the tumor was downwards, backward and inward. After removal it was found to be four inches in diameter from right to left, and two inches in diameter through the symphysis, and two and a half inches from above downwards. On the right side of the face was a sinus extending down to the bone, the result of an effort to remove the tumor with caustics. The history was indefinite, but the patient said the tumor had been growing for about two years. There had been no pain, but articulation was becoming indistinct and swallowing difficult. There was no evidence whatever of the tumor being cystic. Indeed, after removal it was found that except from numerous small cysts the size of a pin-head to that of a bean, the whole of the enlarged alveolar process was practically solid, while the rest of the bone was cystic.

On January the 2nd, after a tracheotomy, the tumor was removed together with all of the jaw on both sides, except a small bit near the articulation of one side. On March the fifth, after a slightly protracted recovery, the patient was discharged in good health.

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## ACHONDROPLASIA.

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By Dr. W. E. PLUMMER, Wenchow.

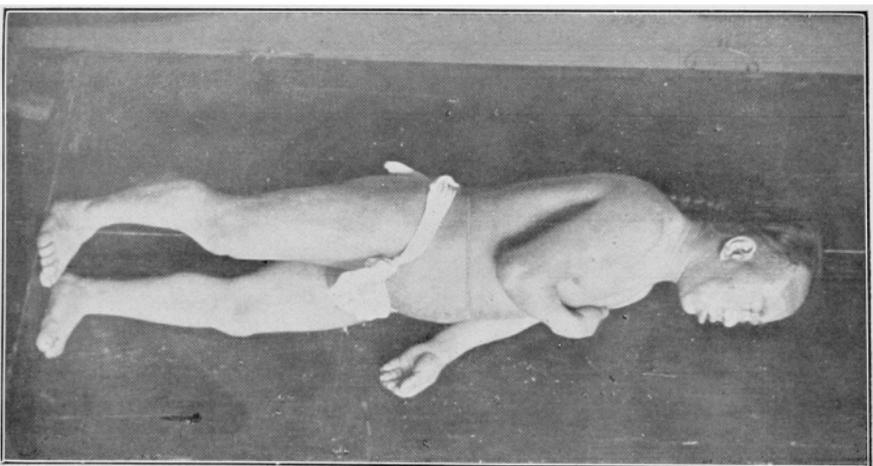
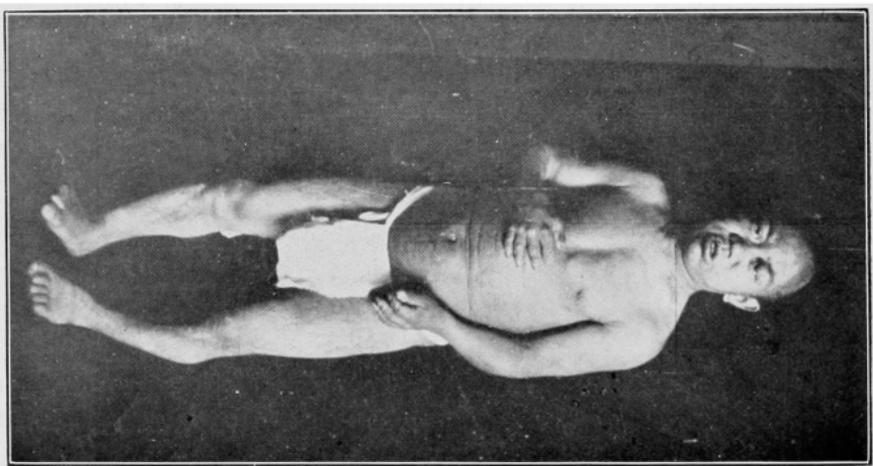
Achondroplasia is a rare disease. In the *B. M. J.* for January 5th, 1907, there are reports of five cases with photos. In the same journal, June 30th, 1906, there is a more detailed account with many particulars not mentioned in the text-books.

The following report is of a patient recently seen in Wenchow. The man was thirty years of age; he came for treatment for his eyes.

Family History.—Mother and four sisters living. The father is dead and also four brothers, who lived from three to five years. All these relations were of a normal size.

Personal History.—The patient was born smaller than the other children. Three years since his eyes inflamed, and immediately after he had gonorrhœa, which lasted for two years.

On Admission.—Intelligence good. Height, 4 ft. 5 inches. Eye-balls prominent. Tension = +1. Vision, R. E. =  $\frac{2}{40}$ , L. E. =  $\frac{1}{40}$ ; no improvement with glasses, media cloudy, no abnormality of the disc or retina detected. The cornea and iris are normal in appearance.



A CASE OF ACHONDROPLASIA.



CASE FOR DIAGNOSIS.

The following list of the differential characteristics of achondroplasia is taken from the paper already quoted in the *British Medical Journal* for June 30th, 1906:—

1. A congenital origin.
2. An abnormally large vault to the cranium.
3. Depression of the root of the nose.
4. Prognathus.
5. Arrested development of the long bones of the extremities, with exaggeration of their normal curves.
6. Normal development of the trunk.
7. Beaded ribs and enlargement of the ends of the long bones.
8. Decentralization of the mid-point of the body, which is invariably and persistently above, and not below the umbilicus.
9. Characteristic appearance of the hands, described by Marie as the main-en-trident.
10. Excess of adipose tissue.
11. Protuberent abdomen.
12. Lordosis.
13. Smooth pliable skin, with abundance of glossy hair in all the ordinary situations.
14. Normal mental condition.
15. A tendency to other congenital malformations, especially high arched palate and inguinal hernia.

In the case now reported most of the characteristics mentioned above can be seen to be present in the photos, and the soft skin, high palate, and normal mental condition were found to be present at the examination. There was no inguinal hernia, and the beading of the ribs was not pronounced.

There is no mention of eye trouble in the cases recorded in the *B. M. J.*, so that in this patient it is probably an accidental complication.

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### CASE FOR DIAGNOSIS.

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By MARGARET PHILLIPS, B.Sc., M.B., Pingyin, Shantung.

In July, 1907, Dr. Jefferys reported in the *JOURNAL* a case of extensive pustulo-tuberculous ulceration and cicatrization of the epidermis of unknown specificity. I at once remembered having seen at least two cases of the disease during my short stay here (both in men), but the language having hitherto required much attention, I had to wait until another case should come to me. The case reported here presents clinical features closely resembling those of Dr. Jefferys' case, with one or two slight though interesting variations which may make it worth recording.

The patient is a man, aged 40, a cattle dealer in the extreme west of Shantung. In the course of his occupation he naturally (in China) comes in contact with many diseased animals. He refuses to acknowledge any previous illness, saying that he has always had excellent health. He has never seen a case similar to his own. He is in fairly comfortable circumstances and lives on the ordinary Chinese diet here—grain (millet, wheat) and vegetables, occasionally meat (though rarely). He is of temperate habits and does not smoke opium. His present condition is good, though he is now, and always has been, a somewhat spare subject. He complains now of a slight degree of anorexia and irregular attacks of pain in the diseased areas of skin.

The disease originated about five years ago as a small red papule on the left shoulder, which broke down and ulcerated, and then began to advance slowly across the chest; the older portions healing as new ones were attacked.

His chest is covered in front with a continuous area of stellated scar tissue extending from the left supraclavicular region obliquely downwards to the lower costal margin on the right side; the whole of the front of the chest being covered also to a similar point on the left side. The right arm is affected around the elbow joint, above and below it. When the arm hangs by the side the upper line of the diseased area corresponds with that on the chest. Below the elbow the disease completely encircles the arm. There is contraction of the elbow to  $70^\circ$ , and the biceps tendon stands out prominently as a thick red cord. There are active centres on the chest, at the left extremity of the affected area, extending round towards the back of the chest, also on the arm at the upper and lower margins of the scar tissue. There are no lesions on the face, or legs, or in any other situation.

The active lesions consist of large red, slightly raised granulating ulcers, covered with a dry crust consisting of serum and pus with here and there slight hæmorrhages. There are no pustules and no vesicles. No scales are present, and there are no scattered patches. There is no itching, or smarting, and no signs of scratching. There is no tenderness, but attacks of pain in the affected skin occur irregularly every few days.

The cicatricial tissue is both white and red, slightly raised above the normal surface, smooth, shiny and thin; in some places drawn into fine creases, in others the red raised cords show a keloid tendency. The effect is to produce a reticulated appearance of the whole of the scarry tissue. I noticed the peculiar slanting depressions that Dr. Jefferys referred to. This case seems to differ chiefly in the absence of any

disease on the face and the reported occurrence of a certain amount of pain, though pain in the Chinese is not always a reliable symptom. A photograph is enclosed, not of much use except to show the general aspect of the patient and the contraction of the right elbow joint. An active lesion is seen on the wrist and a large one on the left side of the chest. The cicatricial tissue, though covering the whole of the front of the chest, is only visible where keloid ridges are prominent. There is no better camera at present at my disposal, so a nearer view was impossible. I am building a hospital and dispensary, and being without assistance, have no time for bacteriological work. Failing to cure a disease of years at one sitting, the patient has naturally not returned, and it seems difficult to get in touch with him again, though I am still hoping to do so eventually. I have no suggestions to offer towards identifying the disease, except that the key to the solution probably lies in the study of the etiological factors common to all such cases, especially occupation, sex, habits, and communicability or otherwise of the disease. In the case reported by Dr. Jefferys it would be interesting and probably illuminating to hear the history of the disease in the husband. I shall note with interest a record of other cases either privately or through the medium of the JOURNAL. Were it only in the investigation of the skin diseases in which China abounds, the medical missionaries of China might find a life work.

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[NOTE—This is evidently the same disease as that reported by me, and I believe that it represents an entity and that its cause will be found to be a yeast. Dr. Plummer's case, reported in the September issue, is probably the same thing.—W. H. JEFFERYS.]



### In Consultation.

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LINCOLN, NEB., August 5th, 1908.

DEAR DOCTOR :—On my return from a month's vacation I find two letters of yours awaiting me here.

I am accustomed to use alcohol as a permanent preservative. Formol is apt to deteriorate, unless the bottle is perfectly corked, and I have had better success with alcohol for permanent use. Any specimens of any kind are acceptable. The big picture of the laboratory is particularly attractive. May I ask if you are the gentleman with the *sunburst* on top of his head or the fellow whose modesty almost carried him out of the picture. [Sunburst.—ED.] You see I am anxious to have you identified properly in personal fashion. I wonder if by any possibility you could get me a print of that picture protected by card board so that it would be in a condition for framing. I should be delighted to be able to hang it on the wall of my parasitological laboratory. It would be the cause of the greatest interest to my students. I am enclosing to you a card made by Blanchard, of Paris, from a photograph which was taken at my solicitation in Boston. It is the collection of parasitologists at the International Zoological Congress.

To secure satisfactory results your worms must really be preserved in different fashion. You will find a solution of 70 per cent. alcohol, plus 10 per cent. glycerine, heated to 60° at the time of using altogether the most satisfactory means of preserving nematodes. Under its influence the worm, if not too much tangled up with other specimens, will straighten itself out and make a specimen good enough for a museum. Tapeworms and flukes may be thrown into hot formol, 1 to 10 per cent., and this need not be changed unless they are held for some weeks. In that event a single change is wise on account of the fact that the fluid deteriorates. They may also be well preserved in a saturated aqueous solution of mercuric chloride, to which has been added approximately 1 per cent. of glacial acetic. In this event they may be transferred to 70 per cent. alcohol any time within two weeks.

We are accustomed to write labels in the carbon ink or drawing ink which is used in making sketches for reproduction by the zinc process. After a label is written with this and permitted to dry we find that it is not affected by formol or alcohol.

I am sorry I cannot give you any better information on a book than herewith. I am hoping to get the manuscript for my own book on

Medical Zoology in preparation for publication this year; if I do not have *too many* good fellows like yourself to write me, I will succeed!

With regards as always,

Very sincerely yours,

H. B. WARD.

P. S.—I am accustomed to place parasites, when collected, in small dishes of warm salt solution. A short stay in this fluid or a little agitation suffices to relieve them of intestinal mucus and to permit the preserving fluid to penetrate. In fact it does no harm to keep them for six or twelve hours in this fluid.

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YUNG-CHUN, June 30th, 1908.

DEAR SIR:—I should like to ask Dr. Aspland why he declines to look upon the three cases as the consequence of sepsis. In cases 1 and 3 amputation was performed through septic tissue, and it is the common thing in such cases to have gangrene of the edges of the incision unless pure carbolic has been widely and freely used. In the second case the stump was "sloughy" and the lymphatics of the leg probably infected for some distance up and gangrene of the flaps in this condition is by no means unknown. There is no objection to amputation in these cases or for the matter of that in true Reynaud's disease. But in Reynaud's disease and cases of gangrene of the toes, where separation is commencing, it is preferable to allow the parts to spontaneously separate and the wound to become covered with healthy granulations. Sometimes the wound will cover over without surgical treatments, in other cases a plastic operation is easy. But all trace of the gangrenous process must have disappeared before this is undertaken, and if there is any doubt about this, the wound should be thoroughly treated with pure carbolic acid at the time of operation. Should gangrene be present, the rule is to amputate far away from the seat of disease, and probably in the second case amputation through the knee joint or a "Carden" would have saved the subsequent trouble. In these cases, however, strong antiseptics should be used and every care taken to prevent infection from below.

I am, yours truly,

J. PRESTON MAXWELL.

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## TOXIC GANGRENE.

[A reply to Dr. A. A. McFadyen's query in July number of the CHINA MEDICAL JOURNAL.]

SUCHIEN, July 23rd, 1908.

DEAR DOCTOR:—In the famine of 1898-1899 in North Kiangsu I treated many cases as described in his letter, and I named the disease "gruns" disease, because at that time I thought it due to eating wild weeds, which we usually call gruns, and not sufficient grain. All the cases at that time were women, although I treated four times as many men in the daily clinic.

I diagnosed the trouble as stomach irritation and treated it as I do stomatitis—C. C. pills, chlorate of potash in fairly large doses, and a pill of gentian, ext. rhubarb and cinchonine later in the treatment. The result is like magic. A patient with eyes swollen shut, by the next morning, will have them fully open, and other swelling correspondingly reduced.

Gangrene never develops if treated promptly, and after treatment there is no advance of gangrene if already started.

The gangrene as I have seen it, is only of the skin.

I had one case with gangrene of the skin of the head and most of the face who recovered. The nose is often gangrenous.

I was so interested in these cases at that time that I wrote about them to the *New York Medical Journal*, and the article was published.

The strange part is I never saw another case, as I remember, until our next famine of 1906-1907. The cases came in numbers, and I still diagnosed it as "gruns" disease, and a short account of it appeared under famine notes in the *N.-China Daily News*. These responded to the treatment as mentioned above, not one, in about 30 cases that I saw, but what recovered in a few days, if seen before gangrene developed.

This spring, 1908-1909, I was forced to change my diagnosis. To my surprise in April the cases appeared again, and no famine to account for it. On inquiry I found it due to a poisonous plant, in all probability the same one that Dr. McFadyen sent you.

The case mentioned in the same JOURNAL by Dr. Shackleton, entitled "More Gangrene from Frost," answers to the description of this poison weed. The hail was an incidental circumstance and covered up the true diagnosis.

I have made no external applications unless true gangrene has developed.

Yours, in the interest of our JOURNAL,

Mrs. B. C. PATTERSON, M.D.

WENCHOW, 31st August, 1908.

DEAR DOCTOR :—Some little time since I sent you notes of a case of skin disease which you will recognise from photo now enclosed.

If you think the case worth publishing, will you kindly add "that the patient called four months after leaving the hospital and reported himself as quite well and all the ulcers healed. He left the hospital shortly after the ulcers had been scraped, using boracic ointment dressings.

Yours sincerely,

W. E. PLUMMER.

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RENSHEO, July 4th, 1908.

DEAR DOCTOR :—I send you herewith a specimen, which I wish to submit to your experienced judgment for recognition. A patient with all the signs of Ankylostomiasis came in for treatment. His fæces showed eggs like those of *Ankylostomum duodenale*, except that they were very pale, so much so that I almost overlooked them after examining a number of slides.

Oil of eucalyptus the first day brought away six of these creatures. Thymol the second day and a repetition of the eucalyptus on the third did not bring any more and at no time could I find the typical *A. duodenale*.

Four of the six were alive and all were transferred to a watch glass of water. Next day three were living and the others had disappeared, the third day only two were alive and the other had also disappeared, I believe eaten by his surviving relatives. In size they were slightly longer than *A. duodenale* and about the same breadth.

There seems to be a distinct division into twelve sections ; all, except the second and third, being bright red in color. The second and third are light green.

The first section, the head, is smaller than the rest of the body and is freely moveable on a sort of neck. It is provided with a pair of "antennæ" near the end of what might be called the lip, and another pair farther back and wider apart. Along each side of head, and also on the second segment, are arranged long filaments looking like hairs. The lower jaw is provided with a row of teeth. On the ventral surface of the second section there is a short stumpy protuberance covered with hooked bristles, which seemed to assist the creature in grasping any object.

The last segment divides into two cone-like structures, which moved freely. These are provided with sets of claws, and when the creature has grasped any object the tail curls up, and these claws assist in rending it. The action is quite vicious looking.

Between these cone-like structures are two pairs of club-like processes, while anterior to these and upon the sides of the last section were three more pairs of these club-like processes. These seemed to take part in locomotion. On the dorsal surface at the end of the tail are two small knobs, each surmounted with a few long filaments. They look like a couple of hairy warts.

The creatures were very active in the water, and the activity increased when they were placed in a strong light.

It is alarming when looking for the quiet little *A. duodenale* to discover a vicious looking creature like this, and my curiosity has been aroused. My literature on the subject is limited. It may be that they are just some wanderers who came along to puzzle a very inexperienced observer.

I shall feel greatly obliged if you can enlighten my obscurity.

Yours very sincerely,

JAMES R. COX.

P. S.—If this is only some “ordinary garden creature” please don't occupy good space in the *JOURNAL* with it.

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CHEMULPO, Korea, August 7th, 1908.

DEAR DOCTOR :—Many thanks for your letter just received. I am glad to get confirmation about *Opis. sin.*, but the worst of it is that my earliest communication to the *JOURNAL* saying that I had found *Schyst. jap.* is thereby invalidated, as it was this same egg which, from pictures, I mistook. I fear that any one who wanted to write about *S. j.* might quote my letter of the past and say that it is found in Korea, which may be true, but is not proven. There is no doubt that *O. s.* is common here. I have found it in many cases, all Koreans, though not often in this quantity, and think I have probably overlooked it in many more, as it requires more search than the more usual larger kinds, and I am not always very careful, especially as my earlier work was done with thicker films, than I use now, and small eggs were easily missed. The method I described to you makes the films nice and thin, and I am much less likely to overlook things now.

Concerning this same method I have lately been mounting the films after drying in formalin as suggested in the *JOURNAL*, and find that

while I get very nice results for hard eggs, ankylostomum tend to shrivel and do not look nice, and it has occurred to me that it can be improved by making the film, butter side up, as before and examining it, and if it is worth keeping putting a drop of dilute formalin onto a clean slide and transferring the film face down to it at once before drying, so as to keep it always moist and then ring it with balsam. I have not had a chance of trying this with ankylostomum since thinking of it, but there can be no doubt that it is at least as good as letting it dry and ought to have advantages, so I hasten to mention it, so that if not too late you can amend the note you make of it in the JOURNAL by the addition of this point. The only possible objection is that the eggs will be floated about and will not be in the same places as when first examined, but they will all be there, so that does not really matter.

*Re tricho. dis.*, he is said to do no harm, and this may be so, but at least one of mine when passed was as full of blood as is ever an ankyl.

I am afraid I rather agree with you about my large eggs being distom. ringer. and I fear that he may not even have swallowed the sputum, but spat into the motion, as I cannot trust my boys to prevent that sort of thing. I am sorry to say that not having a really scientific mind I did not investigate that point or his sputum, and though the idea you mention did occur to me later he was then gone and I could not test it. I may say, however, that I did not always find the eggs, but did so whenever there was some bloodstained mucous in the stool, which supports the view.

Yours truly,

HUGH H. WEIR.



## Reports of Customs Surgeons.

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### REPORT ON THE HEALTH OF KONGMOON FOR THE SIX MONTHS ENDED 31ST MARCH, 1908.

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By Dr. JOHN A. McDONALD.

The report for this port must necessarily be brief, as the author has not been able as yet to become acquainted with all local conditions.

The port, which is on the main branch of the West River, is distant from the city proper about two miles. Though it is surrounded by villages we are free from the odors, etc., common to a Chinese city. The country round is for the most part given up to mulberry production. There are a few gardens and paddy fields. The same system of mulching is used as elsewhere.

The houses occupied by the foreigners are on a fairly high piece of land. It has, however, been flooded. The system of drainage is on the whole poor. A system of sluices are laid at a short depth below the soil. The new Customs buildings must be excepted. There open drains are used. Some of these empty into small canals running past the houses, the others into the river. At high tide these are not properly emptied, and of course there is no means of flushing. For a while the above mentioned canal was quite offensive owing to the practice on the part of a few of dumping night soil into it. Lately this has been stopped.

The drinking water is obtained from the river. This is not as bad as it might seem, for there is, as a rule, a swift tide flowing by.

The rainy season and heat extended into October. This spring we have had bright sunny days to take the place of the customary dull damp ones. This of course has been beneficial to the health of all.

Measles and whooping cough, both of a mild type, have been prevalent among the children. Apart from these the general health of the foreign community has been good. Small-pox has broken out, but so far is limited to the boat population.

Of the cases which have come to the dispensary for treatment the larger number have been for eye troubles. Many of these were hopelessly blind. In a number of the cases of ulcerative keratitis a history of small-pox as the origin was obtained. Granular ophthalmia is common among the boat people. Several cases of cataract have been seen. Two of these were under seven years of age. Operative treatment has,

owing to lack of accommodation, been limited. The question is, What can be done to prevent such loathsome eye troubles as present themselves?

I have not been able as yet to confirm the report that vesical calculus and malaria are common in this district. I have very good authority as to the veracity of the former.

An interesting case of erythema multiforme bullosum fell to my lot. When first seen the patient's body was covered with large purplish blebs. The mucous membrane of the mouth and conjunctiva were also affected. Though weak the patient showed no other objective symptoms. The treatment given was sodium salicylate with occasional doses of magnesium sulphate.

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RAPPORT MEDICAL POUR DE PAKHOI.—OCTOBRE,  
1907—MARS, 1908.

Par le Dr. R. ASCORNET.

Nous n'avons que fort peu de choses à dire au point de vue medical pour le Port de Pakhoi et les environs, pour la période comprise entre le 1er Octobre 1907 et le 31 Mars 1908. Les epidémies de peste et de choléra qui ont sèrie en 1907, ont pris fin en Septembre, et depuis, nous n'avons pas entendu dire qu'une reprise de ces epidémies, ou l'apparition d'une nouvelle ait en lieu.

A point de vue Meteorologique, on peut dire que l'année 1907 a été très pluvieuse surtout dans le deuxième semestre. Nous n'avons pas eu de typhon cette année ; le 28 Octobre seulement une queue de typhon qui nous a donné quelques inquiétudes.

Les températures moyennes ont été sensiblement les mêmes pendant les semestres Octobre-Mars 1906-1907 et Octobre-Mars 1907-1908. Pas de phénomènes sismiques à signaler sans un très léger tremblement de terre, du côté de Chap-Sy, qui a coïncidé avec la queue de Typhon.

La population Européenne de Pakhoi s'élevait à environ 60 personnes au 1er Octobre dernier, y compris le Missionnaires de Tien-cheou et de Hoi-chao.

Nous n'avons rien à signaler au point de vue Pathologie Européenne. Toutes les affections que nous avons eu à traiter à une exception près étaient en général bénignes. Le plus grand nombre des malades a été fourni par le service des Douanes.

Pas d'epidémie à signaler parmi les Européens ou le personnel attaché à leur service. A notes une naissance en Octobre. Rien non

TABLEAU STATISTIQUE DE MÉTÉOROLOGIE POUR 1907 ET 1908.

|                   | Service des Douanes impériales. |                                |                                      |                                  |                       |                                    |                                   |                              |                              |   |
|-------------------|---------------------------------|--------------------------------|--------------------------------------|----------------------------------|-----------------------|------------------------------------|-----------------------------------|------------------------------|------------------------------|---|
|                   | Moyenne Mensuelle des Minimas.  | Moyenne Mensuelle des Maximas. | Moyenne Mensuelle de la température. | Moyenne hygrométrique mensuelle. | Pluie totale du mois. | Quantité de pluie tombée le matin. | Quantité de pluie tombée le soir. | Température Maximum du mois. | Température Minimum du mois. | Observations diverses.  |
| Octobre, 1907 ... | 22°.5                           | 27°.8                          | 25°.2                                | 85.7                             | 493.8                 | 421.                               | 72.8                              | 31°.7                        | 17°                          | Les températures sont prises sur le thermomètre centigrade.<br>Les Hauteurs de pluies sont comptées en millimètre.<br>La tension hygrométrique est calculée de 0 à 100 ce dernier diffusi tant la saturation. |
| Novembre, 1907.   | 17°.5                           | 24°.5                          | 21°.05                               | 74                               | 17.5                  | 17.5                               | ...                               | 29°.6                        | 9.4                          |   |
| Décembre, 1907.   | 12°.7                           | 19°.7                          | 16°.1                                | 86                               | 78.5                  | 63.5                               | 15                                | 29                           | 8                            |   |
| Janvier, 1908 ... | 14°.45                          | 19°.73                         | 17°.09                               | 81                               | 66.4                  | 45.6                               | 20.8                              | 24°.8                        | 9°.3                         |   |
| Février, 1908 ... | 10.82                           | 15.62                          | 13.22                                | 81                               | 46.7                  | 39.4                               | 6.7                               | 25°                          | 6°.9                         |   |
| Mars, 1908 ...    | 14°.55                          | 21°.36                         | 17°.95                               | 70                               | 12.5                  | 10.3                               | 2.2                               | 27°                          | 8°.2                         |   |

Pakhoi, 2 Avril, 1908.

Medical Officer Customs,

DR. R. ASCORNET.

plus de bien particulier à dire au point de vue de la Pathologie Chinoise. Comme nous l'avons déjà dit plus haut, pas d'épidémie de Peste—de Choléra ou de variole à signaler du 1er Octobre 1907 au 31 Mars 1908. Toutefois nous avons constaté après la terminaison de l'épidémie de Choléra de 1907, une recrudescence d'affections gastro-intestinales diarrhée et dysentérie.

Nous signalerons aussi, le nombre toujours croissant d'année en année des cas de Paludisme. Ainsi qu'on le voit par le graphique ci-joint, la Malaria tout en sévissant plus ou moins toute l'année, augmente notablement d'intensité dans les 4 derniers mois. Les cas ne sont en général par très graves, mais relativement tenaces. Cette augmentation du Paludisme est dû croyons-nous au défrichement de plus en plus considérable de la plaine, qui sèche autrefois est maintenant copieusement anoté d'eau et d'engrais humain et est devenue par mite un lieu d'élection et d'éclasion de moustiques, qui comme on le sait sont les meilleurs agents de propagation de la Malaria.

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### PRAYER OF A PHYSICIAN.

Prominent in Alexandria in Egypt in the Twelfth Century.

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This beautiful and noble composition appeared first in the *German Museum Magazine*, 1785. A reprint of the same was published in the *Deutsche Medicinische Wochenschrift* some years ago. It was translated by Dr. Leonard Weber of New York and printed recently in the *Journal of Tropical Medicine and Hygiene*. The prayer, which was worthy of a wide circulation, reads in this translation as follows :

“Oh Lord, Thou hast most wisely fashioned man's body, thousands upon thousands of organs hast Thou joined in it to work incessantly in order to build up and preserve the beautiful whole, the dwelling of the immortal. In perfect order and union they will perform their functions, but when their harmonious action is interrupted by the fragility of the constructive material or the perversity of the passions, the forces will antagonize each other and the body may perish. And Thou sendest the warning messengers, diseases, to man, to show the threatening danger and stir him to try to avert it.

“Thy earth, Thy rivers, Thy mountains are full of healing substances which have the power to mitigate suffering and to prevent the destruction of Thy creatures. And to man Thou hast given wisdom to study the body and understand the organs in their order as well as disorder ; also to seek and find those remedies and prove and prepare them according to the indications, for disease.

“By Thy grace I have been called to watch over sickness and health of men, and I make ready now to start in the professional work

of the day. Be my strength, good Lord, in this great undertaking and bless my work that it may be good.

“Let me be filled with love of man and my art, and do not let desire for gain or position or fame interfere with my duties.

“Preserve the strength of body and mind that I may always and equally serve the poor and the rich, the good and the bad, the friend and the enemy, for all of them are Thy creatures.

“Let my reason be steady and sound, that I may well observe what is before me and truly surmise what is hidden. Let my mind not be confused and overlook what is present, or go beyond that which can be actually seen and proved into the territory of the speculative, the invisible. For fine and scarcely traceable are the border-lines of the great art in caring for the health and life of man.

“Let me be always myself and my attention fully concentrated; at the bedside nothing foreign must disturb it, so that all the experience and insight I may have will be at my command in the case before me.

“Fill my patients with confidence in myself and my art, and with obedience to my advice.

“Keep away, O Lord, from the sick chamber every quack and the whole army of advisory relatives and the over-wise nurse; they constitute a cruel set of people, who in their vanity, may spoil the best work of medical art, and not infrequently assist the disease in destroying the patient.

“When wiser counsellors than myself are ready to correct and improve my knowledge, let me gratefully receive their counsel, for art is broad and wide and no one man can know all.

“But should the vain and unwise find fault with my skill, then make me firm as steel to stick to the truth and right of my position, and maintain the same against the greater fame and age of others.

“Give me patience and humility in dealing with such of my professional brethren as, being proud of their long years of practice, may try to push me aside and belittle my knowledge. I will profit from the wisdom which they have to offer, but will also try to bear with their haughtiness; for they are old in years, and old age does not always control the passions—and I also hope to grow old in walking before Thee, O Lord.

“Whatever I have or may possess will suffice me, but not as to science and art. Let never the thought arise in me: ‘I have of knowledge enough,’ but extend to me the power, the leisure, the burning desire to correct and adjust my accomplishments and add to them steadily. Great is our art, but the power and extent of the human mind is also vast and its limitation unknowable. Further and further we advance, but in the science of yesterday we find errors to-day, and that of to-day will be questioned to-morrow.

“Give me Thy gracious help and protection, O Lord, in the work to which I will go now, that it may prove a blessing to those who shall to entrusted to my care.”

**In Memoriam.**

The Late GEORGE F. STOOKE, L.R.C.P.

George Frederick Stooke was born in March, 1876, in Bristol, England. When he was about 12 years of age he came to China with his parents, who came then to take charge of the China Inland Mission sanatorium at Chefoo.

Receiving his education at the C. I. M. school he went direct from that school to Edinburgh and entered upon his medical curriculum. He was a most successful student, carrying off many prizes every session. After five years' study he graduated L.R.C.S. and P.

During his medical course in Edinburgh he associated himself with the Livingstone Institute in the Cowgate, taking part in the Christian work of the institution. Having gone to Edinburgh with the intention of becoming a medical missionary, and with China as his prospective field, he offered himself to the Foreign Mission Committee of the Church of Scotland and was accepted.

In the summer of 1899 the Church's Mission in China had lost one of its doctors, Dr. David Rankine, and when the appeal was made at home for a doctor to take Dr. Rankine's place, Dr. Stooke at once volunteered to proceed to China. He arrived in Ichang in March, 1900, and set himself at once to acquiring the language.

In 1901 he was married to Miss Jessie Graham, who also was a doctor, having the Edinburgh qualification of L.R.C.P. and S. Hospital and dispensary work was commenced in that same year, and from that time the work went on increasing as the fame of Dr. Stooke and his colleagues spread through the city and surrounding district.

There was an ideal hospital staff. There were Dr. Stooke and his wife and Dr. And. Graham, who had been a fellow-student with both. Medical work in Ichang seemed after previous ups and downs to be in a fair way of great prosperity. Dr. Stooke went home on furlough in January, 1906, and returned to work in September, 1907. He felt so well and strong after his furlough and looked forward to years of successful work when, alas, the dread cholera seized him and in a few hours he has passed away.

That was on August 16th. It is not known how he contracted the disease. His wife was with him all the time and did everything for him that could be done medically. It is a great grief to all of us and a great loss to the Mission—this sudden death of Dr. Stooke. He was an all round man, not only proficient in his profession, but an accomplished musician and a thoughtful preacher.

A man's proficiency in his medical profession can be judged by the numbers who seek his aid. The hospital here had its wards full, the out-patients would number over 100 per day, and the calls to attend officials and others in their homes were not few. Besides the Chinese work, Dr. Stooke had the medical care of the community.

On Sunday evenings at our English service he played the organ, and when occasion required would preach. His sermons were always thoughtful and well prepared. There was no slipshod work done by him. Thoroughness was surely his motto, and that alone could account for his skill in his medical profession and for his ability in other directions. To me he was a companion, and as such I miss him and deeply mourn his loss.

It may not be amiss here to acknowledge the heroism of his wife. After the doctor's death she remained in Ichang and attended to several serious cases of illness amongst the foreigners. Everyone owes to her a debt of gratitude for her unselfish devotion to the needs of others in the midst of her own sore bereavement. She is left with two little children of six and three years of age respectively.

The community here contemplate the erection of some memorial to the late Doctor, either in the hospital or elsewhere, and the Chinese Christians and friends are preparing a like thing to be inserted in the wall of the native church.

W. DEANS.

## DR. GEORGE F. STOOKE OF ICHANG.

In the passing away of Dr. George Stooke the medical missionary body has lost one who gave great promise to be one of its most brilliant members in China.

The suddenness of his home call reminds us once more that summer in the Far East is often fraught with tragic possibilities. Last year Hodge, this year Stooke; the one in the full ripe experience of many years of service, esteemed and loved by all who knew him; the other young, bright, keen, and giving promise of taking a high place in his profession. The Yangtze Valley has suffered a great loss both last year and this.

A missionary and the son of a missionary, educated at the C. I. M. school Chefoo, Dr. Stooke from his boyhood days was an indefatigable student and that industry and perseverance won for him a high place in all his classes during his medical course. It was the regular thing for Stooke to obtain a few class medals every year, and his fellow-students knew well that to get ahead of George Stooke meant hard work and plenty of it.

Had he chosen to remain at home, there can be no doubt he would have taken his place in the front rank of the medical profession, but the "call of the East" came to him when the news of Dr. Rankine's death at Ichang reached Scotland. At that time he was filling the post of resident doctor in the Edinburgh Medical Mission, dear old "39" Cowgate, one of the slummiest parts of Edinburgh; there, along with a band of men who are now scattered over the world, he ministered to the needs of the sick poor. Already he had decided that China, the land of his youth and the home of his parents, should have his services; his Master's "follow me" was heard and answered, and allurements of position could not tempt from the path of consecration.

His intention at that time was to have remained for more post graduate study, and probably he would have taken his F.R.C.S. examinations before setting out for China, but the needs of Ichang appealed to him and he could not wait longer, but set out for this needy land.

I well remember the Sunday evening he bade his fellow-students farewell. "Brothers", he said, "perhaps you may have heard that the place I am going to gets the name of being unhealthy. I trust, however, none of us will shrink from a post because there is danger." To him the call was not to the place where he was needed merely, but to the place that needed him most.

He arrived in China in 1900, and after six years of splendid service at Ichang he went home on furlough. Returning in the summer of 1907, he spent some time with his parents at Chefoo, and as he bade them good-bye he remarked that he felt splendidly fit and strong for work, and now after one more year's brief service he has been smitten down with that scourge of tropical summers—cholera.

The severe epidemic which has visited the Yangtze Valley has carried off thousands of Chinese. He had been attending some of these in his hospital and probably got the infection there. It was true of him as of his Lord and Master, "He saved others, himself he could not save." He gave his life for those he had come to serve, a martyr as truly as any who have gone before, and his brave life thus laid down will bear abundant fruit in the coming years.

He was enthusiastic for music, for chess, for the Chinese language, for medicine, and for his high calling as a missionary. May God send us many more medical missionaries like George Stooke.

J. G. CORMACK.

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ANALYSIS OF THE HOT SPRINGS AT PORT EDWARD, WEI-HAI-WEI.

The report of the analysis of the waters of the above springs by Mr. Frank Browne, government analyst, Hongkong, gives the result as follows:—

70,000 fluid parts (1 gallon=70,000 grains) contain :—

|                           |     |     |     |     |     |     |     |     |       |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Sodium sulphide           | ... | ... | ... | ... | ... | ... | ... | ... | 2.6   |
| „ sulphite                | ... | ... | ... | ... | ... | ... | ... | ... | 2.9   |
| „ sulphate                | ... | ... | ... | ... | ... | ... | ... | ... | 23.1  |
| „ chloride                | ... | ... | ... | ... | ... | ... | ... | ... | 833.6 |
| Potassium chloride        | ... | ... | ... | ... | ... | ... | ... | ... | 11.9  |
| Magnesium „               | ... | ... | ... | ... | ... | ... | ... | ... | 17.1  |
| Calcium „                 | ... | ... | ... | ... | ... | ... | ... | ... | 314.0 |
| „ carbonate               | ... | ... | ... | ... | ... | ... | ... | ... | 14.0  |
| Alumina and iron peroxide | ... | ... | ... | ... | ... | ... | ... | ... | .4    |
| Silica                    | ... | ... | ... | ... | ... | ... | ... | ... | 9.5   |

Parts by wt.=1,229.1

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PARASITOLOGISTS' MEETING AT BOSTON, AUGUST 21, 1907.

*Front Row:* E. Linton, M. Braun, A. E. Verrill, R. Blanchard, A. F. Shipley.

*Middle Row:* A. Hassall, W. R. Coë, Young, C. W. Stiles, H. B. Ward, B. H. Ransom, W. C. Curtis

*Rear Row:* F. B. Barker, O. Fuhrmann, H. S. Pratt, M. Lüthe, Al. Mrázek.

# The China Medical Journal.

VOL. XXII.

NOVEMBER, 1908.

No. 4.

The yearly subscription to the China Medical Missionary Association is \$4 Mex., payable in January of each year. This includes the JOURNAL and postage on the same, whether local or foreign.

All changes of address, departures on and arrivals from furlough should be notified to the Secretary and to the Presbyterian Press. Members are requested to invite new comers to join the Association.

The Editors will be obliged if all those who are building hospitals will send copy of plans and detailed description (in duplicate if possible). These will be loaned, on application, to members who are proposing to build.

## Editorials.

We desire to call the attention of our readers, and especially of advertisers, to the fact that Mr. L. P. Larsen no longer represents the CHINA MEDICAL JOURNAL as advertising agent, or in any other capacity whatsoever; nor has he so represented it for some months past.

Notice!

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With deep sorrow we record the death of our beloved colleague and fellow-worker, Dr. George F. Stooke, of the Church of Scotland Mission at Ichang, Central China, who passed away after a very short illness in August. Dr. Stooke is one of the many victims of the terrible epidemic of cholera which reigned in the Upper Yangtze Valley during this past summer. He died while on duty at his post. The JOURNAL has lost in Dr. Stooke's death one of its most regular and most interesting professional contributors. Dr. Stooke was a keen observer, and whatever he wrote was the result of clear thinking and hard work. One of his best contributions, that in the shape of a Customs' Surgeon's Report on Ichang Fever, appeared in our issue of July, very shortly before his death, and a letter received from him, within two days of his death, gave promise of another equally interesting paper and the assurance of his never-failing interest and sympathy with the Association, its JOURNAL and its work. We take this opportunity of extending to his parents and family our tenderest sympathy and deep sense of loss.

It may be truly stated of the medical profession that the poor we have always with us. At the present epoch Shanghai seems to be teeming with "poor European fathers," who manage to scrape together out of their hard-earned pennies enough to take their families and themselves to Kuling for the summer, but apparently are shaving things so close that they have no margin left to pay their doctors' bills. There is no subject on which the average business man seems to be more unbusinesslike than on the subject of doctors' bills. Why on earth a missionary doctor should be expected for one instant and on any business ground to work during his holiday for nothing, or to charge less than any other doctor on earth, is beyond our dim mortal vision. In fits of mistaken charity we have known some of our colleagues to waive a definite charge and suggest a contribution to the Mission hospital instead. But in our experience the result is usually a long-delayed and much grudging contribution of say \$5.00, where a bill of taels 50.00 might rightly have been charged, and the added expectation that the generous gift of \$5.00 be recorded on the hospital accounts at the hands of such and such a generous-hearted European father. It is not, perhaps, realized by foreigners living in China that the undercharging on the part of medical missionaries has been periodically and regularly complained of by private practitioners as "unfair undercutting". We seem to be between the devil and the deep sea, and suggest that the deep sea has the greater attraction financially and on all scores. (No reflections on "A poor European Father".) We note that a certain member of the army of the disgruntled was charged Tls. 14.00 for the opening of a boil. The opening of a boil is a surgical operation, though a minor one, and usually requires a certain amount of preparation and dressings, and it is to be expected that a considerable degree of care must be exercised to prevent mixed infection, spreading, and so on. This charge is not an excessive one, even if but one visit was paid; if more, it was most reasonable. We would suggest that there should be no difference whatever between the charges of medical missionaries and other medical practitioners. It is usual for private practitioners to be particularly reasonable in charges to clergy, missionaries, and other poor European fathers, and medical missionaries should be no less

so. The fact that a man is in a tight place and needs medical assistance, no matter how badly he may need it, no matter how poor or how rich he may be, is no excuse for an exorbitant charge, and righteousness towards our colleagues in private practice, our own protection in the effort to obtain a few weeks' rest and mental relaxation, and the value of our services, entitle us to compensation without any manner of doubt whatever. The peculiar refinement and benevolent nature of our work forbids us to collect, from those who will not pay, as other debts of a no better earned nature are wont to be collected.

\* \* \*

In the *Shanghai Mercury* of Saturday, September 26th, 1908, we find the following:—

#### ANTI-OPIMUM TABLOID.

Dr. W. Graham Aspland, Peking, writes to the *China Times*:—Kindly allow me to make an appeal through the medium of your paper to a certain class of businessmen in China, and to the public generally, upon the **The Fite Again.** question of "Anti-Opium Tabloids".

I am urged to this the more from the fact that I have just had under my treatment a big official of one of the Chinese Boards for the cure *not of opium smoking*, but of "anti-opium tabloids" which he commenced to take a year ago. These tabloids, like many others I have examined, contain morphia in large doses, and, alas for the nation to which I belong, they are sold and prepared by a British firm doing both wholesale and retail business here in China. How many tons of morphia tabloids are being sold in China at this present moment I would not like to venture to guess, but I am prepared to believe it is appalling.

I am prepared to admit, what has been often stated of old, that companies and corporations have neither conscience nor soul, so that publicity of facts is all one can aim at until the Chinese themselves can be roused to take some action. Even in remote country villages morphia tabloids and hypodermic syringes are frequently seen, and a condition of things which allows a Chinaman whom I know to buy daily a dram bottle of Japanese morphia (60 grains) imperatively calls for restriction if not prohibition.

There can be no extenuating circumstances associated with the sale of these "anti-opium tabloids", for I have not found one that contained any antidotal drug—any stimulant, or tonic ingredients—but simply morphia made into a tabloid with ordinary household flour, so that the sale is not accompanied with any honest intention of relieving the suffering but finding that there is a big market for morphia, under the name of "anti-opium" tabloids and powders, foreign trading companies, who do no trade in arms and ammunition, follow this lucrative one under the heading of benefactors.

May I quote from the recent editorial of the *CHINA MEDICAL JOURNAL*, for what is there said regarding "patent medicines" can more forcibly be applied to anti-opium tabloids?

Then follows a liberal quotation from our editorial on the subject. We heartily endorse the sentiments expressed by Dr. Asp-

plaud. Of their truth there is no shadow of doubt. Further argument would be superfluous; the facts are all-convincing.

We have been asked by the agent of Messrs. Burroughs, Wellcome and Company to call attention to the infringement of their patent name "tabloids" as used by this proprietary article.

\* \* \*

The chairman of the Research Committee, Dr. James L. Maxwell, Jr., 31 Hammelton Road, Bromley, Kent, England, asks us to call the attention of the members of the Association to the fact that Fecal Research Reports for the past year are due and should be forwarded to him as early as possible after the receipt of this notice.

**Time for more  
Research Reports.**

We repeat that all contributions, even though the number of cases reported be as small as five only, will be welcome and serve to add to the general final result. The chairman is at leisure at present, and desires to do as much in the way of compilation as possible at this time.

\* \* \*

A cordial welcome and best wishes to the West River, Han Valley and Mokanshan Medical Missionary Associations.

## ASSOCIATION NOTES.

### BRANCHES OF THE C. M. M. A.

|                                |   |
|--------------------------------|---|
| <i>Central China Branch</i> :— | Dr. J. G. Cormack, Hankow, Secretary.             |
| <i>Kuling Branch</i> :—        | Dr. C. W. Somerville, Wuchang, Secretary.         |
| <i>Manchurian Branch</i> :—    | Dr. W. Phillips, Newchwang, Secretary.            |
| <i>Korean Branch</i> :—        | Dr. H. H. Weir, Chennulpo, Korea, Secretary.      |
| <i>Shanghai Branch</i> :—      | Dr. A. W. Tucker, St. Luke's Hospital, Secretary. |
| <i>Mokanshan Branch</i> :—     | Dr. J. C. A. Beatty, Hangchow, Secretary.         |
| <i>West River Branch</i> :—    | Dr. Kate W. McBurney, Takhing, Secretary.         |
| <i>Han Valley Branch</i> :—    | Dr. R. Anderson, Fancheng, Secretary.             |

### NEW MEMBERS OF THE C. M. M. A.

*Joined through the China Medical Journal* :—

|   |
|---|
| ESTHER ANDERSON, M.D., Ohio Med. Univ., A. P. M., Soochow.                                      |
| WALLACE CRAWFORD, M.D., C.M., Western Univ., Loudon, Can., Canadian M. E., P'en Hsien Szechuan. |
| T. O. HEARN, M.D., Maryland Med. Col., S. B. C., Pingtu.  |
| MAUD AURA MACKEY, M.D., Col. Med., U. of S. Cal., A. P. M., Paotingfu.                          |
| VICTOR SCHOCH, M.D., Zurich Univ., Basel, Kaying, via Swatow.                                   |

*Joined through the West River Branch* :—

|  |
|--|
| JESSIE A. MACBEAN, M.D., Toronto University, Canad. Pres., Kongmoon.     |
| Mrs. DORCAS F. MEADOWS, M.D., Univ. of Nashville, S. B. C., Wuchow.      |
| CHAS. A. HAYES, M.D., Univ. of So. Cal., S. B. C., Wuchow.               |
| Mrs. ALICE J. HAYES, M.D., Univ. of So. Cal., S. B. C., Wuchow.          |
| IDA M. SCOTT, M.D., Cleveland Homeo. Med. Col., Reformed Pres., Takhing. |
| KATE W. MCBURNEY, M.D., Wom. Med. Col. of Pa., Reformed Pres., Takhing.  |
| JEAN G. MCBURNEY, M.D., " " " " " " " " " "                              |
| FRANK OLDT, M.D., United Brethren in Christ, Canton. " " " " " " " " " " |

NOTICE! Letters on Association business requiring immediate attention should be simply addressed, *Secretary, C. M. M. A., 2 Shantung Road, Shanghai*, so that they may be dealt with in event of Dr. Cousland's absence. Dues should be sent to the Presbyterian Press.

The attention of those going to America on furlough is drawn to the advertisement of a course in tropical medicine at the Philadelphia Polyclinic.

There are four insets in this number of the JOURNAL:—A Chinese advt. of our medical books, which please pass on to your Chinese staff, a "List of Members of the C. M. M. A.", "A Nurses' Association" and "Resolutions passed by the Medical Missionary Association of China." Advanced copies of the latter are being sent out in this way for those who may wish to have them at once. Copies are being sent to the Boards.

#### LOCKHART UNION MEDICAL COLLEGE, PEKING.

The report of the work of this college for the past year is of the greatest interest to us. An institution founded, built up, and governed by foreign missionaries is receiving government recognition, and its successful students government diplomas. The number of students—50—is at present small, but this is only the beginning.

The faculty, residing in and near Peking, numbers eleven, and in addition nine others come from a distance to deliver short courses of lectures.

The examination lists show a splendid number of passes, and the examiners, drawn from the faculty and the various legations, etc., avow their great satisfaction with the results attained.

The religious aspect of the work shows excellent progress; the meetings, classes and out-station work having given most encouraging results.

Athletics also are by no means neglected; the students entering most heartily into all branches.

#### THE WILLIAM'S HOSPITAL, PANG-KIA-CHWANG, SHANTUNG.

This last year of work has completed thirty years of work in this hospital among the sick and sad of Northern Shantung, and in this time nearly 326,000 have been treated as out- or in-patients, and have had the Gospel preached to them.

A women's hospital is now within sight, and the increase in room and efficiency will, we believe, be welcomed by none more than the Chinese themselves.

#### C. M. S. HOSPITAL, NINGPO.

Increased numbers in both out-patient and in-patient departments and an all-round good year, is what this hospital has to say for itself.

Dr. Cole has evidently some stories to tell of his patients and their fatuity and ignorance. For instance, the old dame who brought her grave clothes with her when she came into hospital, and the gentleman with double compound fracture of the legs, who was able, notwithstanding his protested inability to pay food money in hospital, to bring to light \$50 for a native doctor to make his legs worse. A curious case was that of a woman afflicted with so-called 'sheep-madness', who would lose consciousness of her surroundings and crawl about on all-fours 'baa'-ing like a sheep. Suggested treatment (by natives) was grass; successful treatment (by foreigner) nerve sedatives.

The spiritual work has been most encouraging to all concerned; many conversions having taken place.

#### THE CAROLINE A. LADD HOSPITAL, PYENG-YANG, KOREA.

One of the most noticeable features of the report for last year, May, 1907, to May, 1908, is the relatively large attendance of children; out of a total of 13,094 out-patients, there were some 8,444 new attendances, and of these 1,865 were children,

not far off a quarter of the whole. It would seem that the ignorance and carelessness of parents in Korea is not so marked as in some parts at least of China.

With such an out-patient number and 444 in-patients, and with some 525 surgical operations, Dr. Wells has had his work cut out, and then in addition there is the evangelical work which has been diligently carried out to the lasting benefit, without doubt, of very many amongst that large number.

#### HWAI-YUEN HOSPITAL.

The records of this hospital for the past year show the number of out-patients to have been 8,098, the number of in-patients 104, and the number of out-calls 49. Of the total number of 314 operations, 73 were with general anæsthesia and 199 with local.

The calculus cases, as in past years, have formed a large proportion of the in-patients. The increasing confidence in the foreigner and readiness, even eagerness, to be operated upon, are encouraging signs.

One patient, who was especially grateful, had been relieved of a sixteen-pound lipoma of the back. The day after operation he was asked if he suffered any pain. "No," he said, "but my back is cold in the place where the tumor used to be!"

#### LU-CHOW-FU HOSPITAL.

The records of cases in this hospital show a decided increase on last year's. The out-patients numbered 33,183 against 21,610 for last year, while the in-patients numbered 438 as against 345. The number of operations was 160 and obstetric and eye cases were 12 and 90 respectively.

#### TAI-CHOW-FU HOSPITAL, CHEKIANG.

This last year, notwithstanding the lack of a foreign building for a hospital, there have been in-patients to the number of 258, and 100 operations have been performed. 21 of these were on the eye; cocaine and eucaine being used in 19 of these. In general surgery chloroform was uniformly used.

One of the eye cases was that of a lad who was suffering from glaucoma of the left eye; the right one being also somewhat affected. The treatment was scleral puncture of the left eye, followed at once by iridectomy. During the first week there were occasional hæmorrhages into the anterior chamber, then the eye cleared and the vision returned. Nine months after the eyes were still perfectly good, no more signs of disease having appeared in the right eye.

Mycosis fungoides was removed from the bridge and ala of a man's nose and a skin-grafting carried out, and later the man left the hospital without a trace of the disease.

The dispensary work in the city, and a number of times during the year in out-lying districts, made Dr. Anderson exceptionally busy.

A new hospital is now in the course of being built.

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## PUBLICATION COMMITTEE.

### SUBSCRIPTIONS.

|   |     |     |     |     |     |          |
|---|-----|-----|-----|-----|-----|----------|
| American Baptist Missionary Union         | ... | ... | ... | ... | ... | \$230.00 |
| Dr. C. E. Tompkins...                     | ... | ... | ... | ... | ... | 10.00    |
| Mr. Morris S. Shipley, per Dr. J. B. Neal | ... | ... | ... | ... | ... | 23.45    |
| C449592                                   | ... | ... | ... | ... | ... | 134.95   |
| American Presbyterian Mission             | ... | ... | ... | ... | ... | 230.00   |
|   |     |     |     |     |     | <hr/>    |
|   |     |     |     |     |     | \$628.40 |

We also gratefully acknowledge the gift of £500 from H. S. Wellcome, Esq., of Messrs. Burroughs, Wellcome & Co., to be used for the expenses of publishing the *Lexicon*, *Hare's Therapeutics*, a *Materia Medica*, and *Hutchinson and Rainy's Clinical Methods*. The money is to be used as a special perpetual publishing fund under the control of the C. M. M. A. and devoted to the publication and republication of the above books.

Dr. Ingram writes that the second volume of *Hare's Therapeutics* should be ready early in December. The delay has been caused by waiting for some special type. Three volumes of the revised edition of *Kerr's Practice of Medicine* are ready, and can be obtained from the Baptist Publishing House, Canton. The price will be at least \$2.50 per set.

The secretary's absence from China this summer on account of personal and family sickness has delayed the work of the committee somewhat. The programme for this season is the printing of a *Surgery* (Rose and Carless), *Medicine* (Osler), *Anatomy* (condensed Gray), *Pharmacology and Pharmacy* (eclectic) and others. Dr. McAll is preparing *Coat's Pathology*; Dr. Cormack, *Hutchinson and Rainy's Clinical Methods*, and Dr. Cochrane, a *Regional Anatomy*.

The copyright, plates and remaining sets of the *Foochow Anatomies* have been purchased from the A. B. C. F. M. Dr. Whitney's Gray is at present the only anatomy available. It is a full translation, and will remain the standard complete *Systematic Anatomy*. We gladly acknowledge the sympathetic and generous way the A. B. C. F. M. has acceded to our wishes in this matter. There is a very definite demand for a smaller systematic work and for one dealing with the subject by regions, and, as above noted, we are seeking to supply these demands. Other books will be reported later. Experience teaches the folly of prophesying when the printing will be completed.

The question comes, "How long before you can give us something in the shape of a magazine for our helpers and medical students?" Not for a year or two unless a man can be found to undertake the editing and publishing. Any way the students are hardly familiar enough yet with the new terms to profit by a Chinese medical journal and the text-books are more urgently needed.

A new edition of Dr. Neal's *Analytical Practical Chemistry* has just been published.

If those who subscribed to the committee's funds last year will repeat their donations it will very materially assist its operations. There are many books, atlases, etc., yet lacking.



## Reports of Local Branches.

### WEST RIVER BRANCH.

A meeting of the members of the medical profession, from the West River and its branches, to discuss the organisation of a branch association of the Medical Missionary Association of China was held in Macao, July 20th, 1907, at the residence of Dr. Wright. Those present were the Drs. Meadows, Wright, K. McBurney, J. McBurney, and McDonald.

The following officers were elected:—President, Dr. Meadows; Vice-President, Dr. Wright; Secretary Treasurer, Dr. K. McBurney.

The second meeting of the West River Medical Missionary Association was held at Macao, July 27th, 1907. A constitution and by-laws were adopted.

*Resolved*, That "This Association recommends that Wuchow be added to the list of prospective medical schools as a union school."

The third meeting of the W. R. M. M. A. was held at Macao, August 19th, 1907.

It was decided to assign to each member a subject on which he should prepare a tract suitable for publication in the Chinese papers and for distribution in dispensaries and hospitals. Subjects were assigned as follows:—

Dr. J. G. Meadows.—Open Wounds and Bruises.

Dr. J. M. Wright.—The Eye.

Dr. J. A. McDonald.—Throat and Mouth.

Dr. J. G. McBurney.—Light and Ventilation.

Mrs. Meadows.—Care and Feeding of Infants.

Dr. Frank Oldt.—The Ear.

Dr. K. W. McBurney.—Dietetics.

Dr. C. A. Hayes.—Prevention of Communicable Diseases.

Dr. Jessie A. MacBean.—Tuberculosis.

Dr. Philip Rees.—Obstetrics.

Subject for General Conference.—Dispensing Medicines.

At the conference held at Tak-hing, January 22nd, 1908, it was *Resolved*, That trained nurses be invited to take part in our meetings, and that all privileges extended to them by the China Medical Missionary Association be given them by our society.

*Resolved*, That application be made to the Central Association to admit the West River Medical Missionary Association as a branch association.

Additional subjects were assigned as follows:—

Dr. Ida M. Scott.—Evangelistic Work.  
Dr. Jean G. McBurney.—Gynecology.

*Resolved*, That Dr. Todd be appointed to write articles for our Society on Histories, Records, and Report blanks in connection with our work.

The following motion was made and carried: That the Committee on Medical and Nursing Education be composed of a member from each Mission.

The following representatives were appointed:—

Wuchow, Baptist.—Dr. J. G. Meadows.  
Wuchow, Wesleyan.—Dr. and Mrs. Rees.

Tak-hing, Ref. Pres.—Dr. J. M. Wright.  
Kongmoon, Can. Pres.—Dr. J. A. McDonald.

Canton, United Brethren.—Dr. F. Oldt.  
Canton, Pres.—Dr. P. J. Todd.

The following papers were read and discussed:—

"The Drug-room and the Druggist."—Dr. C. A. Hayes.

"Surgical Anatomy."—Dr. J. G. Meadows.

"Dietetics."—K. W. McBurney.

"Chronic Suppurative Tympanitis."—Dr. Oldt.

"The Eye."—Dr. J. M. Wright.

Subjects were assigned for the next conference as follows:—

Dr. J. G. Meadows.—Open Wounds and Bruises.

Mrs. Meadows.—Care and Feeding of Infants.

Dr. C. A. Hayes.—General Medicine (selected phase).

Mrs. Hayes.—Prevention of Communicable Diseases

Dr. McDonald.—Syphilis.

Dr. Oldt.—The Throat, Tonsillitis.

Dr. MacBean.—Tuberculosis.

Dr. Wright.—Operations on the Eye.

Dr. Scott.—Contribution from Homeopathy.

Dr. Todd.—Surgery (selected phase).

Dr. Rees.—Obstetrics.

Dr. Hooker.—His own choice of topic.

Dr. J. G. McBurney.—Gynecology.

K. W. McBurney.—Religious Phase of Medical Work.

The hour from 8.00 to 9.00 p.m. was given to a general meeting of all missionaries present for prayer and Bible study. We were led by Rev. A. I. Robb, senior missionary of the Tak-hing Ref. Pres. Mission, the portion chosen for consideration being the last chapter of Acts.

The next meeting is to be held at the summer residence of the Drs. Meadows, on Long Island. It was decided to try to arrange for some practical work in surgery at that time. After reading and approval of minutes of the meetings of this conference the Association adjourned to meet at Long Island.

*President*, J. G. MEADOWS.

*Sec. Treas.*, K. W. MCBURNEY.

#### KULING BRANCH.

*President* :—Dr. THOMAS GILLISON.

*Vice-President* :—Dr. W. ARTHUR TATCHELL.

*Treasurer* :—Dr. E. H. HUME.

*Secretary* :—Dr. C. W. SOMERVILLE.

#### Programme for Season.

|                  |                        |
|------------------|------------------------|
| July 28th, 1908. | President's Address.   |
| Aug. 4th, "      | { Surgical Technique.  |
|                  | { Dr. Hart.            |
| " 11th, "        | { Spirochæta Pallidum. |
|                  | { Dr. H. S. Houghton.  |
| " 18th, "        | Social Evening.        |
| " 25th, "        | { Local Anesthesia.    |
|                  | { Dr. Logan.           |
| Sept. 10th, "    | Annual Meeting, etc.   |

All meetings to be held on Tuesday evenings, at 8.15, prompt.

In consequence of inclement weather and other causes, the original programme for the season has not been adhered to. Only four meetings have been held, with an average attendance of 20.5. Two of these consisted of clinics, which proved of intense interest and value. The paper on *Spirochæta pallidum* was greatly appreciated, but from its exhaustive character failed to evoke much conversation. Dr. Hume's paper was very instructive. Both are to be published in the JOURNAL.

At the commencement of this year, the secretary, after a protracted illness, was invalided home. Thus the whole business of the association has been more or less disorganised. Much had been anticipated for this season, but alas, very little has resulted. Such a condition is but a further proof that after all, the principal motive power of the association is the secretary.

Several resolutions, of more or less value and importance, have been passed, but nothing, to distinguish the largest medical association in China from its weaker compeers. Considering the undoubted talent to be diagnosed on Kuling each season, it is to hoped that the present year of atrophy, which is the first, may also be the last.

Seven new members have been elected this season, making a grand total of fifty members.

The thanks of the association are due to the ladies, who have weekly revived us with delicious refreshments.

#### MOKANSHAN BRANCH.

DEAR DOCTOR: At a meeting of medical missionaries resident at Mokanshan, held on July 22nd, a Mokanshan branch of the Medical Missionary Association of China was formed, with constitution and

by-laws in agreement with those of the parent association.

At the inaugural meeting the following officers were elected for the year:—

*President*:—Dr. R. T. SHIELDS.

*Vice-President*:—Dr. H. W. BOONE.

*Hon. Secretary*:—Dr. J. C. R. BEATTY.

During the months of July and August seven meetings were held, when papers were read and very helpful discussions on purely medical and medical missionary subjects took place.

In all fifteen doctors of various societies attended the meetings.

It is hoped to continue such meetings each summer at Mokanshan, and we should be glad to have this fact mentioned in the JOURNAL that intending medical visitors to Mokanshan may come prepared to take their part in the meetings.

I am, yours sincerely,

JOHN C. R. BEATTY, *Hon. Sec.*

HANGCHOW, September 16th, 1908.

### Manila Medical Society.

At the meeting of May 4th a case of cholelithiasis, with hepatic abscess as a complication, was presented by Major W. C. Borden.

The following are abstracts of the papers read:—

By Dr. P. E. Garrison.—*A new trematode parasite of man.* Ova found four times in native prisoners at Bilibid during the past year; 21 worms obtained from last case after dose of male-fern. Patient complained of no symptoms; physical examination negative, except a slight anemia. Hookworms and whipworms also present. *Morphology of Parasites*: Small Trematoda, of the family Fasciolidæ; 4, 5 to 6 mm. long by about 1 mm. broad; broadest at junction of anterior and median thirds; skin without spines; acetabulum near and much larger than oral sucker; pharynx globular; œsophagus very short; intestinal cæca unbranched and extend to posterior extremity; male and female genital pares open separately between

acetabulum and oral sucker, slightly to left of median line; testicles posterior, median, one directly behind the other, each divided into anterior and posterior lobe by median transverse constriction; ovary anterior to testicles; shell gland between testicles and ovary; uterus moderately developed; vitellogene glands highly developed, extending from plane midway between acetabulum and ovary to posterior extremity, meeting in median line ventrally and encroaching upon median field dorsally after they pass caudad of the testicles; posterior excretory track divides just behind testicles into two lateral excretory canals. Ova average 107 microns long by 63 microns broad, with prominent operculum at one end, unsegmented at oviposition, develop ciliated embryo, which hatches in about one week. Specific and generic position of parasite not yet definitely determined, the indications being that it may be necessary to create a new species and perhaps a new genus also. (Specimens and photographs demonstrated.)

By Dr. R. P. Strong.—*The diagnosis of African tick fever from the examination of the blood.* The literature on the subject was first briefly reviewed which emphasized the frequent difficulty of obtaining a diagnosis from a microscopic examination of the blood with reference alone to the presence of parasites. An experimental examination of the serum reactions in the disease (agglutinating, spirolytic, and precipitin reactions) was undertaken. After describing the technique and the difficulties encountered in performing agglutinin and spirolytic tests with spirochætæ, it was pointed out that none of these reactions were satisfactory for diagnostic purposes and that the most satisfactory methods of obtaining a diagnosis are by the examination of the blood with splenic puncture if necessary and by the inoculation of susceptible animals. A brief description of the tick conveying the disease was given, together with an exhibition of the ticks of economic importance. A microscopic description was also given on the differentiation by means of specific reactions of the African Spirochæta recurrens from that of the European variety of relapsing fever.

By Dr. E. H. Ruediger.—*Further filtration experiments with the virus of cattle plague.* In a previous report, it was found that blood and bile of animals sick with cattle plague lost its virulence on being passed through the Berkefeld filters marked V, N, or W,—V being the coarse filter, N the medium, and W the finest.

Peritoneal fluid diluted with physiological salt solution was virulent after having been passed through any one of these filters.

Owing to the possibility of the animals used in the latter experiments having become accidentally infected from other sources, the experiments with peritoneal fluid have been repeated with the following results:

Peritoneal fluid, after having been passed through the Berkefeld filters N or W transmitted cattle plague when injected under the skin of non-immune cattle. The coarse filter, V, was not used.

Peritoneal fluid, which had been passed through the Chamberland filters marked F or B, did not transmit cattle plague when injected under the skin of non-immune cattle.

**New Members Elected.**—Ernest L. Ruffner, U. S. Army; Percy L. Jones, U. S. Army.

At the meeting of August 3rd, clinical cases and pathological specimens were presented:

By Dr. N. M. Saleeby.—A dermoid cyst taken from an Ilocano woman.

By Dr. T. W. Jackson.—(1) Mediastinal neoplasm. (2) Aortic aneurism, rupturing into the oesophagus.

Abstracts of papers read as follows:—

Dr. A. S. Rochester—The treatment of the opium habit at San Lazaro Hospital. The main points observed while treating Chinese opium smokers:—

First. The rapid withdrawal of opium from the habitual smoker is attended with very little danger.

Second. In a comparatively short time his system regulates itself to carry out its offices without the aid of the narcotic.

Third. The constipating effect of opium, when taken into the system by smoking, is not great.

Fourth. The bad results of long continued opium smoking upon the physique of the Chinaman are less than those occasioned by the continued use of alcohol upon the Caucasian.

Fifth. The use of hyoscine is strongly contra-indicated in the treatment of these cases.

Doctors J. M. Phalen and H. T. Nichols.—Bichloride of mercury in the

treatment of yaws, with demonstration of a case.—Similarity between the manifestations of syphilis and yaws. Various methods of administering mercury. History of the case.—Scout soldier, native of Cavite province, acquired yaws in April, 1907, following a cut from a razor. Lesions disappeared after four months' treatment with biniodide of mercury, mercury ointment, and potassium iodide, only to recur two months later. Again cleared up after four months of same treatment. Recurred in June, 1908, and came under care of writers. Treatment began with intramuscular injections of mercuric chloride,  $\frac{1}{2}$  grain every four days, which dose was soon raised to  $\frac{3}{4}$  grain. Rapid improvement from beginning of treatment, and practical disappearance of eruption in twenty days. Some untoward symptoms. Permanence of cure in question. Advantages of this method of administering mercury.

Dr. T. W. Jackson.—A case of intestinal bilharziosis. The patient, an American soldier, went to Porto Rico in 1898 remaining four months, when he was sent back to the United States on account of some bowel trouble, which lasted two months after his arrival. Has since resided in various parts of the United States and in Alaska. Came to Philippines in August, 1907, and has since served at Grande Island, Camp Stotsenberg, and Fort Wm. McKinley. Has had no bowel trouble from 1898 until November, 1907, when while at Camp Stotsenberg he acquired an attack of dysentery, from which he has not since entirely recovered. After returning to Ft. McKinley, the ova of *Schistosomum hematobium*, with lateral spines, were found in patient's stools by the writer. Source of infection thought to be Porto Rico. The present trouble probably due to an added anaemic infection. Discussion of the disposal of case.

**New members elected.**—*Active*: H. E. Schiffbauer, St. Paul's Hospital; Kent Nelson, U. S. Army; Allan McLaughlin, U. S. P. H. and M. H. S.; Albert G. Love, U. S. Army. *Associate*: Oscar Teague, Bureau of Science; Henry Winsor, University Hospital; Vernon L. Andrews, Bureau of Science.

P. E. GARRISON,  
Secretary.

## Medical and Surgical Progress.

### Tropical Diseases Section.

Under the charge of J. PRESTON MAXWELL, M.B., F.R.C.S.

#### ON THE PHAGOCYTOSIS OF RED BLOOD CORPUSCLES IN THE SPLEEN OF A CASE OF BLACKWATER FEVER.

In the *Indian Medical Journal* (March, 1908) there is an interesting article by Christophers and Bentley on the above subject. In a case of the disease they obtained blood from the spleen during the period of blood destruction. Two kinds of cells, a large macrophage and a smaller cell with a crescentic nucleus and just enough protoplasm to surround the red cell, were noted.

The red cells appeared to be either normal, more or less decolourized or represented by clear vacuoles the size of a red cell. No parasites of any kind were made out in them.

Phagocytosis of red cells is observed *in vitro* as a result of the action of specific sera, and the writers think that this phenomenon may be due to the liberation of specific poisons for the red cells under certain conditions at some stage in the process of malarial immunization, a process which is known in some degree to occur.

#### EPIDEMIC DROPSY AND BERI BERI.

For some months past there has been a discussion taking place in

the *Indian Medical Gazette* on the question of the identity of epidemics of so called "epidemic dropsy" with "beri beri". The inspector appointed to investigate the matter, Captain Delany, M.D., in a paper (*I. M. G.*, May, 1908) on the subject comes to the conclusion that the two diseases are distinct and suggests that epidemic dropsy is a "specific infectious or bacterial disease" conveyed from person to person by the agency of bed bugs.

A discussion on the matter took place in the Medical Section of the Asiatic Society of Bengal, when the speakers were practically unanimous in regarding the two diseases as distinct.

#### ON TRANSFUSION IN CHOLERA.

(*Indian Medical Gazette*, May, 1908.) Rogers and Mackelvie have an important paper advocating the use of hypertonic salt solution for transfusion in cholera. By the use of 1.25 per cent. solution of salt they claim to have obtained a considerable reduction in the mortality of these cases. About 4 pints should be injected at a time and intravenous injection should be practised; subcutaneous injection having proved practically useless in severe cases.

### Pathological Notes.

Under the charge of JAMES L. MAXWELL, M.D.

The Etiology of Pulmonary Tuberculosis, by Sir William Whitla, M.D. *British Medical Journal*, 11th July, 1908.

In the study of the etiology of phthisis the really practical question

narrows itself into the consideration of the two obviously probable routes of infection, namely, the respiratory tract and the intestinal surface. After the discovery of the tubercle

bacillus as the causal factor in tuberculosis and the detection constantly of its presence in the sputum of phthisical patients, it was universally held that pulmonary tuberculosis must be a primary disease. This still remains the accepted view. Koch states his views thus :

In by far the majority of cases of tuberculosis the disease has its seat in the lungs and has also begun there ; from this fact it is justly concluded that the germs of the disease must have gotten into the lungs by inhalation. We know with certainty that they get into the air with the sputum of consumptive patients ; the sputum of consumptive people, then, is to be regarded as the main source of the infection of tuberculosis. On this point, I suppose, all are agreed.

It shall be my endeavour to show that the results of recent experiments should lead us to conclude that the intestinal route plays a far more important rôle in the production of human pulmonary tuberculosis than has been hitherto recognised. The inhalation theory—the common possession of almost all physicians—is based upon a recognition of the results of pulmonary anthracosis, pathological or experimental, and upon the success of inducing pulmonary tuberculosis in animals by causing them to inhale an atmosphere impregnated with tubercle bacilli. When an animal is made to breathe an atmosphere laden with fine carbon particles, the detection of the latter in the lung tissue has been hitherto regarded as positive proof that they reached the pulmonary parenchyma after their arrest in the alveoli, the usually accepted theory being that the carbon dust is conveyed inwards from the alveoli to the pulmonary parenchyma by the process of phagocytosis, and that exactly the same conditions govern the inhalation of tubercle bacilli. Occasionally instead of going on to development within the alveoli, the bacilli find their way through the mucous membrane and are carried by the

lymph stream to the bronchial glands. Cornet considers the case to be amply proven :

1. By the many hundreds of animals which regularly fell sick after the inhalation of tuberculous material in moist or dry condition.
2. That this material exists in a shape fit for respiration in the environment of consumptives.
3. That there is an overwhelming frequency of phthisis among men exposed to just such a manner of infection.

The reports of the Lille investigators appeared so novel and startling, and the conclusions derived from them seemed to be of such vital importance in the elucidation of the etiology of human phthisis, that Prof. Symmers and I undertook a series of experiments upon guinea-pigs with the view of testing some of their results and studying the conclusions arising from them, especially with reference to Calmette's contention that in the immense majority of cases pulmonary tuberculosis is not contracted by inhalation.

*Specimen 1.* In order to roughly test the power of the pulmonary capillaries as a filtering mechanism for the arrest of fine carbon particles circulating in the blood, a mixture of China ink and water was injected into a large vein in the ear of an adult rabbit. This animal's lung, obtained by causing its death within an hour after injection, will be seen to be obviously highly charged with carbon particles.

*Specimen 2.* An adult guinea-pig, killed after being fed for four days with an emulsion of China ink in olive oil and water. The emulsion was introduced direct into the animal's stomach through a soft rubber tube. The specimen shows the lungs to be engorged with carbon while the mesenteric glands are quite free. This experiment performed in a score of cases, including modifications, such as the mixing of the carbon with the animal's ordinary food, always gave the same striking result.

*Specimen 3.* In another series of experiments the carbon particles were injected into the peritoneal cavity by a hypodermic syringe, and similar results were obtained ; the lung of the adult guinea-pig being found to be infiltrated

with the foreign substance, whilst the abdominal lymphatic glands were free.

The explanation of these results is obvious: the carbon particles effect an easy entrance through the intestinal epithelial surface; reaching the lacteal or lymphatic paths they pass through the lymphatic glands of the mesentery, and finally, either enclosed in phagocytes or free, find their way into the thoracic duct to be poured into the venous circulation before being arrested in the capillaries of the lung.

When young animals are used, however, the sequence does not follow; the lungs escaping entirely, as the mesenteric glands form a bar to the passage of the carbon particles.

It is obvious that the main question for the practical physician to be convinced of is: Does the tubercle bacillus pass through the intestinal mucosa like the fine particles of China ink without causing any lesion or leaving any local evidence of its point of entrance? It may at once be asserted without fear of contradiction that this vitally important fact has been conclusively proven by experiments too numerous to mention. After describing the investigation of many other workers the writer says: Calmette and his co-workers have therefore been driven to the conclusion "that in the immense majority of cases, pulmonary tuberculosis, is not contracted by inhalation, but by the ingestion of bacilli or bacilliferous products which penetrate the intestinal mucosa".

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[The following notes of a new treatment of leprosy will be of great interest to all physicians in China. At the same time, after the many failures of promising treatments in the past and especially with Capt. Rost's unsuccessful attempts fresh in our minds, it is impossible not to view these matters with a considerable amount of scepticism.]

#### A SPECIFIC TREATMENT OF LEPROSY (by Prof. Deycke, M.D.).

Despite many interesting facts observed, we did not succeed in growing the lepra bacillus in the form in which it is seen in leprosy tissue; we isolated, however, from several severe cases of nodular leprosy a characteristic micro-organism which on account of its specific characters and habitat we termed *Streptothrix leproides*. The material from which the cultures were made, was obtained by throwing back a flap of skin, including a non-ulcerated recent leproma, and taking fragments of lepra tissue from the under surface of the leproma. The tissue so obtained was placed in normal salt solution and incubated at 37° C. for several weeks. The filaments of the mass were now observed growing from the mass in great profusion. In order to ascertain whether there were any relationship with the lepra bacillus, I ventured on one occasion to inject a small quantity of a living culture in a very severe case of leprosy. Irrespective of a slight induration at the site of injection, no results were observed. The patient, however, obstinately maintained that the injection had had a beneficial effect on him, and he was not satisfied till I repeated the injections at weekly intervals. Under this extraordinary treatment the patient, whose disease was severe and accompanied by high fever, became completely free from fever, and his extensive leprosy symptoms retrogressed so rapidly and in so remarkable a manner that after two months he considered himself to be thoroughly cured and left the hospital. Seeing that similar results were also obtained in other cases of leprosy, we naturally made it our task to discover the curative principle contained in the cultures. After much trouble we succeeded in discovering a chemically well-defined substance which,

on the strength of very numerous trials made on man could, with certainty, be regarded as the sole carrier of the active principle. This substance, called "nastin" by us, is a neutral fat. This is strange, as we are accustomed to look upon genuine neutral fats as chemically very inactive substances.

By giving suitable doses of pure "nastin" by hypodermic, there ensued more or less intense reactive processes in the leprous tissue. These reactions consisted in inflammatory swelling, in pulp-like softening, in true suppuration and necrosis of the leprous formations, to which these processes were exclusively confined; the normal parts of the tissue remaining unaffected.

There existed very great differences regarding the capacity for reaction of individual leprous patients. Whereas some of them responded to "nastin" injections by very violent reactions of long duration and dangerous to life; a small number proved apparently completely refractory.

The author then gives his reasons for believing that the severity of the reaction depended on the amount of leucocytosis which accompanied the injection of "nastin". In re-

fractory cases a previous injection of sodium cinnamate gave a leucocytosis, at the height of which an injection of "nastin" gave very violent result. Eventually he discovered that two per cent. benzoyl-chloride solutions with nastin added in varying proportion gave the desired effect of a moderate reaction. He then goes on:—

The conclusion drawn by me from my experience hitherto are summed up in the short sentence: Benzoyl-nastin is an agent which directly acts on lepra-bacilli. This sentence expresses the advantages and the progress affected by our method of treatment of leprosy as compared with other therapeutic endeavours. On the other hand, it clearly points out the limitations of the method. Rapid visible results should not lead to over-rating the new method of treatment and its natural limitations, nor should occasional absence of expected changes and retrogression of leprous symptoms lead to underrating this method. With patience one will be able generally to effect at least the arrest of the leprous process; frequently, however, far better results will be obtained.—*British Medical Journal*, 4th April, 1908.

### Gynaecological Notes.

Under the charge of KATE C. WOODHULL, M.D.

#### A CASE OF OVARIAN HERNIA.

The comparative infrequency of ovarian hernia makes the following case of more than usual interest:—

The patient was an American. Married for 14 years. Occupation, housework. Has had five children. All are living and in fair health. One miscarriage two years ago. Labors all difficult; the last delivery being with instruments. Perineum and cervix torn with first child.

These were repaired four years ago. Patient complained of dragging pains in the small of the back, headaches, tired feeling, crampy-burning pain in the lower abdomen, and pain and swelling in the left groin. One year ago patient noticed for the first time a small swelling in the left groin. This could be easily replaced, but came down again when patient was working while standing. "By spells" the tumor would seem to grow larger and then

subside. Sometimes at the menstrual period it would be slightly larger and more painful. Very little trouble in reducing the hernia until lately. When difficult to replace she experienced "burning, sickening pains" which extended up from the left groin and then across the abdomen to the other side.

The patient was first seen September 21st, 1907. She complained of "burning, crampy pain" in small of back and across lower abdomen. Vaginal examination revealed the following: Ovary on right side easily palpated and apparently normal. Parametra on that side normal. On careful palpation on left side no ovary could be felt, but when the external hand was placed in the left inguinal region the woman complained of pain. Examination there revealed a tumor about the size of a pigeon's egg, just above Poupart's ligament. It was slightly irregular and had a firm elastic feeling. On coughing no expansile impulse could be obtained. With the left thigh flexed, the tumor could be rather easily reduced by gentle manipulation. The patient complained, however, of some sickening pain. The external abdominal ring readily admitted tip of the index finger. When the patient strained, or coughed while in the recumbent position, the hernia did not easily come down. It reappeared, however, with such efforts when the patient was upon her feet. A provisional diagnosis of inguinal ovarian hernia was given, and after reducing the hernia the patient was told to return for operation September 28th.

The woman claims that at four o'clock on the morning of September 25th, while straining at stool, a larger and firmer tumor appeared in left groin than had ever been there before. It was firm and quite sensitive to the touch, especially at its lower end. The pain

increased steadily. All efforts of the patient and her friends failed to reduce the hernia, and she was sent to the hospital. It should be noted that the patient began to menstruate the same morning and continued to flow for five days after entering the hospital.

When seen shortly after noon September 25th, the patient complained of great pain in the left groin. On manipulating the hernia in an effort to reduce it, the pain seemed to be excruciating. An ovoid tumor, about the size of a large lemon, was seen in the left groin above Poupart's ligament. It was quite firm and slightly irregular at its lower pole; more elastic and fluctuating near the external abdominal ring. Several attempts were made to reduce the hernia; the patient crying all the while with pain. Finally the upper part suddenly slipped back with a gurgling sensation as if a tense bag of waters had ruptured. After this was replaced, the firmer ovoid mass below it was easily reduced. A firm pad and bandage were then applied, the foot of the bed raised, and morphia gr.  $\frac{1}{4}$  hypo. ordered. After this the woman became fairly comfortable. She took light nourishment. Had a little desire to vomit. Bowels were thoroughly moved in two days.

Patient was in fair condition to operate on October 2nd. Operation by Dr. W. H. Humiston. On opening the abdomen the uterus was seen to be in anteflexion and slightly bent towards the left side. The left broad ligament was relaxed and the appendages freely movable. The left ovary was sclero-cystic, and in proximity to it was a parovarian cyst about the size of a small lemon. The fimbriated extremity of the tube, together with ovary and parovarian cyst, could be easily displaced into the external inguinal ring. These structures

had undoubtedly made up the contents of the hernial sac. The right tube and ovary were apparently normal.

The left tube and ovary, together with the parovarian cyst were ligated off and removed in the usual manner. With a very small round needle carrying fine silk thread, the edges of the internal inguinal ring were carefully drawn together *from within* by means of a continual stitch. The abdomen was then closed with interrupted silkworm-gut sutures, the sutures being placed from within outwards and catching a small portion of peritoneum, muscle, fascia, and skin. The edges of the skin were accurately approximated. A firm pad was applied over the external abdominal ring and the ordinary dressings over the wound.

The woman made an uneventful recovery, and was up in about three weeks. The abdominal wound healed perfectly. No recurrence of the hernia. The woman returned a month after leaving the hospital, with an exacerbation of her old pulmonary trouble, but with no signs of hernia and no discomfort in the abdomen or pelvis.—Richard A. Bolt, A.B., M.D., in *Surgery, Gynecology and Obstetrics*, March, 1908.

#### STAB WOUND OF FETUS IN UTERO.

Dr. D. A. K. Steele, senior professor on surgery, College of Physicians and Surgeons, Chicago (*Surgery, Gynecology and Obstetrics*, March, 1908), gives the history of a case briefly as follows:

Mrs. M. in a fit of anger stabbed herself with a knife in the right side of the abdomen, four inches to the right and one and one-half inches below the umbilicus. At this date she was six and one-half months' pregnant. She was taken to St. Elizabeth's Hospital and

treated for one week, when the wound in the abdominal wall healed. She stated that the surgeons at the hospital told her that the wound had probably not penetrated the uterus.

She was delivered at term of a live male child, normal and fully developed, with the exception that, protruding from a wound in the lateral aspect of the abdominal wall of the left side, one and one-half inches above the anterior superior spinus process of the ileum was a mass the size of a closed fist, which on examination was found to be the intestines.

At the point indicated was a partially healed incised wound, one inch in length. Protruding through this wound, adherent to its margins, was the jejunum, the ileum, and all the colon down to the sigmoid flexure. The upper portion of the jejunum was enormously dilated, being one and one-half inches in diameter. The abdominal cavity was found empty, except for the liver, spleen, pancreas and stomach, about four inches of duodenum and two inches of the sigmoid flexure of the descending colon and rectum. All the rest of the gastro-intestinal tract lay outside of the body, protruding through the stab wound.

By widely separating the edges of the wound it was possible to restore the entire mass to the abdominal cavity. The cavity was filled with a warm normal salt solution and the wound closed. The child reacted well and survived the operation eight hours. The post mortem examination showed that the jejunum had been completely cut across by the stab wound penetrating the right abdominal wall of the mother, the right wall of the gravid uterus, and the left abdominal wall of the fetus in utero, completely severing the jejunum about six inches below its juncture with the duodenum.

The extraordinary feature of this case lies in the fact that a stab wound through the abdominal walls of the mother, penetrating the gravid uterus, entering the abdomen of the fetus in utero, completely severing the jejunum, and permitting the escape of the large and small intestine through the wound of the abdominal wall of the fetus, should not in any way have interfered with the growth and development of the fetus in utero, nor seriously affected the recovery of the mother.

Another interesting fact is the complete occlusion of the two divid-

ed ends of the jejunum and the presence of nearly three ounces of glairy, sanguinolent fluid in the stomach of the fetus at the time of the operation ten hours after birth. Unfortunately the fluid was not preserved, so I am unable to present a chemical analysis of it, or to throw any light on the problem discussed by our obstetrical friends as to the nourishment of the fetus in utero by determining whether or not the fluid in the stomach was identical in its constituents with amniotic fluid. In looking up the literature of the subject no other such case was found.

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### Correspondence.

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KULING, August 27th, 1908.

DEAR DOCTOR: I am with you heart and soul in the desire to make the papers, not the result of a few hours' writing, but of many weeks' study and work. I have a number of ideas in my head as problems which will require elucidation and on which people might be making observations. I wish I had your ideas of some of the things which people need observe in internal and tropical medicine. Of course, as you say, the great report will be the fecal report. But in addition, there ought to be a definite lot of contributions on other problems. I have plans on hand for a study of the following:—

1. Malarial prophylaxis in schools, etc., suggested by Montgomery's paper.
2. Ultimate results in trachoma, by Cuso, roller forceps, etc.
3. Traumatism and disease resulting from tropical conditions and practices.
4. The habitual use of opium as a factor in the production of disease.

The last two subjects were suggested by an article in the *Journal A. M. A.* for June 20th, page 2109.

5. The occurrence and significance of indicanuria. Article in *Journal A. M. A.*, June 20th.
6. The physical signs of the pretuberculous stage in those with a tendency to consumption. By this I refer to those measurements, etc., which have been already suggested in the *C. M. M. JOURNAL* as suggestive of tuberculosis when auscultation, percussion, and examination of sputum revealed nothing.
7. Studies of unnamed fevers of the tropics, with reports of blood examinations and of cultures wherever possible. See *Jour. of Trop. Med.*, June 15th, 1908, article on the 7-day fever of Indianports by F. H. A. Clayton; also the article by George Stooke in the July issue of our own *C. M. M. JOURNAL*. Fecal reports should also accompany these reports.
8. Physiological studies. Measurements, etc., of the standard Chinese youth, especially in our schools and colleges, for the sake of having set up some standard which we might compare with to determine pathological states.

I am conferring with Adrian Taylor, of Yangchow; H. B. Taylor, of Ngankin; McCracken, of Canton, and several others, to stimulate work.

E. H. HUME.

AMOY, August 10th, 1908.

MY DEAR DOCTOR: It is really refreshing to see your energy. You make me into a chairman of a "Committee on Animal Parasites Exhibit".

I would suggest that (as at the British Medical Association) the committee fix the subjects for discussion, on the three days of the conference, choose and invite the speakers who are to open the debate, and let all other papers be of secondary importance and taken as read if the writer is not himself present. For instance, say:—

*Wednesday Morning:* Subject for debate—Parasitology: "The pathological states brought about by the presence of the round worm."

To be opened by — and —. Each of the openers to be allowed 15 minutes; the speakers, 5 minutes each. (I would suggest this as one of the subjects.)

*Afternoon:* Continuation from morning, if unfinished. Private papers, at the call of the president.

*Thursday:* A subject in surgery.

*Friday:* A subject in medicine.

I would choose good men for the opening papers, and even if they are not themselves able to be present let their papers be read for them by the secretary.

The reason I suggest this subject of the round worm is that a friend and I hold diametrically opposite views as to the harmfulness of its presence in the human body. It is a subject on which nearly everyone will have an opinion and there should be a good debate.

Kindest regards,

Yours very sincerely,

J. PRESTON MAXWELL.

—  
PING-YIN, Shantung, }  
August 22nd, 1908. }

*Editors of the JOURNAL.*

DEAR SIR: Having at last taken pen in hand to write to you, may I refer to the question of title you

raised some time ago. Like nearly all my women colleagues in China

I have hitherto left the point for others to decide.

*Title Again.* One can only speak for oneself of course, but I certainly prefer the title of "women-doctors" to any other style of designation. Is it not the true feminine of the equivalent masculine form "manductor"? I know that at college we scorned the title of "lady medicals", and there was a standing joke to the effect that the head porter was one day heard to exclaim in pettish tones that "he never could get them charladies to remember to put soap in the women's dressing rooms," and "char ladies" they remained for ever afterwards, whilst we were proud to have our honourable title duly recognized in the proper quarter!

Believe me, yours sincerely,

MARGARET PHILLIPS.

—  
PAISLEY, Ont., Canada, }  
June 29th, 1908. }

DEAR DOCTOR: In the May No. of the JOURNAL at hand, I see my article on "Go Kan Jui Mu" contains this error: "3 ounces of normal salt" should have read 3 pts. [Apologies.—ED.]

We have now been in Canada three weeks and will leave for the States in a few days. We spent a profitable one month in England, and I hope to return at the end of next summer for some study.

I hope to spend some time with the Mayos in Rochester this winter. [Recommend a chain-armor cholera-belt.—ED.]

Believe me, sincerely yours,

J. H. MCCARTNEY.

—  
MOKANSHAN, }  
August 6th, 1908. }

MY DEAR DOCTOR: A month or more before leaving my station I was told by a foreign-trained Chinese

physician that an Imperial decree had ordered the Chinese medical profession to organize prefectural, and I believe provincial, societies, which societies should consider and report a standard to be adopted as the basis for examinations for license to practise. In Hangchow, I am told, representatives of a native medical society have sought Dr. Main's advice on certain questions. Have you heard about it, can you show us a copy of the decree, and can our Association do anything to help this good thing along?

I am, sincerely yours,  
F. W. GODDARD.

—  
TAMSUI, July 11th, 1908.

DEAR DOCTOR: We hope this year to have some hospital work to report. We have opened up old "Mackay hospital at Tamsui" as a make-shift until we get our new building, which we contemplate erecting in 1909. At present we can accommodate only sixteen in-patients. Our out-patients are quite numerous on dispensary days. Our average ran as high as two hundred, our maximum being two hundred and sixty. At that stage we gave notice that we hereafter would limit the number to 100 patients a day, as our staff is too small to handle more than that number.

Wishing you every success,  
I am, yours sincerely,  
J. Y. FERGUSON.

YUNG-CHOU-FU, Hunan, }  
September 29th, 1908. }

DEAR DOCTOR: I am glad that the JOURNAL gives so much space to hospital design. It is an incalculable advantage to us who are not yet fully crystalised.

I have just been reading "The New Engchhun Hospital", and after hopelessly trying for the third time to plan the place in my mind, I give it up, deeply regretting that a carefully written article should be spoiled by the absence of one-half page of diagram.

Might I suggest—these articles have a very practical interest—would an appendix page of dimensions, cost, and practical hints be out of place?

Yours sincerely,  
GEO. HADDEN.

—  
KULING, August 25th, 1908.

DEAR DOCTOR:—Last night we held our annual meeting. Enclosed find report for the year. It has been an unfortunate year. I only came to Kuling a week since, and nobody seemed to whip together the members. We hope for better things next year. Have just emerged from the thick of cholera epidemic in Hankow. Have been quite alone there. Splendid, though horrible experience. To see the natives fall down dead on the street is not a pleasant spectacle. Never shall I forget the experience and sights.

All good wishes, faithfully yours,  
W. ARTHUR TATCHELL.

## Personal Record.

### ARRIVALS.

October 5th, Dr. P. B. COUSLAND, Shanghai.  
October 9th, Miss V. J. LEE, Hangchow;  
Z. S. LOFTIS, M.D., Batang; G. R. LEGGATE, M.B., Ch.B., Liaoyang; THOMAS COCHRANE, M.B., C. M., Peking.  
October 14th, Miss E. M. TRIBE, M.D., Amoy.

### DEPARTURES.

October 3rd, Dr. FRANCES F. CATTELL, for U. S. A.  
October 5th, Dr. and Mrs. W. H. VENABLE, for U. S. A.  
October 7th, Dr. GERTRUDE TAFT, for U. S. A.