A STUDY OF CASES OF ASCITES IN CANTON.

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A visitor to the medical wards of the Canton Hospital is always impressed with the large number of patients suffering from ascites. While the majority of patients admitted to the hospital are surgical, yet we find that during thirteen months, from March, 1914, to April, 1915, 3.95 per cent of all admissions were cases of ascites. This was out of a total of 2,250 admissions. Excluding all general surgical cases and eye, ear, nose, throat and neurological patients among whom there were no cases of ascites, we have left 452 patients admitted to the medical wards during a period of eight months. Of these 70, or 17.69 per cent, were suffering from ascites.

It must be borne in mind that the prevalence of any disease among the Chinese cannot be determined by hospital statistics. A large proportion of medical cases are never sent to an institution but are treated at home by old-style Chinese physicians. Scientific surgery being an unknown art to them, a much larger percentage of surgical than medical cases are sent to the practitioners of Western medicine. The Chinese doctor stands helpless before a case of advanced ascites, while he believes that his decoctions will have a beneficial effect upon other medical conditions.

Nevertheless, it is our belief that those pathological processes which lead to the accumulation of free fluid in the abdomen are unusually prevalent among the Chinese of Canton and its environs, and it was with this in view that the present study was undertaken.

At the start it should be made clear that our data were collected under many difficulties. The histories were not always complete.
An Improved Germicidal Catgut to Supersede Iodized Sutures

The first (light colored) specimen is a cross section of a strand of plain Kalmerid catgut, highly magnified.

The second (dark colored) specimen is a cross section of the same strand, reacted upon by ammonium sulfid to precipitate the mercuric element.

The uniform color throughout the section shows the thorough permeation by the Kalmerid (potassium mercuric iodid). Such an equal distribution of the Kalmerid therefore assures a supply of this germicidal substance in the tissues until the suture is entirely absorbed.

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TUBERCULOSIS OF THE CAECUM.
1. Ileum. 2. Caecum. 3. A small portion of ascending Colon. (Ludlow).
Blood and urine examinations were omitted in some cases, and the modern procedures of electro-cardiography and renal function tests could not be employed at all. A physical examination was made, however, of every patient, and upon this examination alone the diagnosis in some cases must rest. We are certain that free ascitic fluid was present in all the cases reported.

The present paper is based on data obtained from eighty patients, all of whom had ascites from some cause or other. Several were admitted to the hospital two or three times and the period of residence varied from a few hours to several months. These eighty cases have been classified under eight heads in accordance with the dominant pathological lesion, so far as this could be determined without an autopsy.

These eight groups are as follows:

<table>
<thead>
<tr>
<th>Predominant Lesion</th>
<th>Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatic Disease</td>
<td>22</td>
<td>27.5</td>
</tr>
<tr>
<td>Splenomegaly</td>
<td>13</td>
<td>16.25</td>
</tr>
<tr>
<td>Hepatic Disease and Splenomegaly</td>
<td>5</td>
<td>6.25</td>
</tr>
<tr>
<td>Nephritis</td>
<td>21</td>
<td>26.25</td>
</tr>
<tr>
<td>Heart Disease</td>
<td>10</td>
<td>12.5</td>
</tr>
<tr>
<td>Nephritis and Heart Disease</td>
<td>3</td>
<td>3.75</td>
</tr>
<tr>
<td>Tuberculous Peritonitis</td>
<td>4</td>
<td>5.0</td>
</tr>
<tr>
<td>Abdominal Tumors</td>
<td>2</td>
<td>2.50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>80</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

The nationality of all the patients was Chinese. Only those who were admitted to the wards are considered. For the present we shall confine our attention to the first six groups, leaving the tuberculous cases and the abdominal tumors for later study.

**Differential Diagnosis.**

Of the twenty-two cases of hepatic disease there was definite clinical evidence of some pathological process in the liver in only six, in which there was marked enlargement, local tenderness, or jaundice. The remaining cases were classified as hepatic disease, probably atrophic cirrhosis, because of the absence of definite signs of lesions in other organs that might produce ascites.

In thirteen cases there was marked enlargement of the spleen, without signs of liver involvement.

In five cases both spleen and liver were enlarged or there was splenomegaly with jaundice. Some of this group might fairly be classified as Banti's disease.
The twenty-one cases of nephritis were characterized by albuminuria, or other signs suggesting chronic interstitial nephritis.

Ten cases showed no definite abnormality in the urine but there were present signs of endocarditis or myocardiitis.

In three patients there was marked albuminuria associated with organic heart disease. Enlargement of the liver or spleen, when it occurred in the cases classed as cardiac, appeared to be the result of chronic passive congestion.

**AGE.**

<table>
<thead>
<tr>
<th></th>
<th>Under 20 yrs</th>
<th>20-39 yrs</th>
<th>40-60 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatic</td>
<td>2</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Splenomegaly</td>
<td>0</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Hepatic and Splenic</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Nephritis</td>
<td>2</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Cardiac</td>
<td>0</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Cardiac-Nephritis</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

All of the cases were between the ages of 19 and 60 years, except one child of three with acute nephritis. The hepatic and cardiac cases showed about equal numbers before and after the 40th year. There were more than four times as many cases of nephritis under 40 years of age, as over, indicating that this condition is more prone to affect young adults. Splenomegaly was also more common in the third and fourth decades, than in the fifth and sixth. Our series indicates that ascites is rarely found in Chinese under 19 years of age, unless it be caused by tuberculous peritonitis.

**SEX.**

Only eighteen of the 80 cases were female. Of these, four had tuberculous peritonitis or abdominal tumors; one, splenomegaly; four, cirrhosis of liver; four, nephritis; four, heart disease; one, cardio-renal disease. Excluding the cases of tuberculous peritonitis and abdominal tumors, 81 per cent of the patients were males and 19 per cent were females.

**PLACE OF BIRTH.**

Many patients came from towns and villages at a distance from Canton, but, with the exception of six, all came from the province of Kwangtung.

Nineteen men and four women were recorded as unmarried.
### OCCUPATION OF SEVENTY CASES.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Hepatic</th>
<th>Splenic</th>
<th>Hepatic</th>
<th>Splenic</th>
<th>Nephritic</th>
<th>Cardiac</th>
<th>Cardiac</th>
<th>Renal</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Student</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Farmer</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Shopkeeper</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Sailor</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Soldier</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Teacher</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Gambler</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Laborer</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Clerk</td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Housework</td>
<td>2</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Pressmaker</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Painter</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Weaver</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cook</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Child (3 yrs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

The list of occupations throws but little light on the etiology of ascites. The great majority of patients admitted to the hospital were farmers, laborers, or shopkeepers. It is striking that most of the cases lived in the country and had spent but a few years, at most, in the city.

#### FAMILY HISTORY.

The family history was often unreliable, and the causes of death of parents or other relatives were difficult to ascertain. One patient with cirrhosis of the liver reported that his father died of dropsy. Of the splenomegaly cases the father of one died of edema, and the sister of another died from the same cause. In a patient with enlarged spleen and liver the mother was reported to have died of heart disease. Four of the twenty-one nephritics reported a suggestive family history, and one of the cardiac cases stated that his mother died of edema. Thus in only nine of the seventy-four patients could any definite family history bearing on the present disease be obtained.

#### PREVIOUS DISEASE.

These records are not complete in regard to previous history. There were nine who reported attacks of chills and fever, four had had dysentery. There is no doubt that malaria is an important factor in the causation of many cases of splenomegaly, more especially in cases not complicated with ascites. Dysentery was more frequently an initial symptom than a previous illness. The nephritis cases showed a tendency to relapse. Four had had previous attacks, each followed by temporary recovery. We have personally observed patients suffering from marked
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parenchymatous nephritis of the chronic type, in which all signs of disease, including albuminuria, have entirely disappeared. Twenty-nine out of forty cases denied venereal infection, but a Wassermann test was not made, and undoubtedly more were infected.

ALCOHOL AND OPIUM.

Alcoholism in 47 Cases of Ascites.

<table>
<thead>
<tr>
<th>Total abstainer</th>
<th>Hepatic</th>
<th>Hepato-Splenic</th>
<th>Splenomegaly</th>
<th>Nephritis</th>
<th>Cardiac</th>
<th>Cardio-Renal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takes less than 500 mils daily</td>
<td>9</td>
<td>4</td>
<td>3</td>
<td>9</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Takes more than 500 mils daily</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

Percentage of cases using alcohol .... 100% 100% 83.3% 91.6% 88.8% 66.6%

Alcohol is usually taken in the form of rice wine. This may vary in strength from 4 per cent upward. Drunkenness is rare among the Cantonese, but drinking is practised pretty generally. Though we have no data on this subject in a number of cases studied, yet our table indicates that in cirrhosis of the liver, with ascites at least, alcohol is probably an etiologic factor.

Only five of the patients were opium smokers. We cannot assign, therefore, any great importance to the use of this drug.

The mode of onset of the disease was determined in most cases by careful questioning. Where disease of the liver or spleen was the underlying cause, abdominal enlargement was usually the first marked sign. In affections of the heart and kidney, edema of the legs was generally the first thing noted. In six cases the disease was ushered in by an initial attack of diarrhoea or dysentery.

DURATION AND RESULT OF DISEASE.

<table>
<thead>
<tr>
<th>Duration of Illness before admission to Hospital in 71 cases</th>
<th>Time spent in Hospital in 74 cases</th>
<th>Result in 73 cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatic ... 8 4 4 2 0 3</td>
<td>7 5 2 7 0 1</td>
<td>2 5 8 2 4</td>
</tr>
<tr>
<td>Splenic ... 2 4 2 1 2 2</td>
<td>2 3 0 4 4 0</td>
<td>0 7 4 0 2</td>
</tr>
<tr>
<td>Hepatic-Splenic ... 0 2 1 0 0 2</td>
<td>1 0 2 1 1 0</td>
<td>0 1 2 1 1</td>
</tr>
<tr>
<td>Renal ... 2 5 5 6 1 1</td>
<td>5 3 0 5 8 0</td>
<td>0 9 9 0 3</td>
</tr>
<tr>
<td>Cardiac ... 2 2 4 1 0 0</td>
<td>2 4 1 2 0 1</td>
<td>1 4 2 0 3</td>
</tr>
<tr>
<td>Cardio-Renal ... 1 1 0 0 1 0</td>
<td>1 0 0 0 2 0</td>
<td>0 1 0 0 2</td>
</tr>
</tbody>
</table>
It will be noted by examining the above table that many cases had been suffering for weeks or months before admission to the hospital. Several cases died a few days after admission but the majority remained for one or more weeks thus giving sufficient time for study and diagnosis. It may not be correct to speak of recovery in patients with ascites. However, two of the hepatic cases and one heart case left the hospital free of symptoms. The most satisfactory results were obtained in the renal cases. There was less tendency for the ascitic fluid to recur, although albuminuria generally persisted.

Unfortunately, no autopsies could be performed, but the cause of death was usually quite evident. Two of the hepatic cases that died were not tapped. One had a terminal enteritis, and the other showed marked jaundice and delirium. Another patient died with indications of abscess of the liver. Two patients with splenomegaly died. One of these became delirious soon after aspirating the fluid and remained in this condition until death. The other, a young woman from whom 15,000 mils of fluid were removed, died twelve hours later in collapse.

There were two patients with cirrhosis or enlargement of the liver and splenomegaly, who died. In one there was an abscess of the liver which ruptured into the lung. The other patient died shortly after leaving the hospital with symptoms of cerebral embolism which followed aspiration.

One of the cases of nephritis became uremic after the second aspiration and died.

Of the patients with heart disease one died with signs of cerebral embolism which came on soon after tapping the abdomen. One who was not tapped showed signs of beri-beri. The third heart case, in which there was aortic incompetency, died soon after aspiration.

Two patients with advanced heart and kidney disease died. One showed marked jaundice and toxemia, and the other died of advanced mitral disease with decompensation.

TEMPERATURE.

A normal or subnormal temperature was usual. There were eighteen cases in which the thermometer reached as high as 100° F. In seven it reached 101° F. In four it rose to 102° F. or above.
A Study of Cases of Ascites in Canton.

THE CIRCULATION.

<table>
<thead>
<tr>
<th>Condition of the Heart</th>
<th>Rate of Pulse</th>
<th>Blood Pressure (Systolic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatic</td>
<td>75</td>
<td>85</td>
</tr>
<tr>
<td>Splenic</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>Hepatic and Splenic</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Cardiac</td>
<td>25</td>
<td>15</td>
</tr>
<tr>
<td>Cardio-renal</td>
<td>1</td>
<td>10</td>
</tr>
</tbody>
</table>

Twenty-six of the case histories gave no record of the condition of the heart. It may be assumed that in these there was no heart disease, or at most there was only functional impairment.

In three of the patients with splenomegaly, a mitral systolic murmur was heard, probably functional. In five of the patients with nephritis there were signs of heart disease, but the renal symptoms were decidedly predominant.

There were ten cases, however, in which the ascites was considered as a complication of organic heart disease. Seven of these showed mitral regurgitation; two, aortic regurgitation; and one showed evidence of myocarditis.

Out of 452 patients admitted to the medical wards of the hospital in 1914, nineteen were diagnosed as heart disease, and five of these, or 26.3 per cent, had ascites.

The pulse rate was not generally increased above 80. But excessive accumulation of ascitic fluid did cause embarrassment of the heart and consequent acceleration of the pulse.

The systolic blood pressure was estimated in several cases. The Nicholson apparatus was used. The highest reading was found in a case of aortic regurgitation. In general, aspiration of fluid has no appreciable effect on high pressure. There might be a temporary fall, but the next day it returned to the original reading; except in one instance of aortic regurgitation, the higher readings were found in cases of nephritis.
HEMOGLOBIN IN 34 CASES.

90-100% 80-89% 70-79% 60-69% 50-59% 20-29%

Hepatic ... ... ... 1 2 1 ... ... 
Splenic ... ... ... 2 3 ... ... ... 
Hepatic & Splenic 1 3 ... ... ... ... 
Renal ... ... 1 2 3 4 2 1 
Cardiac ... ... 2 3 1 ... ... ... 
Cardio-Renal ... ... ... ... ... ... 

Anemia was especially marked in the nephritic cases, more than half of which were below 70 per cent.

RESPIRATORY SYSTEM.

The records of the lungs and respiratory organs were not complete. There was no case of pneumonia. In the majority of patients there was marked dyspnoea on admission because of the intra-abdominal pressure. This usually soon disappeared after aspiration. In only four was there evidence of pleural effusion; three on the left, and one on the right side. The effusions were moderate and did not require tapping.

LIVER.

Enlargement of the liver was noted in seven cases. In two there was tenderness, but in only one was an abscess demonstrated. In this last case the pus discharged into the lungs. There was a marked infection of Clonorchis sinensis. In several instances it was not definitely stated whether the liver was enlarged or not. It is probable that in most of these it was of normal size or reduced.

Spleen.

The spleen was noted as enlarged in 19 cases, in one of which the enlargement was apparently caused by passive congestion. Excluding this case, there were only eighteen, or 24 per cent, with splenomegaly. Four of these cases appeared to be Banti's disease. Among the others, one was diagnosed as cancer of the spleen; in three, there was a history of malaria; and in one a history of excessive alcoholism. The spleen did not average as large as in many cases of splenomegaly without ascites.

DIGESTIVE SYSTEM.

Pressure of the fluid on the stomach and intestines always caused marked digestive disturbance. Severe enteritis was a frequent complication. In one patient with nephritis and marked albuminuria, suppression of urine was difficult to overcome until a violent acute enteritis developed, when the urinary output was markedly increased.
OVA OF INTESTINAL PARASITES.

<table>
<thead>
<tr>
<th></th>
<th>No. Recorded</th>
<th>No. Ova.</th>
<th>Ankylostoma</th>
<th>Ascariis</th>
<th>Necator</th>
<th>Clonorchis sinensis</th>
<th>Clonorchis variegatus</th>
<th>Clonorchis sinensis</th>
<th>Clonorchis variegatus</th>
<th>Clonorchis sinensis</th>
<th>Clonorchis variegatus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatic</td>
<td>...</td>
<td>16 4</td>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Splenomegaly</td>
<td>... 6 3</td>
<td>2 1</td>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatic and Splenomegaly</td>
<td>1 1</td>
<td>...</td>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renal</td>
<td>... 9 4</td>
<td>1 3</td>
<td>2 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardiac</td>
<td>... 2 7</td>
<td>...</td>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cardio-Renal</td>
<td>...</td>
<td>...</td>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is to be regretted that the feces were not examined in all of the cases. There were forty, however, in which ova were looked for and there was evidence of parasites in about one half of these. Ankylostoma and Clonorchis sinensis, by their own pathological processes producing either a profound anemia on the one hand, or extensive disease of the liver on the other, may be directly responsible for the ascites. Hookworms were present in seven cases, while Clonorchis was found in six. In two of the latter there was great abundance of ova in the feces and there was marked tenderness over the liver.

THE URINE.

In all patients with marked albuminuria a diagnosis of nephritis was made. In two cases there were signs of chronic interstitial nephritis but no albumin was found in the urine. In fifteen cases with nephritis there was a heavy precipitate of albumin, the amounts varying from .5 gm. to 10 gm. excreted per 1,000 mils of urine. Granular and hyalin casts were generally found in these cases.

Ascites resulting from Bright's disease is almost always associated with marked albuminuria. The urine is often very scanty, only 100 mils to 500 mils being voided in the twenty-four hours. It was observed that in favorable cases the disease appeared to remain stationary for a time, until a crisis occurred, so to speak, when the urine increased in quantity and ascitic fluid ceased to accumulate in the abdomen. This critical change was brought about in some cases after the first or second tapping; in other instances the improvement took place some days or weeks after removing the ascitic fluid. In unfavorable cases retention
of urine and symptoms of uremia followed soon after the aspiration of the abdominal fluid.

In the Canton Hospital Report for 1914 there appear but thirty-two cases of nephritis, and according to our series twenty-one of these showed more or less ascitic fluid.

**Edema Recorded in Sixty Cases.**

<table>
<thead>
<tr>
<th>None</th>
<th>Legs or Feet only</th>
<th>Face &amp; Scrotum</th>
<th>Face &amp; Feet</th>
<th>General Anasarca</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatic</td>
<td>3</td>
<td>9</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Splenomegaly</td>
<td>5</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
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It is very evident from the above table that in cases of nephritis the ascites is likely to be part of a general anasarca. When edema appeared in cases of cirrhosis of the liver or splenomegaly, it was usually caused by pressure on the lower extremities and was soon relieved by removing the cause.

In the heart and kidney cases this was not so generally the case. If a free flow of urine was not established by tapping, the edema persisted or quickly returned.

If the edema disappeared in renal cases after aspirating the abdomen a favorable prognosis was justifiable, but if the edema persisted there was little prospect of recovery.

The frequent occurrence of edema in cases of nephritis among the Chinese is of especial interest, because of recent studies of the effect of sodium chloride on this disease. It is well known that the best method of treating the edema of Bright's disease is by giving a diet free of salt. Now salt among the Chinese is a luxury seldom indulged in by the lower classes. Rice, the main article of diet, is cooked and eaten without any salt. Meat is eaten in very minute portions by the laborer, and vegetables are likewise prepared without salt. We have to do, therefore, with a people who rarely eat salt, and whose diet is almost purely vegetarian, who are yet afflicted with a severe form of nephritis frequently accompanied by local edema, ascites, or general anasarca.

In this connection it is also of interest to note that the dairy products, such as milk, butter, and cheese, do not form part of the dietary of the average Chinese.
DATA REGARDING ASCITIC FLUID IN SEVENTY-FOUR PATIENTS.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Not Aspirated</th>
<th>Spontaneous Disappearance</th>
<th>Number of Times Aspirated</th>
<th>Average Amount of Fluid When Tapped More Than Once</th>
<th>Maximum Amount of Fluid Drawn at One Time</th>
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Ascites caused by disease of the heart and kidneys is often relieved by appropriate treatment of these organs and the fluid does not have to be withdrawn so often as in patients suffering from cirrhosis of the liver or splenic enlargement. In two of the hepatic cases in which the fluid was not withdrawn, there was a large amount present, but the patients being in extremis no operative procedure was ventured upon. The largest amount of fluid was found in two cases of cirrhosis, in one of which twenty liters, and in the other 16½ liters, were removed at the first tapping. It was generally found necessary to aspirate when the fluid reached between five and ten liters. Less than this amount caused comparatively slight discomfort, and more produced much oppression with nausea and vomiting.

Many cases are reported as being tapped but once, but in some cases there was a gradual reaccumulation of fluid. In only four was there no tendency to recurrence after tapping. In none the fluid was gradually absorbed, but in these there was at no time a very large amount.

TREATMENT.

Diuretic drugs had little effect. Where large amounts of ascitic fluid were present no relief was obtained until this was drawn off. The urinary output then increased and edema rapidly disappeared. Compound jalap powder proved to be the most satisfactory purgative. Little benefit was derived from hot sweat-baths. Unfortunately, due attention was not always paid to the dietetic treatment of these cases.
There were four patients with tuberculous peritonitis and ascites. Two of these were children aged about fourteen, a boy and a girl; and two were adults, a man aged 23, and a woman aged 43. In three cases the abdominal distention was the primary condition, with chills and fever. The woman gave a history of a long standing pulmonary lesion. Abdominal section was performed in two cases. One, a child, was improved. The man of twenty-three was operated upon because of the very rapid accumulation of fluid. Only temporary relief was afforded and he died on the sixteenth day after admission.

All of these four cases ran a febrile course with rapid pulse. In the two adults, tubercle bacilli were found in the sputum. Edema was absent or very slight.

In two women ascites was associated with tumors of the genitalia. From one, 4,000 mils of clear fluid were aspirated before the diagnosis was made. The liver was enlarged. Operation was refused.

The other case was a widow forty-one years old. On admission, ten liters of dark brown fluid were withdrawn, containing many cholesterol crystals. Upon abdominal section, later, an extensive carcinomatous growth was found involving tubes, ovaries and the peritoneum. A pan-hysterectomy was performed. Patient made a good recovery, and was discharged from the hospital well, after four months.

CONCLUSIONS.

1. Ascites is a common condition in the medical wards of a hospital in Canton.

2. This condition is most frequently associated with cirrhosis of the liver or chronic nephritis, but splenomegaly, heart disease, tuberculous peritonitis and abdominal tumors are also causative factors.

3. The male sex is more prone to ascites than the female, and most cases occur between the 20th and 60th years.

4. The majority of cases with ascites give an alcoholic history.

5. Although the Chinese are largely vegetarian in their diet, and seldom eat salt, nephritis associated with edema is by no means uncommon.

6. Ascitic fluid tends to recur after tapping, especially in cases of cirrhosis of the liver and splenomegaly. The best results were obtained where the ascites was caused by heart or kidney disease.
DUODENAL AND GASTRIC ULCERS, A STUDY OF FORTY CASES SUBMITTED TO OPERATION.

C. C. ELLIOTT, M.D., F.R.C.S.E., Paoting, Szechwan.

In the China Medical Journal, January, 1917, I drew attention to certain features of cases of duodenal and gastric ulcer as seen in China. The purpose of the present paper is to examine more in detail all the cases operated on in this hospital up to the end of the year 1917.

I make no apology for returning to the subject. We are more and more surprised at the frequency with which these ulcers occur. During the two and a half years in question, while sifting out the forty cases referred to, we have probably seen forty others which for one reason or another did not come to operation. Whether northern Szechwan is unique in this respect I have not yet been able to ascertain. The chances are, however, that wherever it becomes bruited abroad that chronic "stomach-ache" can be relieved by operation with slight suffering, slight danger, and slight expense,—these cases will soon begin to appear. Thus of our forty cases, two came in the latter half of 1915, ten in 1916, twenty-eight in 1917.

The two classes of ulcers—duodenal and pyloric—have been grouped together for the following reason: while in certain cases it can be almost certainly predicted on which side of the pyloric ring the ulcer will be found, others are doubtful, while still others present symptoms pointing to a site which turns out to be the wrong one.

ETIOLOGY.

Age. The ages of the patients ranged from twenty-three to fifty-seven; the average age of all cases was thirty-seven years.

Sex. There were only two female cases, both of which suffered from gastric ulcers. Among the cases diagnosed but not operated on, there were no females.

Occupation. The patients were mostly farmers; a few were coolies; one worked in a distillery. The townspeople appear to be nearly exempt, but one duodenal patient who declined operation was a well-to-do man of leisure with a notable fondness for good living.

Alcohol. The vast majority give a history of hard drinking extending over many years (but abandoned, of necessity, when the pain became severe). The spirit used here is distilled from sorghum or barley, contains from 40% to 60% of alcohol, is taken cold or hot, diluted or neat, according to taste.
Injury. One case was said to date from a kick in the pit of the stomach by a horse, twelve years ago; another, from the strain of lifting a coffin.

Ankylostoma. Most of the patients are infected with this parasite, which is said to cause extravasations of blood in the mucous membrane, and even "blood filled cavities as large as filberts" (Manson). My colleague, Dr. Clark, suggests that the hook-worm, by damaging the mucous membrane, favours the formation of ulcer. It is true that the kind of duodenal ulcer now under consideration always occurs in the *first portion* of the duodenum, where the parasites, I understand, are not found. Nor is it known that subjects of duodenal ulcer are more often infected with ankylostoma than are the country people generally. On the other hand, it is hard to believe that the preponderance of ulcer cases among farmers is due to their coarser food or harder labour as compared with the labouring classes in the towns, while the abuse of alcohol is common to both.

Previous Indigestion. To my surprise, the duodenal cases, as a rule, gave no history of indigestion before the onset of symptoms pointing definitely to ulcer. This is worthy of note as it is in striking contrast with the accounts of cases met with in Europe and America.

SYMPTOMS AND SIGNS.

The gastric cases presented nothing unusual. In the duodenal cases the rule is that a man, otherwise well, begins to feel pain in the epigastrium some hours after his chief meal in the afternoon. As time goes on the pain becomes worse and lasts longer while other symptoms present themselves as follows:—

Vomiting. This symptom occurred in only three of the duodenal cases, but others were in the habit of inducing emesis for the relief of the pain. Of the gastric cases, all but one complained of vomiting.

Hematemesis. One duodenal case claimed to have vomited blood on one occasion only, while the same symptom was present in quite one half of the gastric cases.

Hunger Pain was, or had been, present in nearly every duodenal case. Two stomach cases gave a clear history of it and two others a somewhat indefinite one. The usual story is to this effect: "When I get up in the morning I am perfectly well. I have breakfast, but towards noon feel some pain, which is relieved by dinner (at two or three o'clock). As the sun sinks behind the hills the pain returns and gets very bad. I can eat no supper. All night the pain goes on."
Duodenal and Gastric Ulcers.

At cock-crow there is some rumbling of the bowels, the pain dies away and I am able to sleep.” It is remarkable how unanimous they are about the cessation at cock-crow. As one man expressed it:—“Just as the cock opens his mouth the pain stops.”

Location of Pain. In 25% of the duodenal cases the pain was confined to one spot, viz.,—the middle line, half way between the umbilicus and the tip of the xiphoid. It did not radiate. The whole area concerned could be covered by a silver dollar. It is to be noted the pain was not located over the right rectus muscle, as stated in some of the text-book descriptions.

In another 33% of the cases the pain arose at the above site, but radiated to the ribs on one or both sides and sometimes to the lower dorsal spines.

But other cases, and these the most instructive, were not so characteristic. In five of our cases, all duodenal, the site of the pain was described as follows:—In the first case the pain was over descending colon, in epigastrium, and over lower dorsal spines; in the second, the pain was worst over the left side of the chest, also bad over epigastrium, and over region of liver; in the third, it was all over the abdomen, but especially to the left of, and above, the umbilicus; in the fourth, it begins in lower abdomen, radiates to site of gall bladder, and to right mid-axillary line; in the fifth, the pain was below costal margin, just to inner side of right semilunar line.

It can readily be imagined that when the character of the pain and its relation to food are, as in the cases just indicated, not typical, the clinical picture may be a puzzling one.

Character of Pain. This is sometimes dull and “boring,” sometimes intense. The patients rarely cry aloud, but either sit leaning forward, or lie prone across a wooden form, rocking from side to side and groaning, while perspiration streams from their brows. As one man said, “It could not pain worse; if it did, there would be no man left.”

Tenderness. This symptom is very variable. In the majority there is some tenderness on deep pressure, especially when the pain is severe. In a few there is no tenderness, and pressure may even relieve. In two cases, when the pain was bad, there was hyperaesthesia of the skin. So acute was this in one case that the patient could not bear even the friction of his clothing. And this particular case, contrary to what one might expect, showed no involvement whatever of the peritoneal coat of the bowel overlying the ulcer.
Rigidity. More frequently in gastric than in duodenal cases, there was rigidity of both recti above the umbilicus. Rigidity of the right rectus alone was noted in a few of the duodenal cases, but was conspicuously absent in others. Its absence must on no account be thought to militate against the probability of ulcer being present.

Melena. This condition, when present, is of course significant. Nearly all the patients were positive that they had never had it. No doubt it is sometimes overlooked.

Borborygmi. A good many of the patients say that when the pain is about to cease there is rumbling of the bowels and passage of flatus, followed by immediate relief of pain; others claim that by massaging the abdomen from above downwards they can finally induce this sequence of events. So often do they volunteer this information that it would seem certain that one element in the production of the pain is the stretching of the ulcer from gaseous distention of the bowel consequent on spasm of its circular muscle somewhere farther down. Or is it that the spasm occurs at the site of the ulcer, setting up pain and imprisoning flatus in the pylorus?

Effect of Hot Drinks. In most of the duodenal cases the drinking of hot liquids (but not alcohol) gave a certain amount of relief. But often, as the disease progressed, this measure failed.

DIAGNOSIS.

It is well to bear in mind that occasionally a man is seen who, after years of pain, still looks so strong, and even well nourished, as to dispel all suspicion of serious organic disease. Again, a patient whose history seems clear may, if put to bed and given a soft diet, enjoy comparative comfort. In such a case a single meal of pork and steamed rice will often settle the diagnosis.

The presence of visible stomach peristalsis, taken in conjunction with the other symptoms, is of great help in establishing the diagnosis. It should be looked for an hour or two after a meal. If not found, it can sometimes be elicited by kneading the abdomen in the stomach area. Strange to say, its presence is not always associated with an obvious narrowing of the pyloric or duodenal canal. Here, again, it would seem as if the irritation of the ulcer by a recent meal had set up a reflex spasm of the circular muscle fibres.

ADVISABILITY OF OPERATION.

A patient who can afford to live at ease, eat soft, well-cooked food, and consume quantities of bismuth, may exist in tolerable com-
fort, though never out of danger. For all others, the only question is whether they are able to stand the operation. Our greatest difficulty has been with men heavily infected with ankylostoma. After treatment for this condition one would fain restore their strength before operating, but the pain and the inability to take food defeat all one’s efforts.

THE OPERATION.

When possible, we do a posterior gastro-enterostomy; the anterior operation only where compelled to do so by a short transverse mesocolon, adhesions in the lesser sac of the peritoneum, etc.

Our routine is somewhat as follows: Two nights before operation the patient is given a purgative. On the day before operation, soft diet, no purgative; the epigastrium is painted with tincture of iodine; when dry, a sterile towel is applied and a many-tailed bandage. Morning of operation, soapsuds enema; hypodermic of morphia gr. \( \frac{1}{4} \) and atropine gr. \( \frac{1}{10} \), one hour before operation.

On the table, before beginning administration of anaesthetic, paint again with iodine and inject skin along line of incision with a sterilized solution of novocaine, 1 grain; potassium sulphate, 2 grains; adrenaline, \( \frac{1}{200} \) grain; water, 1 oz.

Then inject the same solution through the anterior layer of the rectus sheath and into the muscle along the line of incision. It is quite easy, after passing the needle through the skin, to feel the sheath with the needle point and to puncture it. Use about one ounce of the solution in all.

The incision should be four and a half inches long, one inch to right of mid-line, from costal margin downwards. Having opened the rectus, either divide the muscle in the same line or, better, free it from the sheath, retract it outwards and then incise the posterior layer of sheath and the peritoneum in the same line as the incision in the anterior layer; i.e., one inch from middle line. Protect the viscera and infiltrate the abdominal wall on each side of incision with an ounce or more of a one half per cent solution of quinine and urea hydrochloride, entering the needle from the peritoneal surface and about an inch back from the wound margins.

Examine the whole of the stomach, the duodenum, gall bladder, and ducts. Using a Roosevelt clamp, do a “no loop” posterior gastro-enterostomy, making the stomach incision vertical and approaching as near to the greater curvature as is possible without displacing the gastro-epiploic artery. Use catgut for the inner suture, silk or celluloid thread for the outer. When sewing the return half of the inner
suture, do so in such a way that the edges of the viscera are everted. Thus, when the clamp is released, any spurting artery can be dealt with before completing the outer suture. Deal with the rent in the mesocolon. Close the abdominal wound with three tiers of sutures.

During the first 24 hours after operation, give three one-pint saline enemata; allow sips of hot water by mouth; raise shoulders as soon as patient is out of the anaesthetic.

During the second 24 hours give more water by mouth; also rice water. One or two rectal salines if needed to allay thirst.

From the third to seventh day, soft rice gruel, etc., may be given; soap and water enema when needed.

During the second week gradually return to a generous but soft diet. At the end of this week patient gets up, and goes home a few days later.

COMMENTS ON OPERATION.

From the standpoint of anoci-association it is not good practice to inject novocaine before giving the anaesthetic, but it saves time and the pain is slight. The addition of adrenalin often enables one to open the peritoneum without having clamped a single vessel.

Quinine and urea hydrochloride, besides lessening post-operative pain, is invaluable as a time-saver when sewing the abdominal wall. The peritoneum in this region is very sensitive. As soon as the first tier of sutures is begun (a continuous No. 3 catgut taking up the peritoneum and posterior layer of rectus sheath) the patient begins to strain, omentum is forced between the wound margins, deeper anaesthesia is demanded and time is wasted. When properly employed, quinine and urea hydrochloride obviates all this.

FINDINGS AT OPERATION.

Of the forty cases, in 21 the ulcer was duodenal; in 12 the ulcer was gastric and with one, or perhaps two, exceptions, it was confined to the pyloric half of the organ. Three were clearly cases of ulcer, but the exact site was concealed by extensive adhesions. One case proved to be pyloric cancer. In three cases nothing was found (vide infra).

The presence of a duodenal ulcer is evidenced by a thickening of the first part of the duodenum, which may be slight in extent and confined to one wall only, or may involve the whole circumference, forming a mass as large as a walnut. There is often infection of the peritoneal surface, which may have a contracted, scarred appearance.
Punctate sub-peritoneal haemorrhages are sometimes seen, and there may be adhesions.

Of the three cases in which no ulcer was found, the history of one pointed distinctly to duodenal ulcer and the operation was a brilliant success. There may have been a small ulcer with little induration. The other two cases, whose histories were inconclusive, obtained no benefit from the operation. In order to illustrate the difficulties of diagnosis and also to try to justify oneself for operating when no ulcer was found, it may be well to give a brief account of one of these two cases.

Case No. 4312: male, net. 31, farmer; moderate drinker; frequent attacks of pain, located (a) over gall bladder; (b) in mid epigastrium and umbilicus; (c) over lower dorsal spines. Pain bears no relation to taking of food, but vomiting of food or of clear fluid sometimes occurs, with temporary relief. About two years previously I had explored the gall-bladder and ducts, but found nothing. In June, 1917, he re-entered the hospital and then, for the first time, confessed that ten years ago, on account of his wife's temper, he had tried to commit suicide by drinking a handful of salt dissolved in a pint of spirit. His pain dated from that time.

The symptoms did not point to chronic gastritis. Dieting, bismuth, etc., did not help him. While in the wards he took a clandestine meal of pork and steamed rice. He vomited this, and with it a few clots of blood.

When the abdomen was again opened, nothing abnormal could be detected. The incision was enlarged and the appendix found to be healthy. Having in mind the happy outcome of the case just referred to, I did a gastro-enterostomy, which made him neither better nor worse. The case has always been a puzzle to me. Cannot someone who reads this report suggest an explanation?

RESULTS OF OPERATION.

There were no deaths. All of the patients recovered from the operation and returned to their homes. One man, who had been heavily infected with ankylostoma, became even more anaemic after the operation (see American Year Book of Anaesthesia on "The Destruction of Blood Cells by either Chloroform or Ether"). Probably he never recovered. In a few other cases there was relief of pain but a certain amount of indigestion remained and one could not regard them as cured. But in the great majority all bad symptoms disappeared at once after the operation. The patients enjoyed their meals, gained strength each day, and left us showing a gratitude that was pathetic to witness.

As to the ultimate results I have been able to get trustworthy reports in ten cases only. Of these, one reported that he was free from pain but always had indigestion. The other nine gave glowing accounts of perfect health and of their ability to eat anything and to do hard work.
The China Medical Journal.

CONCLUSIONS.

(1) Both gastric and duodenal ulcers appear to be very common in China, at any rate, in Szechwan.

(2) The symptoms of duodenal ulcer differ in one or two respects from the text-book descriptions.

(3) By careful selection of cases the mortality can be kept so low (perhaps about 5%) that even in inland China patients will submit to operation.

LEUKEMIA.


JOHN H. KORNS, M.D., Peking.

Leukemia, of the myeloid type, is not uncommon in China; the lymphoid type is seldom seen; the aleucocythaemic stage of the lymphoid form is still more rare. The following series of five cases represents those seen as in-patients at the Union Medical College Hospital, Peking, during the last ten months, and the series is of especial interest because it includes all three types mentioned. Cases 4 and 5, representing the rarer forms, are reported in some detail.

I. CHRONIC MYELOID LEUKEMIA.

Case 1. Male, aged 38, a soldier, native of Honan, entered hospital December 30th, 1916, with a history of a gradually enlarging abdominal tumor for sixteen months. No unpleasant symptoms aside from occasional swelling of legs.

Examination showed an anemic-looking man, with a puffy face and edematous legs; some varicose veins below knees. No focus of infection found. No adenopathy. The spleen extended to 2 cm below the anterior superior spine of the ilium, and on the right to the median line; it was extremely firm. The liver was not palpated. Systolic blood pressure, 125. Urine showed a trace of albumin and continued to show this throughout his stay; the amount and specific gravity were constantly normal, and never more than two or three hyaline casts were found. Feces and sputum normal. Von Pirquet tuberculin test, moderately positive. Blood examination, as in chart.

The patient's disease ran an afebrile-course, except for temporary fever from January 12th-16th, due to an abscess of the cheek. As shown in the chart, this was coincident with a rise in the number of W. B. C.
Cases of Leukemia.

and the proportion of polymorphs. When the patient, at his own request, left on March 21st, the spleen had not decreased in size although it was somewhat softer. In spite of the decrease in W. B. C. (see chart) there was no physical evidence of improvement. On leaving, the patient went to the London Mission Hospital, Tientsin, where, according to a letter from Dr. Peake, he died April 16th, after six days of high temperature and two days of extreme dyspnea.

The treatment consisted of the administration of benzol by mouth, beginning January 6th with .5 gm t.i.d., increasing January 18th to 1 gm t.i.d., and March 16th to 1.5 gm t.i.d. X-ray treatment was not available.

CASE 2. Male, aged 32, a farmer, native of Chihli, entered April 19th 1917, with a history of a growth in the abdomen dating back two years, the inception of it following closely an attack of malaria. The mass has grown steadily and patient has lost strength, in spite of vigorous Chinese treatment and a stay of two months in a foreign hospital in Tientsin last year.

Examination showed an anemic, very myopic individual. Teeth, dirty and decayed. Heart gave a hemic murmur. The spleen extended 15 cm below the umbilicus, and 5 cm beyond the mid-line. It was very firm. The liver was distinctly palpable. No ascites. No adenopathy. Urine showed a trace of albumin, no casts. Feces normal. Von Pirquet tuberculin test, negative. Blood findings as in chart. In all three counts tabulated there were nucleated R. B. C., but in the last count they were especially numerous, there being 65 (13 megaloblasts, 41 normoblasts, 11 microblasts) in a count of 900 W. B. C. This last count was made a few hours after a profuse epistaxis.

The treatment consisted in giving benzol, 1 gm b.i.d. with meals, increased in ten days to 1.5 gm b.i.d.; also two X-ray treatments.

On May 17th the patient left at his own request. No improvement.

CASE 3. Male, aged 21, farmer, native of Chihli, entered June 2nd, 1917, with a history of a growing mass in his abdomen for two months. No unpleasant symptoms.

Examination showed a well-nourished man. No foci of infection found. Heart gives a hemic murmur. Spleen extends down to the level of the anterior superior spine and over to the mid-line. Liver palpable. No adenopathy. Urine cloudy, no albumin, but several R. B. C. seen in the centrifuged specimen. Blood as tabulated below. Only one nucleated R. B. C. was seen.

Patient refused to stay longer than two days in the hospital.
II. ACUTE LYMPHOID LEUKEMIA.

Case 4. Male, aged 27, a coolie, native of Chihli, entered September 18th, 1916, complaining of a swollen abdomen, dyspnoea, anorexia, pain in the liver region.

History. The onset was sudden, twenty days ago, prior to which time patient was perfectly well, without any pain or abdominal tumor. Onset was with pain in and above the liver region; the pain has been continuous to time of entrance and patient is unable to work. He has grown weak very rapidly. Within three days after onset the abdomen reached its present size. Vomited four times at onset. Began to feel feverish with beginning of pain. No chills. Dyspnoea began five days ago. Bowels and urine normal. Eyesight good. No convulsions. Sleeps brokenly. Denies venereal diseases and the use of alcohol. Never had malaria. No past disease except hemorrhoids, for which he was operated on three years ago.

Examination. A well-nourished, extremely dyspnoeic, ill-looking man, moves slowly and with difficulty. Skin.—This shows profuse crop of petechial spots, pin head in size, over face, neck, arms, and trunk, especially upper half. Edema of face and legs. No icterus. Skin is dry but not hot. Eyes.—Upper lids more edematous than lower. Pupils react to light irregularly, sometimes contracting, sometimes dilating, under the stimulus. No nystagmus. Mouth.—Some twitching of the left corner. Teeth dirty, gums slightly spongy, no pyorrhoea. No bleeding except opposite the roots of the central lower incisors where there is a small ruptured area of buccal mucosa, with several petechiae. Tongue furred. Pharynx normal. Neck.—Post-cervical glands palpable, vessels not engorged. Lungs.—Resonance normal, except that absolute liver dulness is at the 5th rib in the mid-clavicular line, and correspondingly high behind. Breath sounds, normal. Left lower lobe posteriorly at the level of the 9th spine gives a few inspiratory crepitant râles. Heart.—Left border at the mid-clavicular line, right and upper borders normal. The beat is tumultuous and rapid. Tones clear. No accentuations, murmurs or arhythmia. Abdomen.—Prominent in upper half, especially in epigastrium. Here is seen a smooth, globular swelling, that moves with respiration. It is firm and not tender even on deep pressure. Superficial veins only slightly enlarged. No fluid in abdomen demonstrable. Liver.—Borders: upper, 5th rib in the mid-clavicular line, 6th rib in anterior axillary line, 8th spine in the scapular line; left, 10th rib, left mid-clavicular line; lower, 5 cm above the umbilicus in the mid-line, 1 cm below the umbilicus in the
right mid-clavicular line. This corresponds with the bulging mass seen on inspection. **Spleen.**—Inspection shows a vertical ridge on the left side of the umbilical region that moves with respiration. This corresponds with the right edge of the spleen, which is slightly mesial to mid-Poupart's line; the lower border is 2 cm below the umbilicus. Consistency hard, not tender, edge sharp. **Genitals.**—Normal. **Anus**—Shows some protruding skin and mucosa. **Legs.**—Edema moderate. No petechiae. Reflexes normal. No scars. **Urine,** September 18th, acid, clear, sp. gr. 1.012, no albumin, sugar or bile. **Feces** grayish, no ova, bile present, no occult blood. Wassermann, strongly positive. Blood findings as tabulated.

In the blood chart, 70.5% of the W. B. C. are classed as atypical lymphocytes. These are precisely like those pictured by Cabot in Osler's "Modern Medicine," where they are spoken of as Naegeli's myeloblasts. Some of these contained azurophilic granules with Wright's stain. The mononuclears are seen to form 80.5% of the W. B. C. There are no myelocytes. The nucleated R. B. C. average 12 to each 100 W. B. C. Of these 50% are megaloblasts, 33% normoblasts and 17% microblasts. There is moderate poikilocytosis and polychromatophilia.

**Course of disease.**—The patient grew more miserable and complained bitterly of fulness in the abdomen. He developed exophthalmos, became jaundiced, and appeared toxic. On September 24th, less than four weeks after the onset of the disease, he passed into a state of coma and died. The temperature was never above 37.8° C. No autopsy could be obtained.

**III. ALEUCOCYTHERMIC LEUKEMIA.**

**Case 5.** Male, aged 28, dry-goods dealer, native of Chihli, entered hospital March 21st, 1917, with a provisional diagnosis, made in the outpatient department, of Hodgkin's disease.

**History.**—Seven months ago painless lumps began to appear on the left side of the neck; within a week the right side showed similar lumps, and a few days later there was a similar development in the inguinal regions. After perhaps four months they appeared in the axillae. The lumps have never been painful; they have grown steadily to date. General health is excellent. Past history is negative for syphilis. Personal and family history free from tuberculosis.

**Examination** shows a stocky, muscular male. Teeth are dirty, and tonsils are enlarged and ragged. **Glands.**—On both sides of the neck, in the axillae, inguinal regions, and in the fifth intercostal space below
and lateral to the nipples, are very firm, freely movable, globular masses. They are not attached to the skin, and apparently are not attached to each other or to the underlying tissues. In the axillae, where they are largest, the mass is, roughly, 8 cm in diameter, and protrudes some 5 cm above the normal skin level; in the neck and inguinal regions also they are quite large. Palpation reveals enlarged glands in both popliteal spaces; and in the umbilical region along the spinal column are resistant, ill-defined masses. Spleen and liver not palpable. All other physical findings normal.


As the intercostal glands were single, one was removed en masse for examination. The pathological report by Dr. Wylie is as follows:

Sections show lymphatic glands in which there is a pronounced hyperplasia of the lymphoid cells. The germinal centers have become obliterated so that there are no longer the usual landmarks of the normal lymph gland. Here and there may be seen mitotic figures. The capsule does not seem to be thickened nor the trabeculae increased, but there is a tendency of the lymphoid tissue to encroach upon the lymph sinuses and the capsule and to go beyond the capsule to a slight degree. The glands are congested and the surrounding lymph sinuses filled with blood. The picture is not that of Hodgkin's disease. The involvement is too extensive for lymphosarcoma. It therefore appears to be one of those forms of leukemia in which the blood count (according to the findings) is not typical.'

Unfortunately the above report was rendered after the patient had left the hospital April 3, 1917. All efforts since to get in touch with him have been fruitless. It would be of interest to examine his blood at intervals to see whether he enters a typical leukemic stage later.

**Blood findings in the five cases reported in this article.**

<table>
<thead>
<tr>
<th>Case No.</th>
<th>Date</th>
<th>R. B. C</th>
<th>W. B. C</th>
<th>Polymorphonuclears</th>
<th>Mononuclears</th>
<th>Monocytes</th>
<th>Myelocytes</th>
<th>Neutrophils</th>
<th>Lymphocytes</th>
<th>Monocytes</th>
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<tbody>
<tr>
<td>1</td>
<td>Jan. 2</td>
<td>3,200,000</td>
<td>78%</td>
<td>410,750</td>
<td>50.7</td>
<td>3.2</td>
<td>5.9</td>
<td>2.9</td>
<td>2.9</td>
<td>0.9</td>
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<tr>
<td></td>
<td>Mar. 23</td>
<td>3,894,000</td>
<td>80</td>
<td>3,900</td>
<td>58.1</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
<td>0.0</td>
<td>0.0</td>
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<tr>
<td>2</td>
<td>Feb. 24</td>
<td>2,706,000</td>
<td>45</td>
<td>377,250</td>
<td>57.9</td>
<td>4.5</td>
<td>1.4</td>
<td>3.9</td>
<td>0.7</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>Mar. 23</td>
<td>3,894,000</td>
<td>80</td>
<td>3,900</td>
<td>58.1</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>3</td>
<td>Apr. 12</td>
<td>3,200,000</td>
<td>78%</td>
<td>428,000</td>
<td>64.5</td>
<td>2.6</td>
<td>5.9</td>
<td>1.5</td>
<td>3.9</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>Apr. 12</td>
<td>3,200,000</td>
<td>78%</td>
<td>428,000</td>
<td>64.5</td>
<td>2.6</td>
<td>5.9</td>
<td>1.5</td>
<td>3.9</td>
<td>1.5</td>
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<tr>
<td>4</td>
<td>May 17</td>
<td>4,140,000</td>
<td>70</td>
<td>373,000</td>
<td>50.5</td>
<td>2.4</td>
<td>3.9</td>
<td>1.9</td>
<td>3.2</td>
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<tr>
<td></td>
<td>Sept. 21</td>
<td>3,500,000</td>
<td>65</td>
<td>347,000</td>
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<td>2.4</td>
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<tr>
<td>5</td>
<td>Apr. 12</td>
<td>3,200,000</td>
<td>78%</td>
<td>428,000</td>
<td>64.5</td>
<td>2.6</td>
<td>5.9</td>
<td>1.5</td>
<td>3.9</td>
<td>1.5</td>
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</tbody>
</table>
REMARKS:—

1. The decrease in W. B. C. in Cases 1 and 2 was, in all probability, due to the use of benzid.

2. Case 4 illustrates how extremely acute the disease of leukemia may be. It corroborates the statement of Panton, Tidy, and Pearson; when they say, "the clinical picture of leukemia varies with the acuteness or chronicity of the disease and not with the lymphoid or myeloid origin of the cells." The enlarged spleen and liver, without adenopathy to any degree, did not even suggest lymphoid leukemia; it was only the differential white cell count that showed the true nature of the disease.

3. The positive Wasserman in Case 4, in spite of a negative history, practically proves syphilis to have been present, for leukemia alone does not show a positive Wassermann, according to Noguchi. This opens up the possibility that the high lymphocytosis was merely an expression of the third stage of syphilis.

4. Case 5, while insufficiently studied to make one certain as to the diagnosis, looks like an aleucocytic stage of a lymphoid leukemia. It is with King’s article in mind that I venture this diagnosis. According to Bunting, Hodgkin’s disease early has a normal white count, with probably a normal differential count; but this case, histologically, is not Hodgkin’s disease. Bunting and Yates are inclined to think that the pathological picture in the glands in leukemia, pseudoleukemia and Hodgkin’s disease is due to a varied reaction to the same or similar stimuli, and that the appearance of the leukemic phase is a mere incident.

REFERENCES:—

1. Osier; Modern Medicine, Ed. 1908, Vol. IV, p. 668, Plate VII, Figure 2.
2. Quarterly Journal of Medicine, July, VII, No. 28.
5. Ibid., June 1914, p. 173.
6. Ibid., April 1917, p. 151.

SURGICAL CASE REPORTS.

A. I. LUDLOW, M.D., Seoul, Korea.

I. PAPILLARY ADENOMA OF THE JEJUNUM. INTUSSUSCEPTION, ENTERECTOMY.

Clinical History of Patient. A Korean farmer, male, nineteen years of age, was admitted to the medical service of the hospital, December 30, 1916. Grandparents, parents, and three brothers all in good health.

Previous History. Has had measles, malaria, and gonorrhea.

Present Illness. In June, 1916, he had an attack of "indigestion" lasting three days. About a month later was ill for twenty days with a pain of chronic character in the epigastrium. No nausea, vomiting.

* Article No. 6. Research Department, Severance Union Medical College, Seoul, Chosen (Korea).
or fever. Since September, 1916, has had loss of appetite and considerable loss of weight. The pain has been sufficiently severe to keep him from working. The bowels have moved regularly.

General physical examination negative, except for an indefinite mass in the right hypochondriac region seemingly not connected with the liver or gall bladder. The mass was slightly painful on pressure. Blood: haemoglobin 85%; red cells and white cells normal. No parasites. Sputum, urine, and feces, normal. Stomach analysis: total acidity, 20; HCl., 10.

On January 10, 1917, the patient was seized with a severe attack of pain in the region of the mass, which required morphine for relief. The patient was then transferred to the surgical service and was operated upon on the same day.

Operation. Upon opening the abdomen in the median line from the ensiform downward, the stomach, gall bladder, and ducts were examined and found to be normal. In the right hypochondrium was a large mass which, upon further examination, was found to be distended small intestine in the state of intussusception. The intussusceptum consisted of about five feet of intestine. The further progress of intussusception was apparently impeded by a tumor mass within the lumen of the jejunum. The intussuscepted portion was slightly adherent but was removed without great difficulty. The tumor mass was removed in situ by resection of a portion of the jejunum, the ends being united by end to end anastomosis.

Pathological Report. The accompanying photograph (see Frontispiece) shows a portion of the excised jejunum split longitudinally, revealing a papillary mass which was 4 cm. in diameter practically filling the lumen of the intestine.

Microscopical Report. Examination of a section through the tumor and intestine revealed a typical papillary adenoma. There was no sign of any invasion of the wall of the jejunum.

Outcome. The patient made an uninterrupted recovery and was dismissed from the hospital, February 1, 1917. Shortly after he went home it was reported that he had died, but about three months later he returned to the hospital on a visit. He was in robust health and had gained so much in weight that we could scarcely recognize him as our former patient.

At the present time (January, 1918), the patient reports excellent health.
COMMENT.

Non-malignant tumors of the intestines are relatively rare and seldom diagnosed before operation. Polypoid growths in the intestinal tract occur most frequently in the large intestine at its turning points or in the rectum. The fact that the growth above reported occurred in the jejunum, one of the rarer seats of intestinal tumors, makes it worthy of note. In addition there was the complication of intussusception. The clinical picture of intestinal tumors varies according to the seat of the growth, but in general it is that of stenosis of the bowel. In the above case, until just before operation, there were no marked symptoms aside from what the patient described as "indigestion," and some local tenderness.

In regard to the symptom of "indigestion" it may be well to call attention to the fact, which Cabot points out, that "the majority of the causes of indigestion have nothing to do with any disease of the stomach and we must learn to be familiar with the fact that when patients complain of their stomach they are generally free from gastric disease. Of 15,309 cases of dyspepsia, 12,612 were non-gastric, and only 2,697 were of gastric origin."

While there was no visible peristalsis the pain, referred to a rather definite spot, was suggestive of stenosis. The severe pain which occurred on the day of the operation developed suddenly and was colicky in character, as might be expected from the finding of an intussusception. There was, however, no diarrhea, passage of blood, or vomiting. No doubt these symptoms would have appeared if the patient had not been subjected to early operation.

II. TUBERCULOSIS OF THE CÆCUM. RESECTION WITH END-TO-END ANASTOMOSIS.

Clinical History of Patient. A Korean farmer, male, twenty-six years of age, was admitted to the hospital June 11, 1917.

Family History. Father died fifteen years ago with symptoms of tuberculosis.

Previous History. Had measles, malaria, and dysentery in childhood.

Present Illness. Dates back to three years ago when he began to have "indigestion" and slight pain in the right iliac region. After a few months he noticed an indefinite mass in this location. It has increased very little in size since it was first discovered. There have been no definite attacks of acute pain, with fever, nausea, or vomiting. There has been, however, a gradually increasing soreness. Since July,
1916, he has been unable to work. There has been during this period loss of appetite, headache, some cough, general weakness, and nervousness. The bowels have been regular and the stools normal in character as far as the patient has observed.

Upon entrance to the hospital the patient's pulse, respirations, and temperature were normal. He was much emaciated and weak. The general physical examination revealed nothing abnormal in the heart or lungs. The abdominal wall was thin and in the right iliac region a mass could be palpated at McBurney's point. The mass was not markedly fixed nor could it be moved freely. There was some tenderness on moderate pressure. No free fluid could be detected in the abdomen.

**Blood:** Haemoglobin 85%; red cells, 5,312,000; white cells, 13,000. Polynuclears, 80%; mononuclears, 16%; eosinophiles, 4%.

**Sputum:** Negative.

**Urine:** 800 mils (24 hours); Sp. Gr. 1.015; Acid, no albumen, sugar, indican, or red blood cells.

**Feces:** Ascaris and Trichuris present. No blood or mucus.

**Operation.** Patient was operated upon on June 15th. Incision in border of right rectus. Upon opening the abdomen the ileo-cecal junction was found to be matted together in dense adhesions. While the remainder of the peritoneal cavity seemed to be normal the case was at the time considered inoperable, so the wound was closed and the patient made a good recovery from this exploration. Neither the patient nor the operator was satisfied and so it was decided to operate again, inasmuch as the patient urged me to take any risk. Accordingly, a second operation was done on June 26th. The original incision was enlarged and the mass thoroughly exposed. The ileum leading into the mass was enlarged and its walls thickened. The cecum was so thickened and distorted that it was difficult to recognize. Mesenteric glands, considerably enlarged, were palpated. The mass was fixed so that it was difficult to draw it into the abdominal wound. The ileum was clamped about five inches from the junction with the mass, and a second clamp was applied to the ascending colon just beyond it. All the intervening structures, including the mesentery and glands, were excised and the cut ends united by end-to-end anastomosis. The ileum being hypertrophied this was not difficult to accomplish.

The patient made a good recovery and at the present time (January, 1918), is reported to be in good condition.
Pathological Report. Photograph of the resected mass in longitudinal section (see Frontispiece). The specimen consists of ileum (1), caecum (2), a small portion of ascending colon (3), together with mesenteric glands in the ileo-caecal angle forming an irregular cylindrical mass. The ileum is enlarged in diameter and its walls hypertrophied but regular in outline.

The ileo-caecal valve is practically obliterated, admitting only a probe. The wall of the caecum is hypertrophied, irregular in thickness. The mucosa is dark red but shows no areas of caseous material.

Microscopical Report. (1) Section from the ileum shows much hypertrophy, particularly of the muscle. No tuberculosis.

(2) Section of a lymph gland taken at the ileo-caecal angle shows many giant cells surrounded by epitheloid and small round cells.

(3) Section from the caecum. The greater portion of the mucous layer is missing, its place being taken by a mass of small round cells, epitheloid cells and fibrous tissue. Throughout the submucous and muscular coats there are typical areas of tuberculosis.

(4) Section from the ascending colon shows no evidence of tuberculosis.

COMMENT.

Henri Hartman (Revue de Chirurgie, February, 1907), makes a distinction, from a clinical and pathological point of view, between (a) an entero-peritoneal and (b) a hyperplastic form of ileo-caecal tuberculosis. Clinically, in the entero-peritoneal form, which is characterized anatomically by the presence of numerous ulcerations in the ileo-caecal region with inflammation and even peri-caecal suppuration, there is a group of symptoms corresponding to the lesions. The patient has sometimes, at the beginning of the disease, signs of tuberculous enteritis, the stools are frequent, copious, liquid, and contain some blood. Attention is then attracted to the ileo-caecal region by pain in the ileo-caecal fossa. The general symptoms may increase by the constant persistence of the suppuration, and also as a result of the evolution of a pulmonary tuberculosis. Only a short time ago we had a patient with these symptoms and at first we suspected a localized appendix abscess.

The hyperplastic form, which the above case simulates, has an insidious onset, loss of appetite, and indefinite pain in the right iliac region. This condition may remain for several months. In some cases there may be alternating constipation and diarrhoea, but in others, as in our case, this was absent. The attention was simply attracted by the indefinite mass and increasing soreness. In thin patients such as ours,
one can often outline the mass fairly well. This form is slow, and the lungs may remain uninvolved for a considerable time. If untreated the process advances and results in a condition similar to the enteroperitoneal type.

Prompt and radical surgical treatment, a resection which includes the mesenteric glands in the ileo-caecal junction, seems to offer the best method of relief.

PATHOLOGICAL NOTES.

Some Remarks on the Blue Spot in Mongolian Babies.

Walther Fischer, M.D., and Shen Chen Yu, M.D., Shanghai.

The blue spot is almost constantly present in new-born Chinese babies. So far the authors have failed to find it only twice. As the child grows the spot gradually disappears; however, among 110 cases examined it was found three times in children of 10, 11, and 12 years of age respectively. The size of the spot varies considerably, as well as its colour. Generally, there is only one spot; sometimes there may be two or more. The spots are situated in the regio coccygea, sometimes on the buttocks, or on the upper thigh, very rarely on the back, occasionally on the upper arm. Microscopical examination showed the existence of pigmented cells in the cutis. These cells, first described by Bälz, often have the appearance of the antlers of a stag. The length of the pigmented cells averages 40 μ, sometimes even more; occasionally, cells of the length of 160 μ have been found. In the embryo, up to the fourth month, these cells can not be found; they are present at the end of the fifth month, but they are smaller than in new-born children. The pigment is genuine melanin. In a new-born Chinese baby, full term, with a teratoma the size of a child's head at the regio coccygea, the authors found the same pigmented cells in the cutis covering the tumor. The cells were identical with the ordinary pigment cells but somewhat smaller.

On the So-called Privet Cough in Shanghai.

Walther Fischer, M.D., Shanghai.

During the years 1913-1915 the author examined a great number of cases of so-called privet cough, especially the blood smears in such cases and the sputa. The complaint should be considered as a special form of pollinosis. The term usually employed is erroneous, as the
examinations so far have proved that during the period mentioned the cases of so-called privet cough almost always appeared in Shanghai one or two weeks before the florescence of the well-known and widespread privet. The author made experiments with the pollen of the shrub on persons who had previously suffered from the complaint and who later suffered from it, but always with a negative result. The cause of the disease is evidently the inhalation of pollen, probably of some graminea. The microscopical examination of the sputa shows always a considerable and often enormous number of eosinophile cells, and in many cases the presence of Charcot's crystals; Curschmann's spirals never could be detected. There is a quite characteristic blood picture, viz., a considerable increase in eosinophile leucocytes, averaging between 20 and 30%, even up to 54%. This eosinophilia persists sometimes for a few weeks, and then decreases slowly; even in very mild cases of "privet cough" there is a marked eosinophilia. The lymphocytes were often found somewhat increased, and sometimes also the large mononuclear cells.

The Blood Picture and Intestinal Parasites of Chinese in Shanghai.

WALTHER FISCHER, M.D., Shanghai.

Systematic examinations of the blood and faeces were made at the same time of one hundred healthy Chinese. It was found that 63 were infected with intestinal parasites: viz., with Ascaris, 39; Trichuris, 36; Clonorchis, 7; Ankylostoma, 6; Fasciolopsis Buski, 1; with more than one kind of parasite, 22.

The examination of the blood smears showed a slight increase in the number of eosinophile cells, viz., 6.75%, instead of 2.4%. The number of the eosinophile cells in patients infected with intestinal parasites is slightly higher, especially when severely infected. Cases were observed, however, in which there was no increase of the eosinophile cells despite the presence of worms. It therefore shows that the increase of eosinophile cells is not always a positive diagnostic proof of parasitic infection. The blood picture is in no way affected by amoebic infection.

A Bacteriological and Clinical Study of Phlyctenular Conjunctivitis in Chinese.

CHEN HUNG HSUEN, M.D., Shanghai.

An analysis of 100 cases of Conjunctivitis phlyctenulosa, which were under treatment in the Paulun Hospital, Shanghai, showed that this disease, contrary to experience in Europe, is not more common
The China Medical Journal.

during infancy, childhood, and adolescence than a later period. In 42% of the cases, the patients were between 20-30 years of age. Whereas in Europe there is an undoubted connection between the disease and a scrofulous constitution, no such connection appears to exist in Chinese patients. Only one of the 100 cases was of a typical scrofulous diathesis; in nine cases there were only indications of scrofulosis; and the remaining 90 patients, apart from their eye trouble, were quite healthy. In 55% of the cases staphylococci could be isolated from the conjunctival secretion. The treatment with vaccine prepared from these staphylococci failed, however, to give satisfactory results, a fact which is against the conception of an etiological rôle of staphylococci in the disease.

Rare Intestinal Strictures of Chinese.

Eduard Birt, M.D., and Walther Fischer, M.D., Shanghai.

In Bruns Beiträge zur klin. Chirurgie, 1916, the authors describe nine cases of peculiar strictures of the intestines (colon and rectum), which were treated surgically at Shanghai, and give the bioscopic, anatomical, and microscopical findings. Two of the cases were strictures caused by Schistosomum japonicum; the deposition of the parasites' eggs in the intestinal mucosa caused chronic inflammations which finally led to stricture. Five other cases of stricture to a considerable degree were caused probably by amebic dysentery. The history of these cases did not always give the clinical symptoms of this disease, though in some cases cysts were found. The histological examination of the excised strictures showed only chronic inflammation not in the least characteristic and there were no amebæ. Probably there was a secondary infection of chronic dysenteric ulcers. All the other possible causes of stricture, viz., syphilis, gonorrhœa, tuberculosis, etc., could be excluded. A further case deals with a stricture of the large intestine, caused by propagation of inflammatory processes from a ruptured pyosalpinx. The cause of the stenosis in the before-mentioned cases could have been positively ascertained only in the first two, either microscopically by finding the ova of the parasites in the faeces, or eventually, by a probatory excision.

Bacteriological Examinations of Chinese Preserved Eggs.

Hermann Dold, M.D., and Li Mei Ling, M.D., Shanghai.

The examined eggs were one to three years old. All of them had an intact egg shell. None of the eggs examined was found to be
sterile. The number of colonies grown from a loop-full of material varied from 1 to 38 colonies. There was no relation between the bacterial contents and the age of the eggs. Spore-bearing, anaerobically growing bacteria were most often encountered, especially *B. subtilis* and *B. mesentericus*. In addition, the following species were isolated: *Staphylococcus albus, S. aureus and S. citreus, M. tetragenus, B. Mycoides, B. Chauvoei, Proteus vulgaris, B. coli, B. Friedländer, Sarcinae, Fungi, Actinomyces, Pneumococci*. In one instance *B. anthracis*, and in another *B. tetani* were found.

In the Blood of Persons who have had Variola, are Complement Binding Antibodies Present?

CHANG CHIA PIN and CHENG YÜ HSIIANG, Shanghai.

The blood of 50 Chinese who had gone through an infection with variola was examined for the presence of complement binding antibodies. As antigen, cow-pox vaccine was used. The result was that, of the 50 persons examined, 45 gave a negative complement fixation reaction; 2, a decided positive; 2, slightly positive; and 1 gave a dubious reaction. Neither age nor sex, nor the time which elapsed since the disease, nor the gravity of the infection, had any marked influence on the outcome of the reaction.

A Case of naturally acquired Bacillary Dysentery in the Dog, complicated with Schistosomiasis, Ankylostomiasis, and Filariasis.

HERMANN DOLD, M.D., and WALTHER FISCHER, M.D., Shanghai.

This case of naturally acquired bacillary dysentery was in many respects interesting. It seems to be the first observed instance of a natural infection with bacillary dysentery in a dog. It was a shooting dog and it is therefore very likely that it got infected whilst chasing through fields manured with human feces. The occurrence of true bacillary dysentery in dogs is of great epidemiological importance because of the intimate intercourse between them and man. The bacillary dysentery was of the Shiga-Kruse type. The lesions found in the intestines resembled those encountered in human cases of bacillary dysentery. Besides this dysenteric process, which caused the death of the dog, a simultaneous infection with *Ankylostomum, Schistosomum japonicum*, and *Dirofilaria immitis* existed.
Four more Cases of naturally acquired Bacillary Dysentery in Dogs.

Hermann Dold, M.D., Shanghai.

The author reports four more cases of naturally acquired bacillary dysentery in dogs. All showed the clinical signs of dysentery. In the first case, bacilli of the Flexner type were isolated from the bloody motions, besides flagellata and a few amœbœ. In the second case, bacilli of the Y type and some amœbæ were found; in the third case, again the Flexner type and eggs of Schistosomum japonicum; and in the fourth case, bacilli of the Shiga-Kruse type. In all four cases the blood of the dogs showed marked signs of defensive reactions. The serum agglutinated the corresponding bacilli in dilutions from 1:100 to 1:300.

As five cases of naturally acquired bacillary dysentery in dogs have been discovered within a short time, one must conclude that in Shanghai, and probably also in other places where bacillary dysentery frequently occurs, the same infection may be not seldom met with in dogs. This has an important bearing on the epidemiology of the disease, especially so as the author has succeeded in showing that dogs may act as bacilli-carriers. A dog fed with food infected with dysentery bacilli excreted the bacilli in the faeces during a period of about 3 months, and the animal contained in its mouth-cavity the bacilli for a period of 13 days, as could be shown by making it lick the surface of sterile Endoplates. The plates thus inoculated by the dog developed colonies of dysentery bacilli up to 13 days after it was fed with the bacilli. This experiment illustrates the dangerous rôle which dogs may play in transferring germs by licking.

On Simultaneous Infections with Bacillary Dysentery and Amœbic Dysentery.

Walther Fisher, M.D., and Hermann Dold, M.D., Shanghai.

The authors report seven cases of mixed infection with dysentery bacilli and dysentery amœbæ in man. In four cases bacilli of the Shiga-Kruse type, in two of the Flexner type, and in one case of the Y type, were isolated. As the sera of the patients agglutinated the corresponding dysentery bacilli specifically, it cannot be doubted that besides the amœbic dysentery an active infection with dysentery bacilli also existed. Further, as these observations were not the outcome of a systematic study, but were rather accidental, it is to be concluded that in countries where the two infections frequently occur, simultaneous
active infections with both dysentery amœbe and with dysentery bacilli will not seldom be encountered.

When the usual emetin therapy fails in patients with amœbic dysentery and there is found an abnormally great content of leukocytes in the stools, according to the experience of the authors this probably indicates simultaneous infection with dysentery bacilli.

On Pyocyaneus Sepsis and Intestinal Infections in Shanghai due to B. pyocyaneus.

Hermann Dold, M.D., Shanghai.

In this paper three cases are recorded of Pyocyaneus sepsis in Europeans (male) in Shanghai. The cases were taken by an experienced practitioner for so-called 13 days fever. They resembled typhoid fever clinically, and showed a very pronounced roseola-like exanthem. The serum of the patients did not agglutinate typhoid or paratyphoid bacilli, although it was repeatedly tested. Neither from the stools nor from the urine nor from the blood could typhoid or paratyphoid bacilli be isolated. On the other hand, Pyocyaneus bacilli were found in great numbers in the motions, in the urine, and were also cultivated from the blood of the patients. Further, these bacilli were agglutinated by the serum of the patients in dilutions from 1:250 to 1:400. Therefore the etiological rôle of B. pyocyaneus cannot be doubted. Regarding the etiology, it seems most probable that the bacilli gained entrance through the alimentary tract, as B. pyocyaneus is not seldom encountered in diarrheic stools in Shanghai. For instance, of 62 specimens of diarrheic stools which were forwarded during three months without selection to the laboratory, six contained a large number of B. pyocyaneus. In all probability these organisms were the cause of the intestinal trouble. As B. pyocyaneus, according to the view of most bacteriologists, is identical with B. fluorescens liquefaciens, which is a frequent habitant of water, it appears most likely that the alimentary channel, as already said, was the port of entry of these pyocyaneus bacilli, causing first an intestinal infection and later an invasion of the blood.

Value of Public Health Education in the East.—"As we find in all history that the meanest causes universally multiplied produce the greatest effects, let us not think it other than a fitting sacrifice to the Eternal and Perfect One to look into the lowest habits of great peoples, in order, if we may, to awaken them to a sense of the injury they are doing themselves and the good they might do themselves. Much of the willingness for education is due to the fact, appreciated by them, that education makes money. But would not the same appreciation, if enlightened, show them that loss of health, loss of strength, loss of life, is loss of money, the greatest loss of money we know. And we may truly say that every sanitary improvement which saves health and life is worth its weight in gold."—Life of Florence Nightingale, Vol. II, p. 179.
ANÆSTHESIA BY ORAL ADMINISTRATION.

ALLEN C. HUTCHESON, M.D., Nanking.

The very novel and promising suggestion in the recent article by Gwatthuey and Karsner in the Journal of the American Medical Association (April 6, 1918) "General Analgesia by Oral Administration" seemed to open up such interesting possibilities in the domain of analgesia and anaesthesia that I was stimulated to make trial of their recommendations.

I have looked in vain for further reports from the same or other sources on the same matter but have so far failed to find any further reference to it. The original article covers most of the points of interest in regard to this method of induction of analgesia and I have to offer only clinical data with conclusions from the cases in which I have tried the method.

Since the article mentioned may have been overlooked by some, and not taken seriously by others, I shall give a résumé of some of the salient points brought out, before referring to my own experience with the method.

The authors after trying various mixtures and combinations, including paraldehyde, morphine, etc., finally selected a mixture of chloroform, ether, and liquid petrolatum as the most satisfactory and safest combination for the purpose. Their investigations were carried on, primarily, with a view to finding some method by which partial or complete analgesia could be induced during the painful dressings at the military hospitals in the war area, but they also suggest its applicability to civil surgery as well. They state that, "The patient is as safe by this oral administration as if the ether were outside the body, but the total amount that can be given by this method has not yet been determined." They bring in the following conclusions:

"1. General analgesia is safer than general anaesthesia.

"2. Fifty per cent ether in liquid petrolatum or other bland oil is probably the safest general analgesic, has apparently no deleterious effect on the stomach, and is not followed by the nausea and vomiting that frequently accompany inhalation anaesthesia. It may be given without unpleasant taste when 'sandwiched' between mouthfuls of port wine.

"3. The method is especially indicated during the dressing of painful wounds, without taking the patient from his bed or ward and when supplemented can be employed for surgical operations."
Since I have no great need for the induction of analgesia alone, I was anxious to determine how much this previous oral administration of ether would assist in the induction of complete analgesia and anaesthesia for operations of all kinds and, with that end in view, have used it in 33 cases in all.

Gwathmey and Karsner recommend that while as much as one ounce of ether can be used yet for the present one should not exceed a formula of:—chloroform, \( \frac{3}{2} \) to 1 fluidram; ether, \( 3\frac{1}{2} \) fluidrams; liquid petrolatum, \( 3\frac{1}{2} \) fluidrams; but I soon increased the amount of ether and petrolatum to 7 fluidrams each.

As regards the taste of the mixture, while naturally it is not a pleasant beverage, yet in no case have I had to give wine or other disguising substance to a patient and I have had only one patient refuse it because of its taste, and have had only two patients vomit it, one of these being a foreign-educated Chinese woman. To people who eat bean curd and bean oil it is not so distressing as it might be to the sensitive foreigner.

In addition to the 33 cases which received this preliminary oral dose of ether, I administered as a control, during the same period of time, ether by inhalation alone, in 19 other cases. This with the purpose in view of determining whether there was any marked saving of ether by this previous oral administration of ether and chloroform. Records also were kept of the amount of ether required by inhalation to induce sleep and relaxation necessary for operation, together with the total amount of ether used and total time of anaesthesia of each operation in the two classes of cases. In seven of the cases chloroform was used instead of ether to induce the complete inhalation anaesthesia.

Our conclusions in the matter were that while we were not able to induce complete enough analgesia or anaesthesia for operation without the addition of inhalation yet the method has the following advantages. It quiets the patients' nerves, some patients going almost to sleep. The patient goes under the influence of the inhaled anaesthetic more quietly and more quickly and requires less ether or chloroform not only for the induction of the necessary anaesthesia, but for the subsequent maintenance of this anaesthesia during the operation than is required for the induction of anaesthesia by inhalation alone. There is then a distinct saving in the amount of ether used, a consideration which, in these times of high prices, is distinctly worth while.

I have seen no deleterious effects from this method in the few cases in which I have used it. In two cases a hiccough developed which persisted only until the patient became anaesthetized.
The amount of both ether and chloroform in the formula might perhaps be still more increased but I have not yet felt it wise to exceed the recommendations of those who first brought the matter to the attention of the profession.

My custom has been to give the dose by mouth fifteen to twenty minutes before starting the inhalation of chloroform or ether.

In conclusion I should say that I think it is well worth using not only for analgesia alone but as a preliminary to the induction of general anaesthesia in any ordinary operative procedure.

A CASE OF DETACHMENT OF ISCHIO-PUBIC JUNCTION, INVOLVING DEFORMITY OF THE PELVIS AND A COMPLETE RUPTURE OF THE URETHRA.


Before discussing the particular case in question it will be well to recall a few details of the anatomy of the os innominatum, for its development has a considerable bearing on the course of the case. The os innominatum is formed of three bones, the ilium, ischium, and the pubis. These are united in the cartilage of the acetabulum, and the ischium and pubis are united about the middle of the ischio-pubic ramus. Under normal circumstance the ischium and pubis should be completely united by bone about the 8th year, and the union in the acetabulum should be complete during the period from the 18th to the 20th year.

Report of Case.—I. L. a lad aged 9½, but small and weakly for his age, went out in the afternoon of the 22nd of May, 1914, to catch fish in a mountain stream. Whilst seated on a rock with his left leg drawn up, and his right leg extended, a rock from in front fell on him and pinned him down. It had a sharp edge which caught him in the right groin. He remained in this position for half an hour, when a man came in response to his cries, took off the rock, and carried him home. Shortly after he reached home, bleeding began from the urethra, and he could not pass any urine. After 24 hours the parents sent to the hospital, and the case was seen by my assistant, who passed a catheter as far as the prostatic urethra which drew off blood mixed with water, but which failed to enter the bladder. He persuaded the parents to bring in the boy at once, and he reached the hospital at midnight.
There was a good deal of induration and ecchymosis in the right groin, and the perineum and scrotum were swollen and oedematous.

The patient was at once anaesthetised with chloroform, and placed in the lithotomy position. The perineum was opened up, and one came to a cavity in the situation of the prostatic urethra filled with blood and urine. The ischio-pubic junction had been detached, the cartilaginous surface being left attached to the pubic portion. The bones were separated for about half an inch, and the cavity containing blood and urine extended on their outer side so that the ends of the bones projected into it. The urine was coming away freely, so no search was made for the opening into the bladder. A large rubber tube was sewn into the perineum and the thigh put up with a metal splint on the outer side, extending well up on the side of the pelvis, so that the thigh was at an angle of $135^\circ$ with the body, as it was found that this position brought the ends of the ischium and pubis together.

On June 10th, that is 18 days later, the boy was again anaesthetized and a small soft rubber catheter was passed from the meatus into the bladder and tied in. The bones were apparently united, and the parts had come together well. The splint, however, was kept on for another 12 days, and the rubber catheter was removed at the end of that time.

Four days later, under chloroform, a silver catheter was passed with a little difficulty, and this procedure was repeated on four occasions. He went home on July 10th well, passing all his urine *per urethram*, the perineal wound being soundly healed.

The os innominatum was not in perfect position, the acetabulum having been driven inwards at the time of the accident, and the boy had a slight limp. He came back to hospital at the beginning of September with the limp much improved, but he was passing urine in a small stream and a catheter could not be made to enter the bladder. The boy was difficult to manage, and the relatives were not keen on anything further being done, so he was kept in under observation. A week later he had an attack of complete retention, and the parents, fortunately for the lad, gave full permission for anything to be done which was necessary.

On reopening the perineal wound it was found impossible to find the passage into the bladder. A suprapubic incision was made, the bladder opened and a fine metal instrument passed outwards from that organ. It was then found that the urethra had been carried far over to the left, and a rubber catheter was introduced and tied in. Two days later the boy pulled it out. For the next three weeks he
was slightly anaesthetized every second day and a silver catheter or sound was passed; this was done with difficulty, owing to the considerable callus which had formed about the ischio-pubic junction and which also encroached on the prostatic space.

At the end of three weeks the confidence of the boy had been so far won that he allowed the instrument to be passed after an injection of eucaine. Finally he learned to pass it himself, and left hospital on January 29th, 1915, passing a No. 7 (English measure) metal sound easily. He urinated freely and without any difficulty.

Since that date he has steadily improved, and in November, 1916, he had lost his limp and could run and jump as easily as other boys. He is growing well, and one's impression is that the deformity in the pelvis is less marked. Urination is normal, and he occasionally passes his own metal sound without any difficulty.

The rarity of the case depends on the particular injury to the pelvic bone. I can find no record of such injury in any of the books at my disposal. As a rule, damages to the pelvis involve much more injury to the pelvic bones and are very often bilateral.

It is not at all improbable that the injury to the urethra was caused, not by the rock, but by the ends of the bones whilst the patient was being carried home. The gradual reduction of deformity is also interesting, though it is doubtful if the os innominatum will ever regain fully its original shape.

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MILLET STALKS IN RECTUM.

J. H. BALDWIN, M.D., Changli.

A farmer came to the Changli Hospital in January, 1918, complaining of internal hemorrhoids and of pieces of stalks of kaoliang (高粱, millet) which he had inserted into his rectum for the purpose of keeping the hemorrhoids in, or, possibly, he may have thought that the stalks would cause pressure on the hemorrhoids and so cure them in that way.

He had worked for four days after his experiment and then began to lose his appetite and to be troubled with diarrhea. Two weeks after the attempt at self-treatment he came to the hospital to be cured of the hemorrhoids and incidentally to have the kaoliang stalks removed.

At time of entrance he appeared to be in fair health, but he had been eating very little, and was passing frequent, foul-smelling fluid movements tinged with blood. The friend who was with him stated
that three pieces of kaoliang stalk had been inserted, and one piece had afterwards been passed.

The patient was given chloroform the next day, without previous catharsis, and examined. Nothing could be seen with the speculum, but the examining finger could palpate a hard substance which I took to be doubled kaoliang stalk. After some difficulty I managed to withdraw one piece with the forceps. It was nine inches long and the ends were rough. It was a complete joint. Without much trouble I drew out two more pieces, whereupon the friend insisted that there were no more. However, I found still another piece. With the one he had passed this made five; each was about nine inches long and from ½-¾ inch in diameter.

We irrigated the lower bowel and put him to bed. He made an uneventful recovery. Six days later we operated upon the hemorrhoids by clamp and cautery, from which operation he also made an uneventful recovery.

This is the most remarkable instance of foreign bodies within the human body that I have encountered in my ten years of practice in China.

STUDIES IN SANITATION IN CHINA.

NATHANIEL BERCOVITZ, B.S., M.D., Kachek, Hainan.

I. THE DISPOSAL OF SEWAGE IN INSTITUTIONS.

The problem of the disposal of sewage in China is particularly difficult. The reason for this is twofold. In the first place, the methods of intensive farming in China require the use of human feces and urine as fertilizer. Without this source of supply the fields would soon be impoverished, and millions of people, who even now barely have enough for their sustenance, would perish. In the second place, the use of night-soil as fertilizer is a constant source of disease, not only among the farmers, but among all the inhabitants of a community. The pollution of drinking water from this source and the contamination of vegetables from the liberal use of human excrement in vegetable gardens, are the direct cause of the spread of cholera, typhoid fever, and dysentery, and the almost universal incidence of *Ascaris lumbricoides* and other intestinal parasites. Furthermore, working in the fields with bare feet is the cause of the large proportion of the people in China being infected with hookworm, especially in the southern provinces. This proportion varies in different places. A limited survey of parts of Hainan shows the percentage to be high. Of ten dispensary patients
examined in the Kachek hospital, nine were found infected. Of 79 pupils of the mission schools in Kachek examined, 69 or 87.3% were found infected.

The final solution of the problem will be the discovery of a method to treat the night-soil so as to make its use safe. Experiments along this line are being conducted by different investigators. In the meantime, the problem must be dealt with as it exists to-day.

A great deal will be accomplished by means of education. To this end the schools and hospitals in China are working, and it is to be hoped that the coming generation will be so enlightened that many of the extremely unsanitary conditions existing in China will be done away with.

A great many of the patients who enter the hospitals in China are afflicted, in addition to the usual run of diseases, with diseases of a serious nature which can be communicated by fecal contamination. These include Asiatic cholera, amebic dysentery, hookworm, and other intestinal parasites, and, to a growing extent, typhoid fever.

The faeces, and in certain cases the urine also, of these patients are highly dangerous. The greatest care should be taken to treat the discharges with disinfectants so as to render them innocuous, and to dispose of them by such means that will effectually prevent them from being the source of contamination or infection to others. This is the least in this direction that hospitals in China can do for the public health. Yet it has been the experience of the author in visiting a number of hospitals in China that, owing to its commercial value as fertilizer and because no other available means of disposal was known, the night-soil of all the patients, irrespective of the character of their diseases, has been farmed out to persons who take it away daily and use it in their rice fields and vegetable gardens. No disinfectants are used as it would impair the value of the fertilizer.

The same procedure is followed in educational institutions. Aside from the fact that undoubtedly a number of the pupils, because of the homes and conditions from which they have come, are “carriers” of diseases such as cholera and dysentery, and that so many of them are infected with hookworm (87.3% in the schools in Kachek), it is decidedly a bad thing from an educational point of view for them to see such methods followed out in the schools they attend. How deeply will the lessons in sanitation taught in the classroom sink in and affect their future conduct in the communities to which they belong, when the sanitary procedures in the school are not much advanced beyond what they know in their homes?
It is the purpose of this paper to suggest a method for the disposal of sewage in institutions which does away with the use of faeces as fertilizer. It has been tried in the American Presbyterian Hospital in Kachek, and has proven satisfactory. It can be used in any place, and is especially serviceable where water is scarce or has to be carried. It is adapted to the Chinese method of squatting during defaecation.

The principle of the method consists in the use of a few pails of water two or three times daily to wash the faeces down a smoothly cemented inclined trough into a septic tank some ten feet away from the latrine. The accompanying diagrams illustrate the method.

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**Fig. 1, Section AA.**
Showing compartments, "seat," bowls, edges of hole, and flow of inclined trough.

**Fig. 2, Section BB.**
Showing section of trough, also hinged cover.

**Fig. 3, Section CC.**
Showing position of vent pipe, shape of holes, doors of compartments, and cover.

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*Studies in Sanitation in China.*
The latrine is built as large as is desired. Compartments are made two and a half feet in width. The "seats" are raised a short distance above the floor. The hole of the "seat" is pear-shaped, and the edges are beveled, as shown in the diagrams. The "seats" and the partitions are cemented over to facilitate washing and to insure absolute cleanliness. The holes are covered by wooden doors hinged so that they will fall into place automatically.

Underneath the "seat" is an inclined concave trough, built at an angle of about 20°. A concrete bed is prepared, and a coat of cement, \( \frac{3}{8} \) inch thick, is laid over this. Great care must be taken to have the trough well rounded, with no angles, and with the cement as smooth as can be worked.

The lower end of this trough ends in a cement pipe, 8 or 9 inches in diameter, leading to the septic tank. The septic tank should be situated at least 10 feet from the latrine.

The latrine must be carefully screened, and the door should be of the self-closing type with strong spring hinges. A vent pipe, 3 inches in diameter, leading from 6 inches above the trough through the roof of the latrine eliminates odors.

Two or three pails of water poured in three times a day at the upper end of the trough effectively washes away all material into the septic tank.

The principle of the septic tank is well understood. By continued bacterial action organic material is decomposed, and clear water flows from the opening of the third chamber. Hence any disinfectants are unnecessary, and fresh water only is used to clean the latrine and "seat" and trough.

**Complement Fixation in Experimental Trypanosomiasis.**—In a recent paper on this subject by Dr. Harold H. Morris, of Shanghai, and Dr. A. C. Woods (Journ. Infectious Dis., January, 1918), the authors state that as the result of an elaborate series of experiments it was found that dogs infected with *T. equiperdum* develop complement fixation with a specific antigen within 8 days after inoculation. The complement fixation usually follows the appearance of trypanosomes in the blood, although it may occasionally precede the appearance of trypanosomes, but the fixation always antedates the appearance of symptoms.

Dogs infected with trypanosomes frequently give a positive Wassermann reaction. Within 3 weeks after the appearance of trypanosomes in the blood, the serum of the infected dog becomes strongly anticomplementary. This phenomenon appears to be due to the liberation of anticomplementary substances into the blood by the invading trypanosomes.

The blood is rendered sterile, and all clinical symptoms clear up following the intravenous injection of arsenobenzol, and in the only complete experiment the anticomplementary action and complement fixation properties with the trypanosome and Wassermann antigens likewise disappeared.
Energetic preparation should now be made by all those who intend to take any part in our next Conference as there is every reason to believe it will not be postponed but will be held in Peking at the time appointed, early in 1919. The Organizing Committee of Peking is already hard at work and it is anticipated that the meetings will be more stimulating and helpful than those of any previous Conference.

The reading and discussion of papers relating to the form of professional work in which most of our members are engaged should be the strongest feature of the Conference and the one to which most time should be given. Hence it is proposed to hold sectional meetings as these will afford opportunity for the discussion of questions for which it would be impossible to find time without this separation of interests. And in accordance with a resolution introduced at the last Conference, the Organizing Committee will try to arrange that certain days shall be allotted to the reading and discussion of scientific papers, and that all business matters shall be relegated to the later sessions. It is hoped that nearly everyone will prepare an original and valuable paper for the Conference, which can be subsequently published in the JOURNAL.

Among other important matters to come before the Hospital Conference is the consideration of measures necessary for raising all our hospitals to a high standard of efficiency, with full medical and nursing staffs and adequate equipment. This question is of particular interest to
physicians in charge of small hospitals who are often obliged to work under circumstances disadvantageous to themselves and to their patients. At present, a missionary physician in appealing for help is not able to present his case supported by all the force of the united opinion of the medical profession in China. But if the Conference will lay down clearly and definitely what is absolutely necessary in the way of staff and equipment for hospitals in this country, according to their size, the mission boards and churches at home will know exactly what is required and will doubtless then do their utmost to meet the needs specified, to the great advantage of all concerned.

Much time and energy are often consumed in debating resolutions which are suddenly brought before the Conference without previous opportunity having been given for their quiet and thoughtful consideration. The consequence is that such resolutions whether wise or unwise, necessary or irrelevant, are often voted for as a mere matter of form, or as a concession to those who advocate them, or are passed out of sheer weariness and the desire to get rid of the subject. The attention of members is respectfully directed to By-law No. 14 (Const., and By-laws, C. M. M. A.,) which runs as follows: "The order of business at each biennial meeting shall be determined by the Executive Committee. All principal motions which members intend to propose at the meeting should be forwarded in writing to the Executive Committee signed by the mover and seconder, in time sufficient to allow the order of business with these motions to be published in advance of the meeting in the CHINA MEDICAL JOURNAL." All motions or questions are either principal, subsidiary, incidental, or privileged. In Robert’s Rules of Order a principal motion is defined as "a motion made to bring before the assembly, for its consideration, any particular subject." Practically, the meaning of By-law No. 14 is that previous notice should be given of every motion which it is intended to propose at the Conference.

The progress made in the treatment of leprosy, as shown by Dr. Cadbury’s article in the May number of the JOURNAL, and other recent literature on the subject, is most encouraging. This disease is commonly held to be one
of the worst to which the human body is subject, partly because of the repulsive, destructive effects of its later stages, and partly because it has been generally regarded in the Christian world as peculiarly symbolic of sin in its worst aspects, so that no condemnation can be more severe than to say a man is a moral leper. The permanent isolation from all social life has also increased the horror of the disease. Of course, in true leprosy there is no necessary connection between it and any particular sin and the sufferers have always been objects of deep compassion. Indeed, there is hardly any form of work in the mission field which makes a stronger or more deserving appeal to the steady sympathy and charity of Christian people.

Confusion of Leprosy with other Diseases. But in considering the history of the disease it is doubtful if we can accept implicitly all that has been written in the past concerning it. When diseases were not as scientifically differentiated from each other as they are now, syphilis and other chronic diseases of the skin of a repulsive or disfiguring character were usually classed with leprosy. In England, three or four centuries ago, the unhappy inmates of leper hospitals often included patients with scrofula, cancer, and syphilis, and all those "full of sores" from any loathsome skin eruption. It was the same in France and Italy. At the beginning of the sixteenth century, when physicians became better acquainted with the nature of diseases, a revision was made of the lazars houses in these countries and it was found that in many of them the majority of the inmates were not the victims of leprosy at all but of some other disease. And the farther back we go it would be surprising if we did not find the same sweeping classification.

Biblical Leprosy. In the Old Testament (Leviticus xiii) there are "certain laws and tokens whereby the priest is to be guided in discerning the leprosy," and in ordering the isolation of persons adjudged to be suffering from it. It may be true that the disease was as common then as it evidently was in New Testament times; but the question has often been raised in recent years whether the various conditions described in Leviticus can all be regarded as manifestations of the
disease to which the term "leprosy" is now confined, and the question has been generally answered in the negative by those most competent to judge. The attempts to diagnose accurately and beyond all question each variety of disease mentioned in Leviticus have not been very successful, as the symptoms given are not sufficient for the purpose. However, there is one important clue often overlooked. The period of separation imposed by the Levitical regulations, during which the diagnosis was held in suspense, lasted only one or two weeks. Hence many of the diseases classed as unclean were of rapid development and may have been the exanthemata, acute eczema, anthrax, erysipelas, and such like. In short, it seems very probable that all skin diseases characterized by cutaneous eruptions, whether acute or chronic, were swept together as leprosy. Little or nothing was known of infection or pathology in those far-off days, so there was no basis for the proper differentiation of diseases. Even in England as late as the middle of the sixteenth century, leprosy was called the "linenless disease," as its cause was believed to be the wearing of woollen garments, seldom or never washed, next to the skin. It was noticed that with the introduction of under-garments made of linen certain loathsome skin diseases began to disappear.

While it is no doubt true that among the ancient Jews sickness was regarded as a supernatural visitation and isolation was enforced for religious not for hygienic reasons, yet the general effect of the Levitical code has been to inculcate a scrupulous attention to the avoidance of personal and household defilement and the development of certain customs and manners which have contributed not a little to the racial vitality of the Jews and their wonderful survival as a separate people.

An interesting paper on "La Lèpre de la Bible" has been recently written by Dubreuilh and Baragues of which the following abstract, with comments, appeared in the *Tropical Diseases Bulletin*, March 15, 1918. "The popular belief that 'leprosy,' as we know it, is the same disease as the Biblical 'Zaraath,' which term has been translated as 'leprosy' or 'lepra' in all modern editions of the Bible since the Septuagint, though long discredited by most leprologists, is still universally held by the public, and largely even by the medical profession."
"This very able paper fully discusses the whole question and well explains how the error has arisen. The authors emphasise the fact, well-known to those who are practically acquainted with leprosy, that the chief characters of 'Zaraath,' as described by the Biblical writers, not only do not coincide with the symptoms of our modern 'leprosy,' but are in many respects diametrically opposite to them. There is, e.g., no allusion in the Biblical accounts to the characteristic loss of hair, alteration of voice, impairment of vision, local anaesthesias, mutilations of extremities, slow progressive and fatal evolution, etc.

"Zaraath was rather an affection or group of affections of rapid course and obviously of ready contagion and curability. [As the Reviewer has elsewhere observed, it is likely that many severe, disfiguring, 'unclean' and manifestly contagious diseases of the skin were then included under the general term 'Zaraath.' In those days there certainly were no means for the accurate diagnosis or differentiation of such diseases.]

"When the 70 learned men of Alexandria in 150 B.C. translated the sacred writings into Greek, they rendered the word 'Zaraath' into the Greek 'lepra,' which had at that time the Hippocratic signification of a scaly disease. When true leprosy afterwards attracted attention, it was known among the Greeks by the name 'elephantiasis' and not 'lepra,' which still had the Hippocratic meaning. It was not indeed until the 10th century that the great authority on Arabian medicine, Constantine of Carthage, originated and perpetuated the mistake in his medical writings by wrongly translating the term 'djudsam' which was the Arabic name for true leprosy into the word 'lepra.'

"The authors quote the various references to Zaraath in the Bible and Talmud, and refer to all previous writings on the subject. They admit that there is much to be said for the theories of MacEwen and Unna, who regard the term 'Zaraath' as implying a taboo rather than a definite malady.

"They finally conclude that in the ancient writings of the Old Testament, the word 'Zaraath' designated an indeterminable group of contagious cutaneous affections, and that while the Levitical regulations had a medical and hygienic signification, the term
later on assumed a rather figurative and moral meaning as seen especially in the Talmud. The confusion of Zaraath with our modern ‘leprosy’ is principally due to the error of the African Constantine, who used for ‘Elephantiasis grecorum’ or true leprosy the word ‘lepra’ which had been employed by Hippocrates and the translators of the Septuagint in a totally different sense.”

In the preceding number of the Journal, Dr. Syphilis in China. Wong examines anew the question whether references to syphilis, another disease which must surely be ‘“blasted with antiquity,”’ can be found in ancient Chinese literature. It has recently been held by Japanese and other writers that this disease was unknown in the Orient until the early part of the sixteenth century when it was introduced by Europeans. If this is correct, it lends indirect support to the position of those syphilologists who contend that the disease was introduced to Europe from America by the sailors who accompanied Columbus on his voyages of discovery. Dr. Wong shows, however, that venereal diseases were known to, and described by, Chinese of the seventh century, and as there is an attempt to differentiate “chancroid” from “chancre” there is the probability that one of these was syphilis. But we cannot be sure that the medical terms used by the Chinese are the exact equivalent of the foreign terms used, and Dr. Wong admits that the ancient Chinese physicians confused constitutional syphilis with leprosy, as they were unaware of the full significance of the primary lesion and were ignorant of its connection with the secondary and tertiary symptoms. Herein lies the main difficulty in tracing the history of the disease as all ancient writers, whatever their nationality, were in the same predicament, so that the absence from the medical literature of a country at any particular period of a clear description of syphilis as a venereal disease does not prove that it did not then exist.

It would be very strange if syphilis was not prevalent in ancient times among nearly all peoples, European and Asiatic, when we consider that prostitution, the oldest profession in the world, has been everywhere common, and that connected with religion itself there were licentious rites that would spread the
disease far and wide once it was introduced. One point seems fairly clear. Undoubtedly there was a most remarkable outbreak of syphilis in Europe shortly after the discovery of America. From there it may have spread to the Far East, just as leprosy was brought to the West by the Crusades, as the result of the rapid development of intercourse between nations. But the evidence, as collated by recent writers, proves that, the disease was known in Europe long before the voyages of Columbus, certainly in the early part of the fifteenth century, and that the physicians of the day treated it with mercury.

Whatever its origin it is now one of the greatest, if not the greatest, of the physical evils of mankind, and the present great war, during which hundreds of thousands of soldiers of all nationalities are said to have fallen victims to it, has shown the imperative necessity of grappling with the whole evil of which it is a part. In reporting the results of his long and careful investigation of the social evil in Europe, undertaken by the direction of the Rockefeller Foundation, Abraham Flexner closes with the statement: "Civilization has stripped for a life-and-death struggle with tuberculosis, alcohol, and other plagues. It is on the verge of a similar struggle with the crasser forms of commercialized vice. Sooner or later, it must fling down the gauntlet to the whole horrible thing. This will be the real contest,—a contest that will tax the courage, the self-denial, the faith, the resources of humanity to their utmost." The struggle must be waged in China also, for syphilis and tuberculosis are generally said to be the twin scourges of her people.

We regret to announce that the editorial drawer of The Journal is almost empty of original articles. A large number of medical missionaries to the Far East have volunteered for war service and the work of those who remain is well nigh overwhelming. Nevertheless, it is hoped that the present standard of the Journal will be maintained. An earnest appeal is made to those in the field to support it in this emergency. Original medical papers, brief reports of cases, interesting medical items of any description, will all be very welcome.
THE NEXT BIENNIAL CONFERENCE.

A few months ago it was suggested to the Executive Committee that the Conference arranged for January next should be postponed, for the following reasons:

1. Our countries need all the money their citizens can spare to enable them to win in the present tremendous struggle in the West for honor, freedom, and justice.

2. Others are fighting for us and many are in deep distress. We should be able to respond, as far as lies in our power, to appeals made on their behalf.

3. Missionary societies must find it difficult at the present time to obtain all the funds they need; it is our duty to be economical.

4. China is everywhere in a state of political turmoil and social disturbance.

5. It is very inconvenient for the Chinese physicians in the south, members of the National Medical Association which is to hold its Conference at the same time and place as the C. M. M. A., to attend a Conference in Peking during the winter months.

These reasons for postponing the Conference seemed so strong and appealing that the Executive Committee thought it wise to obtain an expression of opinion from the members of the Association so that whatever action was taken would have a certain amount of general support. Accordingly, a questionnaire was issued. From the replies so far received it appears that a large majority is in favor of postponing the Conference; but a number, more than sufficient to form the necessary quorum of fifty, have intimated that should the Conference be held at the time appointed they will attend. Thereupon the Committee passed the following motion: "That in view of the votes so far received, we advise the Peking local committee that they proceed with the necessary arrangements for the Conference, and that the final decision as to holding the Conference be settled by the vote of the complete Executive Committee." It is arranged that this meeting shall be held in September.

The Committee had acted in accordance with the old, familiar Constitution and By-laws. It had now to face a serious difficulty. The question was raised whether, under the Constitution and By-laws as revised at the last Conference, the Committee or even the Association itself, had the power to postpone the Conference however important the reasons might be for taking this step.
Without the least desire to influence the decision of the Committee, but solely with the hope of lessening the uncertainty so that the necessary preparations for the Conference may proceed without further loss of time, this question will here be examined and the reasons given for believing that the Committee has no other course open to it than to adhere to the arrangements made at the last Conference.

By-law No. 13 (Constitution and By-laws, C. M. M. A.) enacts that "Stated meetings of this Association shall be held biennially at the call of the Executive."

By-law No. 15, states that "each general meeting of the Association shall be conducted according to Robert's Rules of Order." Presumably, whatever business arises out of, or is related to, such meetings, is governed by the same rules.

Concerning the particular point raised, Robert's Rules of Order contains the following: "The Constitution and By-laws cannot be suspended even by unanimous consent unless they provide for their own suspension." (P. 50, note.)

The only provision made for the suspension or alteration of the By-laws occurs in By-law No. 19 (C. M. M. A.): "These by-laws may be altered or added to by a majority vote at a regular meeting of the Association." As By-law No. 13 refers to "special meetings," a "regular meeting" can only mean one held during a biennial conference. A questionnaire and the replies thereto cannot be regarded as the equivalent of a regular meeting. Indeed, as if to place this point beyond all doubt, the last Conference struck out the by-law which had formerly provided that "In the event of any important subject arising between the biennial conferences requiring immediate action of the Association, the president and secretary may issue circulars calling for the votes of the members on the question at issue." Unless it adopts the extreme expedient of calling a special meeting, the Association is thus rendered inarticulate during the long period between the conferences.

Therefore, according to the Constitution and By-laws of the C. M. M. A., and Robert's Rules of Order, it seems that neither the Executive Committee, nor even the whole of the members of the Association by unanimous consent, have the power to postpone the Conference beyond the biennium. Hence the probability is very great that the Conference will be held at the time appointed, and as the interval is now very short we should energetically prepare for it.
A NATIONAL BUREAU FOR THE PREVENTION OF PLAGUE.

It is satisfactory to learn that the Government has decided not to ignore the plague danger which threatens this country. Two outbreaks of pneumonic plague within seven years suggests that a third may occur again at an early date, particularly as there is some cause still existing in Mongolia which gave rise to the last outbreak. So far as we are aware there has been no kind of investigation into the origin of the epidemic that flared up in Suiyuan during the past winter, but experience indicates that the bacilli must have come from one or other of the variety of rodents that inhabit the Mongolian steppes. The rodents are always there, and if it were ascertained under what conditions they became dangerous to mankind by reason of being infected with disease it would be possible to do something to prevent transmission of infection. As things are to-day trappers and fur merchants may unwittingly do murder on a huge scale by bringing diseased pelts into the commercial centres of the country.

The Board of the Interior, at the instance of the Plague Prevention Commission, has decided to create a National Plague Prevention Bureau, and two well-known Chinese medical men, Dr. Yen of the Peking Isolation Hospital, and Mr. Liu, chief of the Department of Hygiene, have been entrusted with its organization. Apparently the Bureau will be required to plan measures to be taken in case of future outbreaks, to mark down men competent to take charge of such measures, and to make provision for ample medical supplies being forwarded, particularly as regards vaccines and serums which are so difficult to obtain from abroad in present circumstances.

The Bureau will fulfill its purpose provided the Government supplies sufficient money and provided the money is efficiently spent. The Chinese during the recent outbreaks very wisely made use of foreigners in planning preventive measures and in carrying them out. It is not in the least derogatory to the foreign-trained Chinese profession, still more or less in its infancy, that the advice and assistance of foreign doctors was freely taken and accepted. It is because the Chinese profession is still young and lacking, comparatively, in knowledge and experience, that it seems of much importance to the success of the Bureau that foreign opinion should be consulted as to its programme of work.
Particularly is it desirable that the task of the Bureau should not be restricted to the duties mentioned above. These are excellent so far as they go, but they do not go far enough. An essential thing is to trace the cause which gave rise to the recent epidemic, and that cannot be done without the appointment of a commission to examine the problem on the spot. This means greater expense, but any trifle expended in this way will indeed be but a trifle compared to the losses the Government is liable to sustain should pneumonic plague again threaten the country.—North China Daily News.

THE PEKING UNION MEDICAL COLLEGE.

Dr. Franklin C. McLean, Director of the Peking Union Medical College, has accepted a commission in the Medical Officers Reserve Corps and is now on special duty in the Surgeon General's office at Washington. He is still able to give some time to the work of the College, but it is uncertain when he will be able to return to Peking. In the meantime Dr. H. S. Houghton, who was in charge of the New York office of the China Medical Board during Dr. Buttrick's absence on a special mission in England last year, has returned to China and will for the present remain in Peking as acting resident director of the College. His principal work will be the supervision of the construction of the new buildings.

Work on the new plant was begun last September and was actively pushed all through the winter. Most of the basements and the first floors have now been completed. A great deal of soil had to be removed from the compound to bring it to a convenient level, and the foundations had to be carried to a considerable depth to get down through the debris of former buildings to a solid base. A great deal of the work done does not therefore show above ground. It is hoped that the southern group, comprising the laboratory buildings of the college, will be finished this coming winter, while the hospital group should be finished by the end of 1919.

Several new appointments to the faculty of the college and the pre-medical school have recently been made.

Dr. Adrian S. Taylor, formerly of the Southern Baptist Mission at Yangchow, has been appointed professor of surgery. Dr. Taylor will remain in the United States for another year doing special work at Johns Hopkins University where he now holds an appointment as assistant resident surgeon. Last year he was in charge of the Hunterian Laboratory.

Dr. Harvey J. Howard, formerly of the Canton Christian College and the Pennsylvania Medical School, has been appointed professor of ophthalmology. Dr. Howard will also remain in the United States for another year. He is at present on the visiting staff of the Boston Eye and Ear Infirmary.

Mr. B. E. Read, who formerly had charge of the pharmacy and of the teaching of chemistry in the Peking Union Medical College, has been appointed associate professor of physiological chemistry. Mr. Read has been studying in the United States since the beginning of 1916, and has done some important original work. Mr. Read is to return to China this summer.

Dr. A. M. Dunlap, formerly of the Harvard Medical School of China, who has been in the United States two years under a fellowship from the China Medical Board, has been appointed to the department of otology, rhinology, and laryngology. Dr. Dunlap will return to China in November.
Dr. Donald E. Baxter has been appointed Business Manager of the college.
Dr. Baxter was formerly assistant superintendent of the Minneapolis Municipal Hospitals. Later he was director of the New York Committee on After Care of Infantile Paralysis Cases, and he has recently been in France, working on hospital organization for the American Red Cross. He is expected to arrive in China this summer.

Dr. Edgar T. H. Tsen, a graduate of the Harvard Medical School of China, who has been three years in the United States and has held an appointment this past year as assistant to Dr. Hans Zinsser in the department of pathology at Columbia University, has been appointed associate in pathology.

New appointments have been given to present members of the staff as follows:
Dr. F. E. Dilley, as associate in surgery.
Dr. W. G. Lennox, as associate in medicine.
Dr. Li Tsing-meu, as associate in ophthalmology.
Mr. A. J. D. Britland, as pharmacist.
Mr. Ma Kiam, as instructor in Chinese.
Mr. C. T. Feng, as assistant in chemistry.
Miss E. J. Haward, as graduate nurse.
Miss S. H. Connelly, as graduate nurse.
Miss Pai Hsiu-lan, as graduate nurse.

Dr. W. W. Stiffer, who came out last year as instructor in physics in the pre-medical school, has been appointed dean of the pre-medical school.

Dr. Charles Packard has been appointed instructor in biology in the pre-medical school. Dr. Packard has the degrees of B. S. and M. S. from Syracuse University and Ph.D. from Columbia, and has been instructor in biology at Columbia since 1914. He is expected to arrive in China this summer in time to prepare for starting his course in the autumn.

Mr. A. E. Zucker, Ph.D., a graduate of the University of Illinois, who has been teaching modern languages at Tsing Hua College during the past year, has been appointed instructor in English and German in the pre-medical school.

Miss Emily Gilfillan has been appointed librarian of the College. Miss Gilfillan is a graduate of the University of Michigan and has studied at the Library School at Albany, N. Y.

Dr. C. W. Young, who has been teaching pathology, is leaving for the United States on furlough. His new appointment is as associate in medicine. Dr. H. J. Smyly, Associate in Medicine, who has been in charge of the department of medicine during the past year, is also leaving on furlough, and is planning to offer his services to the British army. Dr. J. H. Korns, who is also Associate in Medicine, will return to Peking later in the year. Dr. Lennox will be in charge until then.

Dr. E. M. Johnstone has left for the United States to take up a fellowship under the China Medical Board. His place in the department of surgery will be taken by Dr. Liu Jui-heng, who holds the degrees of B.Sc., and M.D. from Harvard University, and served his internship at the Boston City Hospital. Dr. Liu has been on the surgical staff of the Red Cross General Hospital, Shanghai, for three years. Dr. F. H. Dieterich, who has been on the surgical staff at Peking for the past year, has resigned, and his place will be taken by Dr. Way Sung New, a graduate of the Harvard Medical School, who taught anatomy for one year in the Harvard Medical School of China, and has lately been doing work in orthopedic surgery in the United States.

Dr. E. T. Hsieh, a graduate of the Peking Union Medical College, who assisted Dr. Thomas Cochrane in the translation of Heath's Practical Anatomy and Lectures on Osteology from Morris' Anatomy, has been appointed assistant to Professor Cowdrey who will arrive in China this autumn to prepare for opening the department of anatomy a year later. Dr. Hsieh has the degree of Doctor of Public Health from the Harvard Medical School.
The Peking Union Medical College.

It has been decided that the degree of M.D. will be conferred on students who have fulfilled the requirements of the Regents of the University of the State of New York, after they have completed the regular four years course. The serving of an internship will not be made a pre-requisite to a degree. As regards the present students, the Chinese Ministry of Education has objected to the conferring of a degree upon them, and they are not qualified to receive the degree under the regulations of New York State, from which the College holds its charter. They will therefore be given diplomas in the form prescribed for graduates of the existing Chinese government medical schools, which also confer no degrees, and will be given also special certificates from the Ministry of Education, recognizing them as physicians.

Six annual scholarships of $100 Mex. a year, have been established, which are to be awarded to the student attaining the highest rank in each class of the pre-medical school and in each of the three lower classes of the medical school.

Mr. Walter A. Hawley of Santa Barbara, California, has promised for a limited period a scholarship to realize approximately $150 Mex. to be given to a promising student in the Peking Union Medical College.

The China Medical Board.

Grants have been made during the past academic year to institutions and individuals connected with the medical work, as follows:

Grants to Mission Hospitals: To the Medical School of Shantung Christian University, to cover loss by exchange on previous appropriations, $20,000.

To the Foreign Christian Missionary Society, three-fourths of the support of a second physician at Nantungchow for five years, and a similar proportion of the cost of his residence.

To the Foreign Christian Missionary Society, $360 for the support of a Chinese doctor in its hospital at Luchowfu.

To the Yale Foreign Missionary Society, $9,000 towards the increased budget of the Hunan-Yale Medical College, and $6,200 towards the support of a third instructor in the pre-medical department, payments under both appropriations to be spread over three years.

To the Mukden Hospital of the United Free Church of Scotland, three-fourths of the support of a foreign nurse, and $9,000 for improvements in the buildings, on condition that the society raises $3,000 for the same purpose.

To the Board of Foreign Missions of the Presbyterian Church in the United States of America: for an electric lighting system for its hospital at Chefoo, $900, and for increased operating expenses $2,250 per annum for five years, upon condition that the society contributes $350 and $750 respectively for the same purpose.

To Dr. P. B. Cousland, for addition to the salary of his Chinese pundit, who is assisting in the translation of medical books into Chinese, $500.

For maintenance of the Red Cross General Hospital, Shanghai, during 1917-18, $26,209.

To the Yale Foreign Missionary Society to cover loss by exchange on the grant for a laboratory building, $10,200 Mex.

To the Board of Foreign Missions of the Methodist Episcopal Church, for the support of one dentist, one internist, and one nurse, for its hospital at Peking.

To the Board of Foreign Missions of the Reformed Church in America, for water supply and electric lighting plant for its hospital at Amoy, $2,025 upon condition that the mission board contributes $675 for the same purpose. Also three-fourths of the support of one additional physician for five years.

To the Publication Committee of the China Medical Missionary Association for salaries and expenses connected with its translation work, for the year beginning November 1, 1918, $5,500.

To St. John's University for the support of an instructor in anatomy for the year 1918-19, $1,500.
An appropriation was made at the December meeting of the China Medical Board to cover loss by exchange on all grants to missionary societies on all payments actually made during 1917, the intention being to provide $2.00 for each dollar gold originally appropriated. As regards future payments it was decided that in the case of staff members who had already been appointed and should go to China during the year 1918, and grants for maintenance, buildings, and equipment which were urgently needed, payments should be made at the rate of two for one. In the case of persons not yet appointed and equipment and buildings not urgently needed the additional payments to cover loss by exchange are to be made only after special consideration of each case by the Executive Committee.

Development of Pre-Medical Education in Shanghai and Fukien: The General Director was authorized to arrange with the Domestic and Foreign Missionary Society of the Protestant Episcopal Church for the development of the science department of St. John's University by the contribution of a sum not to exceed $80,000 in all, the payments to be spread over five years.

A grant of $50,000 was made to the trustees of the Fukien Christian College, half being toward the cost of a science building and half for its equipment, upon condition that the trustees contribute before December 31, 1918, $15,000 additional towards the construction of the science building, $30,000 for residences, and $3,000 towards the equipment of the science building. As regards maintenance, there was granted $10,000 per year for five years towards the salaries of six instructors, upon condition that the trustees contribute $5,000 per year for the same purpose; $2,700 per annum for five years was granted for salaries of Chinese instructors, and $10,000 per annum for general maintenance expenses of the science department.

Schools for Foreign Children near Peking: In view of the desirability of sharing with other organizations the expense of developing schools suitable for the education of children of the foreign staff of the Peking Union Medical College, the following grants have been made to schools for foreign children in and near Peking:

To the Peking Primary School and Kindergarten, for maintenance during the school year 1918-1919, $500.

To the North China American School at Tungchow, fourteen miles from Peking, $500.

Shanghai Medical School: The China Medical Board has recently completed the purchase of 120 mou of land on the Rue de l'Observatoire, in the French Concession at Shanghai, for the site of the medical school which it is planning to establish in that city. On account of the war situation, the further development of plans for that institution has been postponed.

The China Medical Board has received a trust fund of $25,000, formerly held by the Harvard Medical School of China, the income of which is to be used for the purposes of the Shanghai Medical School.

Fellowships and Other Aids: Fellowships and other aids have been given since July, 1917, to the following:

Dr. Adrian S. Taylor, of the Southern Baptist Mission, Yangchow.
Dr. W. W. Peter, of the Young Men's Christian Association, Public Health Education Department.
Dr. F. C. Ven, of the Yale Mission, Changsha.
Dr. Ethel Polk, of the Southern Methodist Mission, Soochow.
Dr. A. M. Dunlap, formerly of the Harvard Medical School of China.
Dr. J. O. Thomson, of the Canton Hospital.
Dr. N. Worth Brown, of the American Baptist Mission, Nanking.
Dr. Paul Wakefield, of the Foreign Christian Mission, Luchowfu.
Dr. Liyuin Tsao, lately of Nanking.
The Calling of a Medical Missionary.

R. Fletcher Moorshead, M.B., F.R.C.S., Secretary, Medical Missions Auxiliary, English Baptist Missionary Society.

There are times in the history of every living enterprise when it becomes a matter of urgent importance to get back to first principles, and to re-affirm with renewed emphasis the purpose for which the work exists. We believe that such a point has now been reached in the experience of medical missions, and this article is written in the hope that it may prove of help to those who are either already engaged in this service—at home or abroad—or are facing the question of an after-war decision in this direction.

Let us begin by reminding ourselves that medical missions are something vastly more than the fortuitous blending of missions and medicine. The idea that medical work per se, conducted on the mission field, constitutes medical missions, implies a serious misconception
of the true nature of this missionary service. Such a view is faulty because it puts the emphasis in the wrong place, and reduces the whole enterprise to the position of a purely mechanical association. Medical mission work is no doubt "dedicated science," but for its true exposition we have to introduce the thought of a vocation in which the master passion is not science but souls. In the enfranchisement of the whole man is to be found the goal of medical missions, and no insistence can be too strong which enforces the supremacy of this ideal.

The calling of a medical missionary is therefore a line of Christian service that demands a great sacrifice, and imposes an unending task. The medical man or woman who essays to go forth in this work has to face the fact that to be a medical missionary involves setting a limit to the quest of science in order that the quest of souls may not be outrun. The ambition to achieve great things professionally has to be subordinated to the ruling purpose of the career, and first things forever kept first. This may mean the surrender of many a brilliant prospect, and the giving up of some of the refinements of modern medicine. If so, the medical missionary may rest assured that every sacrifice voluntarily assumed for Christ's sake contains within itself the promise of blessing.

But there is also the other side, that of an unending task. The medical missionary vocation has many characteristics, but none is more self-evident than the unceasing nature of the responsibilities that are inseparable from the work. The missionary doctor cannot feel, when the hospital ward has been visited and the patients treated, that there and then the duties of his calling have been discharged. The finish of his professional duties means the fuller freedom for the exercise of his spiritual functions. Of necessity he can know no other motto than that of "Excelsior." Rest of body he may and must have, but rest from the burden of souls he can never have except at the cost of his calling.

Yet, in thus conceiving the medical missionary vocation, let it not be supposed that between the twin aspects of the service there is implied a conflict of claims. It would go ill with the whole work were that so, and any fear of such arises from the mistaken idea that separates the calling into two opposite spheres. The life of the medical missionary is not worked by a rota of duties in which so much time is given to healing and so much to preaching. The whole enterprise would be strangled by a time-table scheme. The actual part that a medical missionary may take in public speaking may, indeed, be small, and his missionary service cannot be measured by standards of that kind. The supreme test can only be applied to his work as a whole,
and when that is done it should be found that right through everything there runs the golden, unrestrained, and impelling purpose to win men and women for Christ. It is in that and not in professional ardour that his greatest earnestness should be observed, while (again let us emphasise) this intensity may be in evidence more by his life and by his redemption of the spiritual opportunities of the medical work than by his actual participation in the public ministry of the Word. If this ruling purpose is not revealed in his service, and if he is content to be the doctor, and to leave to others the spiritual interests of his patients, then it may be questioned whether he is not a misfit in the missionary ranks.

We are conscious that these considerations may appear to embody a doctrine of medical missions that is hard of realisation in these up-to-date medical times, and it is easy to imagine that doubts may be raised concerning the practical possibilities of modern medical missionaries living up to this standard. We freely allow that the ideal is a high one, but can it be lowered without the surrender of what has hitherto been one of the noblest features of medical missions? And if the task to which God's servants in this enterprise have heard His call seem one that is unusually difficult, is their case not one in which by faith the things that are impossible with men become possible with God? To them it may well be given to "glory in the impossible." "Howbeit this kind goeth not out but by prayer and fasting." — *The Missionary Herald.*

**A Searching Question.**—"She [Florence Nightingale] was intensely spiritual; she sought continually for the Kingdom of Heaven, and she conceived of it as a kingdom of the soul. Yet her aim may seem material; what she sought was a kingdom of more airy hospitals, more scientific nursing, brighter barracks, cleaner homes, better laid drains. It was after all a searching question which Aga Khan put to her, as he listened to the tale of sanitary improvement during the fifty years of her active life. 'But are your people better?' Are there more of them, we may conceive him as saying, who have attained to the kingdom of heaven in their souls? And unless you can show me that such has been the case, why have you, with your great influence and powers, devoted your life to this service of tables?'—'Life of Florence Nightingale,' Vol. II, p. 428.
Japanese Medical Literature.

Review of Current Periodicals by the Staff of the Research Department, Severance Union Medical College, Seoul, Korea.

RALPH G. MILLS, M.D., Director.

Jikwa Zasshi
(Journal of Pediatrics)
June 20, 1917.


In Japanese the disease is called Kata, and in English, for the want of a better name, "Hemorrhagica gastro-intestinalis dyspepticum." It is different from any other disease thus far described. It occurs in epidemic form, and is apparently contagious though the bacilli of dysentery, typhoid, or paratyphoid, could not be found. The essential lesion is a bleeding from the stomach and small intestines.


On examination the feces were similar to those found in intestinal hemorrhage high up; the color was tar-like, yet here and there intact red cells could be distinguished. There was an absence of mucus and no distinctive odor. Various cultural methods were employed but without isolating any one form common to all and that had any agglutinative action with blister fluid taken from the patient. Experiments with the guinea-pig were without success.

Third article, pp. 32-44. K. Midorigawa.

At autopsy the lesions found were petechial in the ileum, and fatty changes in the liver and kidneys. These suggested the action of some toxin which was perhaps absorbed through the intestine, had a selective action on the ileum and produced a toxemia manifesting itself by the fatty metamorphosis.


This is considered to be a rare disease in Japan, there being recorded 22 cases of purpura in 4,752 cases, only 3 of which were of this particular type. In the course of 9 weeks the patient had 7 recurrences. No further light is thrown on the etiology.

Juzenkai Zasshi
(Journal of the Perfection Society, Alumni of Kanazawa Medical School)

(396) Tuberculosis of the Skin, Forms of and Frequency in Japan.

During 4 years’ experience in treating 7,576 patients in the skin clinic the author has observed tuberculosis of the skin in the following proportions:

<table>
<thead>
<tr>
<th>Lesion</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lupus, ordinary type,</td>
<td>5</td>
<td>9</td>
<td>14</td>
</tr>
<tr>
<td>Lupus, of face</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Papulo-necrotic tubercles</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Erythema induratum, Bazin?</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Tuberculosis verrucosa cutis</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10</strong></td>
<td><strong>11</strong></td>
<td><strong>21</strong></td>
</tr>
</tbody>
</table>
Japanese Medical Literature.

Tuberculosis verrucosa cutis is distinct from lupus. It is manifested by gradually progressing lesions 2-4 cm. in diameter, erythematous margin and a surface covering of thick ashen-grey hyperkeratinized masses. The edge is erythematous; the next zone is infiltrated and dark reddish purple in color with numerous small pustules; the center is elevated with this scaly mass which was occasionally dark in color. Secondary infection occurred with staphylococci and streptococci but the basal infection was by the tubercle bacillus.

Most of the 6 patients were farmers; 5 were males and all were over 20 years of age. Only one of the cases might have been infected from a cadaver.


The larval form of Luciola parvus Kirby, was found to kill the snail, Blansfordia nosophora, when the two were put together in an aquarium.

Chugai Iji Shimpo

(Home and Foreign Medical News)


Various investigators have previously examined the serum of beri-beri patients and reported the discovery of various alterations. Shimasono finds an adrenalin-like body which contracts the pupil of a frog’s eye. Ohno finds the adrenalin content of the suprarenal capsule increased; and Inakase, Inada, and Miyamoto proved that the serum and milk of a nursing beri-beri patient contained a toxin that contracts the heart of a frog. The author has gone into this subject a little more in detail and, with Ringer’s solution and normal serum as controls, has definitely established this fact upon a good basis. One or two of his patients did not give this reaction, and the reason was not discovered.


The pressure of the cerebrospinal fluid was found to be greatly increased in certain cases of beri-beri, especially those in the acute stage. This was found to be 180-280 mm. in certain cases, and then as low as 100 mm. in slight cases. Miura has called attention to the observation that in these cases the blood pressure is low but that the cerebrospinal fluid is under high tension. A case in point was that of a young student seized with a violent attack, marked by exaggerated reflexes, vomiting, and motor disorders. The blood pressure was 60-80 mm. but that of the cerebrospinal fluid was 250 mm. Ten mils were removed from the spine and this reduced the pressure to 180 mm. but it rose again to 190 mm. At autopsy there was no meningeal lesion to account for the heightened fluid pressure.

The question has arisen as to whether in this case the nausea and repeated vomiting were not caused by central irritation from the increased pressure. So with the heightened reflexes commonly observed at the beginning of an attack, but commonly attributed to more direct nerve irritation, the prognosis is very grave in cases in which the pressure increase is very marked.

Solutions of the cerebrospinal fluid of a patient with high pressure was perfused through the rabbit ear preparation and the number of drops flowing from the cut end of the artery was greatly decreased as a result. The powerful vasoconstrictor action of this fluid was thus demonstrated.

This disease, which is called in the vernacular "Nanukayami," prevails in certain districts of Japan in the autumn and its symptoms resemble somewhat those of hemorrhagic icterus. The cause is a spirochete, not unlike that of hemorrhagic icterus, but the two are distinct as proven by immunological reactions. The serum from patients taken just after recovery contains some spirochetocidal bodies. Wild rats harbor the spirochetes in their kidneys and excrete them in their urine, and the distribution of these rats has a close connection with the distribution of the disease.

Injection of the serum into rats produced symptoms quite similar to those of hemorrhagic jaundice, but the guinea-pig is much less susceptible to this form of infection. This is especially noticeable in the matter of lymph gland enlargement.


Prior to the thorough examination of the serum of chickens affected with rice disease, a form of beri-beri, the author made some experiments upon the blood serum of normal birds. The blood serum diluted with Ringer's solution and injected into the leg of a frog produced a pronounced contraction, which was relaxed when the Ringer's solution alone was injected, the degree of contraction being in direct proportion to the concentration of the serum. This vasoconstricting property was not destroyed by heating the serum to 60° C. for 1 hour, but was weakened or removed by keeping it in the ice box for 1-2 days. When applied directly to the exposed mesentery of a frog or rabbit no such vasoconstriction was observed.

The serum of chickens affected with this rice disease shows this phenomenon even more decidedly.


The fundus is distinctly brown in the Japanese as compared with crimson in Europeans. This is due to the increased amount of pigment found here as well as in all other parts of the body.

Japanese Medical Literature.

British Medical Journal, September 29, 1917, that they were unable to confirm the observations of Futaki. With the bulk of evidence against him, Futaki has gracefully acknowledged the mistake and the medical authorities consider this the conclusion of one of the many unfortunate incidents in medical progress.

Saikin Gaku Zasshi
(Journal of Bacteriology)
No. 163. August 15, 1917.


This study was undertaken primarily to repeat the work of Futaki in the course of which he described the spirochete supposed by him to be the cause of this disease. The detailed work of these authors shows quite conclusively that the organism in question is a non-pathogenic smegma spirochete. They were unable to observe any changes in temperature or condition of the guinea-pigs and monkeys used for the test.

Four different blood samples from as many patients sick with typhus were carried, from 2-3 passages, through guinea-pigs and Japanese monkeys (Macacus fuscatus). Typical fever reactions occurred between the 6th and 12th days. No other change was noted and no causative organism could be found.

Seventeen lice were taken from the members of a family suffering from typhus. The lice were washed with H₂O₂, emulsified in saline, and the emulsion then injected into three generations of monkeys and one generation of guinea-pigs. A transmissible fever-producing substance was proved to exist in these lice, which caused a rise of temperature about the 19th day.

A color drawing illustrates the erythematous rash produced on the face of the monkeys which had been injected with the patients' blood, but it is not quite clear whether the rash also followed the injection of the lice emulsion.

Plate I. Blood of Monkeys injected with Lice Emulsion from Patients with Typhus Fever. Giemsa Stain.
Another plate of nine drawings (Plate I) illustrates the findings in the cells of the blood and bone marrow after the Giemsa stain. In the blood of normal monkeys there were occasionally found a few dark granules (Fig. 5 and 6) which under these conditions were greatly increased in number and were round, comma shaped, or mulberry formed (Figs. 3). These are not believed to be the causal organism but represent a blood reaction incident to the infection. Fig. 4 represents a bone marrow cell in which the eosinophilic granules are greatly degenerated. Neutrophilic granules of pale color were seen in the leucocytes (Figs. 7 and 8) and rod shaped bodies in the erythrocytes of the circulating blood.

These granules, which occur during the incubation period of the disease in monkeys, are in 10% of the bone marrow cells on the 4th day, and 55% on the 5th. They persist during the fever, involve 96% of the cells on the 2nd day, 5% on the 4th and are absolutely gone by the 5th. A consideration of this distribution caused the authors to conclude that they were not causal in nature.

In the early part of the disease in monkeys there was a slight decrease in leucocytes but this was later replaced by a slight increase.


In August, 1916, about 200 people were poisoned by eating the flesh of a horse that had sickened and died. The symptoms affecting the horse were anorexia, diarrhea, cough, and depression, followed by death in four days. The persons thus poisoned had high temperature, vomiting and diarrhea, headache, anuria, pallor, convulsions, and in nine cases death occurred. Samples of the meat when introduced into the stomach of rabbits caused death with hyperemia of the various internal organs and a brownish peritoneal exudate. The organism isolated was culturally identical with the paratyphoid bacillus (not stated whether A or B) and was agglutinated by the serum collected from vesicles produced in the bodies of those sick with the disease.

The death of the horse was supposed to have been due to a septicemia the causative organism of which was the same as that which caused the sickness of those eating the flesh.

In October, 1915, a cow, brought from Tokyo to Itano, was taken sick and died. The symptoms were acute bloody gastro-enteritis and coma. This cow was butchered and the meat sold to the villagers for food. About 90 out of the 300 who partook of this meat were taken sick and 4 died. Some had cooked the meat, whereas others had eaten it more or less raw.

The organism was identical with that in the former epidemic as far as examined.

Tokyo Igakukai Zasshi
(Mitteil. d. Med. Gesellisch. z. Tokio)


If there is any enzyme action in the mechanism of the gas exchange in the lung then the author concludes it should have at least some action in vitro. An extract of lung tissue was made after thorough cleansing with Ringer's solution and this was added to dogs' blood which has been strongly reduced with CO₂ and with H. The mixture was enclosed in a separatory funnel and after a half hour the oxygen content of the blood was determined with Barcroft's differential gas apparatus. The same blood mixed with Ringer's solution was used as a control. The former never contained more oxygen than the latter, thus eliminating the possibility of an enzyme action taking any part, at least under these artificial conditions.
Japanese Medical Literature.

(408) 

Tetrodonin, the Toxin from the Roe of the Globe Fish, Physiological Action of, Pp. 12-55. F. Ishihara.

The crystalline body, tetrodonin, has been isolated before from the roe of certain kinds of globe fish. The eating of this fish is the cause of several deaths a year in Korea and Japan, where its flesh is greatly relished. It is presumed that insufficient cleaning is the cause of the difficulty. The toxin is a powerful nerve poison affecting chiefly the sympathetic system: it leaves the myo-neural junction intact. A fall in blood pressure and circulatory slowing result from an injection of the toxin and the heart is greatly affected by tremors, fibrillation, agitation and there is finally heart block. In its action upon the pupil, the oculo-motor and sympathetic post-ganglionic fibers are involved, but the endings remain intact. Peristalsis is quickened through interference with the sympathetic; and the secretions of the skin, sweat and saliva are inhibited for the same reason. Death is believed to be due to a direct action upon the respiratory center, rather than to any interference with the phrenic nerve. A dilution as high as 0.00002% of the toxin paralyzes a nerve fiber in 30 minutes, and a striated muscle in 1 hour and 30 minutes, but these can be restored by washing. It has very little action upon the smooth muscle of the stomach, intestine, blood vessels, iris, or bladder.

Tokyo Igakukai Zasshi

(Mitteil. d. med. Gesellsch. z. Tokio)


(409) 


Following the suggestive contribution of Römer (1914) in regard to the power of the lens of the eye to neutralize alkaline solutions, the author has continued the work and repeated it on various animals. Normal animals (cattle, dogs, guinea-pigs, goats, and cats), as well as man, have lenses that have this power to varying degrees. It has a quantitative relation to the size of the lens, is not specific for any animal, but varies between the different kinds. Old animals have less power to neutralize solutions than young ones, and it is lost in eyes that have been removed for a considerable length of time or that were taken from dead bodies. A solution made of the lens has the same power, but a concentrated emulsion can neutralize a relatively larger amount than it can in a more dilute form, and a concentrated alkaline solution will also combine with a larger amount of lens substance. Higher temperatures appear to decrease the combining power, but a solution kept at constant temperature does not readily lose its characteristics. The peripheral portion of the lens is more antialkaline than the central portion. The chemical constituent that is apparently responsible is Krystallin A. and B. not the albumen nor albuminoids of the capsule. A lens affected by cataract is less active than a normal one.

(410) 


Intense subcutaneous injections of tobacco extract were given to guinea-pigs to produce poisoning just short of the fatal point. Four different solutions were employed: (1) aqueous extract of "white flower" brand of tobacco, "Shiraume"; (2) same from "Hagi" brand; (3) watery solution of the pipe stem sediment of "Shiraume," and (4) pure nicotine, neutralized with tartaric acid. One injection per day was given in carefully graduated doses but uniform results were not obtainable. A tendency to tolerance was overcome by occasional interruption of the series or by increasing the dose. The stomach of a guinea-pig, being always full, the conditions in man were simulated by administering the injections to
animals that had starved overnight. The results were positive for ulceration as follows:

Sol. i. Usual feeding, 40% (4 cases in 10); under starvation, 50% (5 in 10).

Sol. ii. „ 30% (3 in 10), „ „ 60% (6 in 10).

Sol. iii. „ 40% (2 in 5).

Sol. iv. „ 30% (3 in 10).

The ulcerative lesion produced was uniformly a hemorrhagic erosion, but in the early stages the mucosa was not affected superficially. The lesions were situated more commonly near the pylorus, but occasionally in the fundus. Sometimes there was hemorrhage, but always in the early initial stage there was definite anemia.

From observations made on the living animal's stomach after the injection and with the use of the X-Ray, it was demonstrated that the first change produced was a cramp-like contraction of the muscularis propria, causing an intense anemia, followed later by an ulcer. The production of these ulcers by nicotine, which is an autonomic nerve poison, is an indication that they belong to the same class as those induced by pilocarpin and physostigmin. Four drawings illustrate the gross and microscopic lesions.

Tokyo Igakukai Zasshi
(Mitteil. d. med. Gesellsch. z. Tokio)
Vol. xxxii. No. 3. February 5, 1918.

T. Iwao.

By means of intravenous and intratracheal injections of iron compounds and lithium carmine, the author has demonstrated that the histocytes in the interstitial tissues of the lung in puppies take these particles and store them in their protoplasm. Not even chemical tests could demonstrate iron in the alveolar epithelium or in the lymphocytes. Histologically, there is exact agreement between these heart failure cells and the histocytes which took up the particles. The author is convinced that the former arise only from the latter and that they do not come in any case from the epithelium of the alveoli of the lungs in cases of severe passive hyperemia. Four colored drawings illustrate the article.

Iji Shimbun
(Medical News)


These cases are probably due to a condition called "Seven-day Fever," in which a spirochete is incriminated by Ineda. There is little to indicate whether the lesions are the result of the direct action of the causative organism or whether they should be ascribed to a focal toxic process. Both eyes are usually affected, occasionally only one, and the condition manifests itself some little time after the fever has disappeared. The farmer class suffered the most, the greater number being males in the middle range of years.

The fever is clinically distinguished from epidemic jaundice, which may also cause clouding of the vitreous, and the local lesion is distinct from ordinary infections and from syphilis. The special points of differentiation from the latter are the initial limitation of the cloudiness to the anterior portion of the vitreous, the radiate and stringy nature of the opacities, and the lack of involvement of the retina.

Two cases of mental disturbance occurring during the course of typhoid were observed by the author and reported in detail. This pathological entity is not uncommon in Japan and has been previously reported by various authors. Miyake reported the case of a patient who attempted suicide by hanging; Kawagoe and Osawa found the syndrome in a fever of unknown nature; Imamura, in beri-beri; Wada, following inflammation of the kidney.

Others have noted its connection with alcoholism, pregnancy and the puerperium, cerebral syphilis, arsenical poisoning, typhoid, and various diseases of the stomach, heart, and kidney.

Iji Shimbun

(Medical News)

No. 981. September 10, 1917.


A patient with this disease, an infant, had never been bitten by a rat, so far as known, and there were no scars or local lesions to indicate such injury. However, the child had played with the family cat and been scratched at least three times but not severely enough to cause local swelling or redness. The lymph glands all became swollen uniformly, fever developed, and an urticarial rash appeared over the entire body. Other symptoms enabled a definite diagnosis of rat-bite fever to be made. An agglutination test was performed with the spirochete isolated from the case and the serum of a man just recovering from an attack of rat-bite fever, and the test being positive, the treatment consisted of one injection of salvarsan with complete recovery.


At the autopsy of a diabetic, aged 26, who during life had shown considerable acetone in the urine, there was found a series of deposits of calcium soaps in the liver such as occurs in fat necrosis following pancreatic lesions. The pancreas was without demonstrable lesion. The finding was without satisfactory explanation.


The patient was a farmer, aged 36, who died after a few months' illness of which the general symptoms were pain in the left side, splenic tumor, epistaxis, hyperemia, increased pulse rate, and cardiac enlargement. The Wassermann test was positive, but there were no signs of active syphilis. Red cells varied in number from 6,300,000—9,300,000, but normal limits were reached before death. H.B. was 100%; W. B. C. 7,800; polymorphs increased, but lymphocytes and eosinophiles decreased. Sp. gr. of blood, 1.060, and resistance to 0.48-0.4% saline.

Iji Shimbun

(Medical News)

No. 982. September 25, 1917.


This is a first report largely devoted to a general discussion of the known stages in the development of the hookworm. As far as convenient, the urine and feces are kept separate for agricultural purposes, hence the amount of liquid
that dilutes the solid feces is rather small. Hatching of the eggs is ordinarily good under these conditions, and also when any accidental dilution takes place with dirty water. When urine is added in any considerable amount the specific gravity of the resulting fluid is raised and it becomes progressively more difficult for the eggs and larvae to develop. Strong concentrations of extracted feces are very inhibitory; apparently this effect is not specifically toxic but attributable to the osmotic pressure of high ionic concentration.

In the public latrines the urine and feces are passed together and remain mixed for a considerable length of time. Fresh urine alone as a diluent is inhibitory for the young larvae whenever the specific gravity is over 1.015, but decomposed urine must be 1.025 to have the same effect. In the fluid that settled to the bottom of old latrines the sp. gr. must be as high as 1.050. The recently hatched larvae are much more sensitive to external influences than those which are older, hence any condition that allows them to become more mature before this exposure increases their chances of survival in the latrine. In summer, when the temperature is high, the hatching can be accomplished in 24 hours in that portion of the feces raised above the fluid when it floats on paper or on the scum. If this were not soon washed down by urine some would surely survive until able to resist the concentration of the fluid below. Mixture with large amounts of urine would decrease these chances of survival but dilution with outside surface water would keep more of them alive. Thorough and constant mixing of urine and feces as soon as passed would tend to decrease the number of eggs that could hatch. Paper and other floating matter would be detrimental to the process of autodeparasitization.

(418) Spirochaeta icterohemorrhagie, Methods of staining Organism of.

1. Ito’s gelatin hematoxylin method. Mix blood or fluid with 10% gelatin solution, dry, fix with alcohol-ether with Hanson’s hematoxylin. To the naked eye the slide appears bluish, and under the microscope the organisms are clear against a blue field.

2. Burri’s India Ink.

3. Giemsa’s stain.

4. Otahara’s method. Place dried and fixed slide in 10% formalin for 10 minutes to 1 hour in incubator, or 12 hours at room temperature. Immerse in solution composed of tannic acid, .5-1; sodium acetate, 1; distilled water, 100. Place for 10 minutes to 1 hour in incubator, wash well, and then immerse in silver solution (AgNO₃, 1% sol, 5 mils; caustic soda, 4% sol, 3 drops; add a little ammonia to dissolve the sediment that forms and add distilled water to 100). The slide appears yellowish-brown and is then washed in water, placed again in the formalin solution, washed and dried. The organisms are coloured yellowish brown by this method.

5. Gentian violet method. Make a thick slide, dry, dehemoglobinize in water, further treat with formalin 5% in which is 1% acetic acid, stain with ordinary gentian violet or carbol fuchsin.

Kyoto Igaku Zasshi
(Kyoto Journal of Medical Science)


In the years 1913-15, there were 4,893 cases of accidental, homocidal, or suicidal poisoning recorded in Japan as gathered from the reports of the police offices. Chemical substances were ordinarily used for suicidal purposes; the poisons belonging to the vegetable kingdom were usually those contained in
leaves or berries which were mistaken for edible articles of food, or which were eaten in excessive quantity; those belonging to the animal kingdom were almost invariably the poisonous portions of certain animals, or the flesh of animals eaten in a condition unfit for food.

Eleven chemical substances were represented by more than 50 cases each:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Suicide</th>
<th>Homicide</th>
<th>Medicinal</th>
<th>Accidental</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium bichromate</td>
<td>330</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>439</td>
</tr>
<tr>
<td>Bichloride of mercury</td>
<td>133</td>
<td>3</td>
<td>8</td>
<td>3</td>
<td>241</td>
</tr>
<tr>
<td>Sulphuric acid</td>
<td>132</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>225</td>
</tr>
<tr>
<td>Morphin</td>
<td>97</td>
<td>2</td>
<td>12</td>
<td>0</td>
<td>180</td>
</tr>
<tr>
<td>Carbolic acid</td>
<td>75</td>
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<td>0</td>
<td>1</td>
<td>176</td>
</tr>
<tr>
<td>Hydrochloric acid</td>
<td>85</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>147</td>
</tr>
<tr>
<td>Rat poison</td>
<td>55</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Strychnine</td>
<td>35</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>74</td>
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<tr>
<td>Arsenic</td>
<td>31</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>69</td>
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<tr>
<td>Acetic acid</td>
<td>19</td>
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<td>2</td>
<td>68</td>
</tr>
<tr>
<td>Formalin</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>64</td>
</tr>
</tbody>
</table>

Among the other substances not so commonly used as poisons, were the following: Nitric acid, 44 cases; Green powder (Paris green?) 41; Spirits, 39; Potassium cyanide, 37; Caustic soda, 35; Copper sulphate, 29; Carbon dioxide, 22; Antifebrin, 18; Copper acetate, 17; Potassium permanganate, 16; Caustic potash, 12; Atropine sulphate, 10; Kerosene, 9; Potassium chromate, 7; Potassium chlorate, 7; Sodium carbonate, 7; Sulphonial, 7; Iodoform, 7; Silver nitrate, 5; Heroin hydrochloride, 5; Cocaine, 5; Sodium nitrate, 5; gold paint, 5; illuminating gas, 5; Aqua Pruni Armeniacae, 5; green paint, 9; Bean oil, 12, etc.

There is a long list of plants which have occasionally given rise to poisoning from the eating of the berries, leaves, or roots. These cases occur more at certain times of the year, corresponding to the ripening or availability of the plant in question, and the full list is given for the general information contained. Some of these plants are not ordinarily considered poisonous, hence they must have been eaten in unusual quantities or in an altered condition. The number of cases reported is given, also the native Japanese name of the plant, and the part of the plant which gave rise to the trouble in case it is known. The scientific name is determined as accurately as possible by available works of reference.

*Cortiaria japonica*, A. (Dokutsugi) fruit ... ... ... 177 cases.

*Datura latula*, L. (Chosena Asagao) fruit and seed ... ... ... 42

*Cycas revoluta*, Thunb. (Sotetsu) trunk ... ... ... 30

Certain plant resembling *Artemisia vulgaris* (Yomagi) ... ... ... 24

*Ilicium religiosum*, L. (Shikimi) fruit ... ... ... 18

*Solanum tuberosum*, L. (Jagataraimo) ... ... ... 11

*Aconitum japonicum*, Thunb. (Uzu) root ... ... ... 15

*Phylolacca acinosa*, Roxb. (Shoriku) root ... ... ... 9

*Cannabis sativa*, L. (Asa) seed and leaf ... ... ... 7

*Arisaema heterophyllum*, Bl. (Tennansho) root ... ... ... 7

*Fragaria indica*, Focke. (Hebiichige) berries ... ... ... 6
The China Medical Journal.

*Dioscorea japonica*, Th. (Yamaimo) root ............................................. 6 cases.
*Cucurbita Pepo* L. (Tomasu) ................................................................. 4
*Pinellia ternata*, Breit. (Hebusu) root and leaf .................................... 6
*Cicuta virosa* L. (Dokuzeri) root and leaves ....................................... 4
*Dictyota coracensis*, D.C. (Hakonentsuki) ........................................... 4
*Khododendron indicum*, S.W. (Tsutsug) ................................................. 3
*Coccus Thunbergii*, D.C. (Aotsuza) ...................................................... 2
*Ipecacuanha*, (Tokon) ........................................................................ 2
*Amelopsis heterophylla* (Mekurabuto) ................................................. 1
*Sophora japonica*, L. (Enchu) bark ...................................................... 1
*Chrysanthemum coronarium*, L. (Kiku) leaf ......................................... 1
*Ginkgo biloba*, L. (Icho) ..................................................................... 1
*Fatasia japonica* (Yatsude) ................................................................... 1
*Morus alba*, L. 1, berries (?) ................................................................. 1
*Quercus myrsinefolia*, Bl. (Kashi) .......................................................... 1
*Vitis labrusca*, fruit ............................................................................. 1

There is in addition a long list of mushrooms which are given only in the Romanized native terms in the absence of the scientific equivalents. It is hoped to be able to supply the correct names at a later date.

<table>
<thead>
<tr>
<th>Mushroom Name</th>
<th>Cases</th>
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<tbody>
<tr>
<td>Tankiyodake</td>
<td>53</td>
</tr>
<tr>
<td>Ippenshimeji</td>
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<tr>
<td>Sasadake</td>
<td>13</td>
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<td>Jikufutoshimeji</td>
<td>8</td>
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<td>Saseko</td>
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<td>Tengudake</td>
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<tr>
<td>Semponshimeji</td>
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<td>Okuroshimeji</td>
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</tr>
<tr>
<td>Daidokushimeji</td>
<td>10</td>
</tr>
<tr>
<td>Tsubodake</td>
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</tr>
<tr>
<td>Naradake</td>
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<tr>
<td>Katabadake</td>
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</tr>
<tr>
<td>Shiradake</td>
<td>14</td>
</tr>
<tr>
<td>Dokan</td>
<td>5</td>
</tr>
<tr>
<td>Tsuradake</td>
<td>16</td>
</tr>
<tr>
<td>Jikobo</td>
<td>5</td>
</tr>
<tr>
<td>Haitoridake</td>
<td>18</td>
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<tr>
<td>Hatomotashidake</td>
<td>4</td>
</tr>
<tr>
<td>Halsudake</td>
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<tr>
<td>Kikaburi</td>
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</tr>
<tr>
<td>Enokidake</td>
<td>22</td>
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<tr>
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<td>Nezumidake</td>
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<td>Atride</td>
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<td>Ikuchi</td>
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<td>Shisui</td>
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<td>Tamagodake</td>
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<td>Nomedake</td>
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</tbody>
</table>

A summary of these cases of vegetable poisoning is as follows:

<table>
<thead>
<tr>
<th>Vegetable Type</th>
<th>Suicide</th>
<th>Medicinal</th>
<th>Accidental</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Coriaria japonica</em> (Doku-utsugi)</td>
<td>0</td>
<td>0</td>
<td>345</td>
<td>345</td>
</tr>
<tr>
<td>Other plants</td>
<td>3</td>
<td>18</td>
<td>193</td>
<td>214</td>
</tr>
</tbody>
</table>

Cases of poisoning due to animal food were entirely those in which the flesh was accidentally eaten in ignorance that certain portions were naturally poisonous, or else that the flesh had undergone deleterious changes. It is difficult as yet to separate the two classes distinctly, but it can be noted that the
roe of the Globe fish commonly gives rise to fatalities, and that shell-fish are prone
to early anaerobic decomposition when exposed in the markets for sale. The time
at which most of these cases occur is suggestive. Poisoning from Scomber
(mackerel) and other fish, occurs in July; from cephalopods, squids, different
species of octopus, etc., in September; from crustacea, lobsters, crabs, shrimps, etc.,
in October; from tetrodon, Globe fish (poisonous roe'), from December to April.
Those animals in which decomposition products undoubtedly caused trouble
include the best fish in the Japanese market and so are not included in this list.
The habit of eating many forms raw would predispose to ptomain poisoning from
bacterially altered fish. Dried horse flesh, chicken, and beef are also incriminated.


Japanese Vital Statistics.—The Statistics Bureau attached to the Cabinet
has issued an official report on the number of marriages, divorces, births, deaths,
etc., in 1916.

From this report we learn there were 435,755 marriages in 1916, a decrease of
11,415 on the preceding year. This decrease, the compilers of the report state,
was apparently due to economic reasons of a world-wide character consequent
upon the progress of civilization. The situation in Japan resembles the conditions
in Prussia after the Franco-Prussian war. Against the large falling-off in the
number of registered marriages, however, must be set the fact that in this country
there are many couples who, though not regarded as husbands and wives are living
together as such.
The number of divorces was 60,536, which shows an increase of 330 over the
preceding year.

Male births numbered 935,949, an increase of 4,507, while the number of
female births was 896,982, an increase of 3,536 over the preceding year. Taken
as a whole, the position as to births in this country is again much like conditions
in Prussia after the Franco-Prussian war. Whether this also means that this
country resembles Prussia in those days in regard to economic and social condi­
tions is a question which deserves close investigation. Male and female still-births
totalled 139,998.

Male deaths numbered 612,998, an increase of 48,943 over the preceding year,
while female deaths numbered 589,900, which also shows an increase of 46,722.
Whereas the birth rate in this country has already reached its height, and there
is even a tendency for it to decrease, the number of deaths is increasing. This,
says the report, is a very serious matter, for in Europe the death-rate has been
declining. Moreover, the increase in deaths in this country is more in regard to
infants and members of the rising generation than among the aged—a fact which
is a matter for great concern.

Foundlings numbered 244, 126 being boys and 118 girls. The number of
missing people was 574, of which 522 were male and 52 female.
THE HOSPITAL LAUNDRY.

F. E. DILKIN, M.D., Peking.

The laundry in a modern hospital is a very important part of the institution.

This department has been studied for years, and improvements have been so many and so satisfactory in some hospitals, as in the Ford Hospital, Detroit, that the visitor marvels at the quantity and the quality of the work done as he follows the process from one machine to another and witnesses the hundreds of pieces of freshly ironed linen, free from pathogenic bacteria, that are sent back to the hospital from which they came soiled and laden with deadly germs so short a time before.

Soap, water, and heat, are important essentials in modern hospitals, and these agents are extremely valuable in the modern laundry. What
a satisfaction to see the sheets go through the great iron rollers in one unbroken line so fast as to require three persons to put them in and two others to take them off!

We have implicit confidence in the three essentials named, when properly used, and we do not hesitate to sleep in a bed made fresh and clean by such linen, or to have our faces and bodies rubbed by towels that have been cleansed by this thorough process.

It is sad to relate that there are no proper laundries in the hospitals in North China. Nor have I seen a safe and efficient laundry in any of the hospitals that I have visited.

In fact the visitor is seldom shown the laundry. It ranges from the common crockery pot and a little water, where the patient or his attendant does his washing, to the wooden tub and washboard where a washerman spends some time, and then hangs the things he has put through the water in the sun or near the stove.

This was the condition in our own hospital five years ago, and very little improvement was made until during the past year.

When the new hospital was opened in 1914, it was decided to furnish all bedding, towels, and hospital clothing for the patients. Aseptic surgery was introduced into the operating room; this requires a large supply of gowns, sheets, towels, table-covers, and dressings, all to be dry sterilized in the newly acquired sterilizers. There are also the gowns for the doctors and students in the wards, uniforms for the house doctors, nurses, hospital attendants, and servants. Altogether the wash averages about 4,000 pieces a week. The laundry at first had four, then six stationary tubs; warm and cold running water; one large native kettle for a boiler, heated by a fire opening into the room; and an open stove of the ordinary north China type for heating a few irons. The walls were black with smoke from these fires, the clothes were not properly boiled, and the results were very unsatisfactory, as the clothes were not clean nor free from the bacteria with which they were contaminated from all sorts of pus and disease.

The knowledge of this fact was most distressing to all concerned. It was determined that this defective system should not continue here, and it should not continue in any hospital in China.

It has been suggested that other hospitals might benefit by our experience, so we publish some of the steps taken to improve conditions.

Soap, Water, and Heat.—Soap, water, and heat used to good advantage brought about the improvement.
Soaps and Washing Powders.—We found that in Peking more soap and washing powder had to be used than at home, as an analysis of the water revealed a very large percentage of salts.

Water.—The washerman had to be induced to use a large quantity of water and to keep it clean, therefore it was piped right to the tubs and was made hot by a rearrangement of the heaters and tanks, and by a steam pipe that connects with the new washing machine. This is a "Pony" washer, from the American Laundry Machine, Co., with a 30 inch cylinder fitted to be operated either by electricity or by hand. We use electricity at the low rate furnished for power plants.

The machine turns easily and can be run by hand. It comes with a shaft, belts and pulleys for reversing the action. If a large wheel and belt be added to the equipment, a good hand-power plant can be obtained, similar to that found in so many Chinese shops where a lathe is used. The machine is simple of operation, with no complicated mechanism, and works perfectly.

Heat.—The proper application of heat is the point to be noted especially, and the efficacy of the clothes-boiler furnishes the valuable suggestion in this article.

One, two, or more boilers can be built, according to requirements, in any hospital, at small expense with native brick and fire clay; or better, with glazed brick and fire brick as was done here.

Arrange to fire the furnaces from outdoors or from another room and keep the laundry clean.

The large boiler and the percolator arrangement within the boiler are made of galvanized iron, one-sixteenth of an inch in thickness. The percolator is a separate piece and can be easily lifted out when the boiler is not filled with clothes.

There are three hoops of angle iron to strengthen and support the boilers. The hoop at the top, and the one in the middle, angle outwards; the one at the bottom angles inwards and joins the sides and the bottom. All are securely riveted.

The percolator produces a geyser when the water is heated, and there is a continual change of water being drawn down through the clothes, and then sprayed out over them from above. In this manner the clothes are thoroughly boiled and cleansed by the water and steam.

A heavy wooden lid covers the boiler, which has a groove cut in it, a quarter of an inch in depth, to fit the lid.

The bottom of the percolator is like an inverted saucer with perforations around the edge, and a tube leading up from the central
The saucer-bottom and the plate on the top of the tube are soldered and reinforced by angle brackets and rivets.

A drainpipe with a faucet is placed in the bottom of the boiler so that all but one inch of water can be drawn off. The water that remains is to prevent the bottom being burned in case the water is drawn off while the fire is hot.

The flue is very broad from above downwards and winds around the boiler as far as possible; it thus furnishes plenty of heating surface, and very little fuel is used.

The accompanying drawing, which illustrates the details clearly, was kindly drawn for us by Mr. Strom of Shattuck and Hussey, Architects.

Medical and Educational Reports.

Annual Report of the Canton Hospital, for the Year 1917.

Less than a year ago the Canton Medical Missionary Society adopted the Constitution of the Canton Medical Missionary Union and thereby transferred the responsibilities of the administration, of professional staffing, and financing the hospital plant, over to the newly organized Union.

Shortly after this event the Directors of the Union met in order to perfect their organization. The usual officers were elected, first pro tem., and later for a term of two years. Various committees were appointed to meet and to cover any items of business which might arise. By-laws, based upon the constitution of the Union, were adopted which have been found workable without friction.

The measurable success of the new organization was due largely to the enthusiasm of the professional staff and Directors and a deep sense of responsibility and devotion to the trust committed into their hands. In spite of the distressing world conditions, it is doubtful whether the Hospital has ever been better staffed quantitatively and qualitatively than during the past year.

The co-operating Missions have supplied the following members of the professional staff:--

The American Presbyterian Mission (North), Dr. H. W. Boyd.
The Reformed Presbyterian Mission (North), Dr. J. W. Wright.
The New Zealand Mission appointed Dr. R. E. Paterson who has since volunteered for military service.
The American Baptist Foreign Mission Society (North) appointed Miss Lucielle Withers.

The Canton Christian College has contributed the service of Dr. W. W. Cadbury.

Many, if not all, of our co-operating Mission Societies have joined the Union with the ultimate aim to bring about, if possible, co-operation or affiliation with existing institutions in Medical College work. During the year one of the co-operating Missions has given notice to the Board of Directors that its continuance in the Union after the close of three years will be conditioned by the fact whether or not the Canton Medical Missionary Union will have entered by that time upon some plan of affiliation or co-operation with Kung Yee in regular Medical College work.

The Nursing Department reports that a class of six nurses of four men and two women will be graduated within a short time. These nurses have given very faithful and willing service to the Hospital during the period of their training and deserve to be commended highly. The members of the second year class have not succeeded in doing nearly as well as we hoped they would, or as well as they themselves could do. However, they have done some creditable work. Three of this class ran away to join the Red Cross at Yeung Kong. They cannot be blamed very much as fifty dollars a month sounds alluring.

The Department of Administration reports that through the kind service of President C. K. Edmonds, Ph.D., of the Canton Christian College, during his visit to America, a Business Manager has been secured in Mr. J. W. Banbury, whose services have been supplied to the Canton Hospital through the contribution of the China Medical Board of the Rockefeller Foundation to the Canton Christian College for that purpose.

The financial prosperity of the Hospital remains still to be desired, though considerable progress has been made during the past year. The Committee on Finance has given considerable study to this problem and has submitted plans which were approved by the Board of Directors. All are agreed that, in order to get sufficient donations each year, we must co-operate more closely with the Chinese. Mr. Iu Kung Po has been appointed as Social Secretary of the Hospital. He will make his headquarters at the Hospital and will supervise the raising of funds for current expenses. A committee has been formed composed of Chinese gentlemen, leading merchants, pastors, and others who will be subject to the Business Manager, who will in turn be guided by the Directors.

Full statistics are given of the work done in the various departments of the hospital.
Bulletin of the Hackett Medical College for Women, the Turner Training School for Nurses, and the David Gregg Hospital for Women and Children, Canton, China.

The Hackett Medical College for Women, the Turner Training School for Nurses, and the David Gregg Hospital for Women and Children are institutions owned by the Board of Foreign Missions of the American Presbyterian Church, and governed by the Presbyterian Mission of South China. They are directly controlled by a Board of Directors appointed by that Mission and by an Executive of the Faculty and Staff. The work was founded in 1899 by Mary H. Fulton, M.D. For sixteen years she was its able director. In 1915, at the request of the China Medical Missionary Association, she undertook the translation of medical books in Shanghai, and since that time has been obliged to return to America on account of ill-health. The work is now carried on by a force of seven resident workers giving their full time to the work, and sixteen non-resident physicians and teachers.

FACULTY AND STAFF OF THE SCHOOLS AND HOSPITAL.


HACKETT MEDICAL COLLEGE, NINETEENTH ANNUAL REPORT 1917-18.

The classes in the Hackett Medical College are increasing in size. Last year the School enrollment was twenty-three. For the present year it is thirty-one, including two special students who are studying to become hospital druggists. The School is aiming at forty students as the ideal number. Small classes in which individual instruction can be given are extremely important. A limited number come much more closely under the supervision and influence of those who are striving to lead and teach them. On the other hand ten students in a class is
a sufficient number to gain that spirit of class loyalty which all students should learn.

**STATISTICS.**

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Provinces Rep’d.</th>
<th>Cities Rep’d.</th>
<th>Churches Rep’d.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduates</td>
<td>102</td>
<td>13</td>
<td>24</td>
<td>9</td>
</tr>
<tr>
<td>Seniors</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Juniors</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Sophomores</td>
<td>11</td>
<td>5</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Freshmen</td>
<td>10</td>
<td>5</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Specials</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

The matter of language among students speaking different dialects seems a very slight barrier, easily overcome. All teaching is done in Cantonese, but so little does this hinder the students from other provinces that several times a girl who has never known Cantonese before entering the School has been able, nevertheless, to lead her class even in her first half year.

The School requires English as a part of its curriculum in order that the students may be able to use American and English books and journals on medicine in their future practice. But it stands strongly upon the principle of training young Chinese physicians in the language of their daily lives, because it is believed that more students can be reached, their present understanding of the subject is deeper, and their future usefulness to their people greater.

The schedule has become full to overflowing. A point has been arrived at where the addition of a new course is a grave question. Very soon the College will be obliged to add another year to the course of study, to make room for the new courses which are coming in. The present course comprises four years of undergraduate work and a year of internship in some accredited hospital before the granting of the diploma.

**TURNER TRAINING SCHOOL FOR NURSES.**

*Tenth Annual Report.*

In March the first class was graduated after the three years’ course. Four girls received their diplomas. All four have gone into private duty and it is hoped will be a help to the community. The former thirty-one graduates have had only two years of training and even with that are proving to be of great usefulness.

There are now fifteen student nurses and the School is doing its best to give them a good training and at the same time help them to understand the great principles underlying Christian living. A Chinese man in speaking of the graduates said: "Your nurses make good
mothers. They take good care of their children and homes." They are almost all Christians. What more important thing can be given to China than good, intelligent, Christian mothers?

THE DAVID GREGG HOSPITAL.

Nineteenth Annual Report.

The year in the David Gregg Hospital has been uneventful as compared with the great events taking place in the world at large. It has been a year of slow but sure growth, a year of learning to understand each other, a year of readjustment and change, a year full of details to be thought over and planned for, and yet a year full of closer union, more appreciation of the object of the work and a greater realization of the worth-while-ness of it all.

The work has been very interesting from a medical standpoint, and most encouraging from an educational and religious point of view. The whole spirit of the Hospital has been one of helpfulness and thought for the good of others.

There has been more help this year from doctors not regularly appointed to the Hospital, and we are very grateful for it.

The report concludes with statistics which give a general idea of the work done during the year.

Tsangchow Medical Mission, Roberts Memorial Hospital, Report for 1917.

Dr. Sidney G. Peill.

In this brightly written report Dr. Peill first of all deals with the question whether it is the duty of a medical missionary to remain in China during the war, or to offer himself for military service. He writes: "If an unequivocal call is sent out for the last man, and no one can be spared any longer, I shall gladly go to do my bit. Meanwhile I feel that my duty lies here, and so far we have been left full liberty of judgment, and no urgent demand for our service has been made. The authorities only can decide if and when it is really necessary to issue such a call. I feel that it says not a little for the power and for the godliness of Britain that she is able and willing, in the midst of such a tremendous conflict, to maintain representatives in all corners of the earth in the peaceful prosecution of missionary and philanthropic work. The more intelligent and thoughtful Chinese marvel at it, and do not hesitate to express their admiration and gratitude at such a demonstration of the reality and depth of Christian
faith in the supporters of missions, and of the broadmindedness of our rulers. I trust that it may be our country's glory to be able to carry on without interruption the great Christian campaign against darkness and needless suffering in spite of all the powers of the Evil One let loose to hinder."

Brief but interesting reports of cases are given, several of which will be found on another page under "Hospital Notes." In the evangelistic work of the hospital it has been found that teaching the patients to read Chinese by means of the phonetic system has been extremely helpful. "Over 30,000 volumes have been printed with Mr. Clark's type, and more type added by the Presbyterian Press, and books are being prepared and used in various different dialects. We are hoping that the Bible and Tract Societies will see their way to print Gospels and booklets in this system, as it has been proved beyond possibility of question to be just what is needed to make it possible to teach uneducated people to read simple books intelligently in a short time."

The usual hospital statistics conclude the report.

Chenchow Hospital Red Cross Report for the Ten Weeks ending July 30, 1918.

George T. Tootell, M.D.

The city of Chenchow is in the southern part of Hunan province, about 130 li from the Kwangtung border. The old caravan road from Canton to Hankow, used before the days of the coast line steamers, passes through it. The road continues from Chenchow north to Hengchow, a distance of about 320 li. A branch of the Siang River also connects these two places but the route is twice as long. The latter was used as much as possible by the troops advancing toward Hengchow and the road for all those returning. Yuenchow is about the same distance from Hengchow and is the key to the road leading into Kwangsi. These three cities form a triangle with apex north at Hengchow. On account of their strategic importance these cities formed the bases for the Southern armies' operations before Changsha was taken by the Southerners. The foreign hospitals, there being one in each of these cities, have acted as the base hospitals for the Southern wounded.

During the Southern advance last fall several soldiers were treated in the hospital, but it was not until April of this year that we were called upon to do any active Red Cross work. At that time the Southern troops had evacuated Hengchow and were nearing Leiyang, a city about half way between Hengchow and Chenchow. At the same time there had been fighting at Liling and Yuhshien, and a "sporadic attack" had been made by the Southerners at Chuchow. The result of these operations forced the Southerners to retire, falling back upon An Ren and Chaling, which they later evacuated.

Our first wounded were received April 28th and for the following two weeks we received wounded from all the above-mentioned places. The Kwangsi troops had retreated by way of Kiyang to Yuenchow and were taken care of at the
Medical and Educational Reports.

latter place, while the Kwangtung and part of the Hunan regiments fell back upon Leiyang.

Our heaviest day was May 24th when 225 were seen in the out-patient department and 130 in-patients were dressed.

There were several evidences of the use of a bullet which made a wound similar to those caused by the "dum dum." Machine gun bullet and shrapnel wounds were treated. No bayonet wounds were seen. There were numerous cases in which the bullet had, by the fraction of an inch, missed causing instant death.

It soon became apparent that our hospital could not provide beds and food for all of the wounded so the military authorities arranged for two large buildings near the hospital to take care of the overflow. On account of their shortage in medical supplies they requested that we do their dressings. This we consented to and used our out-patient department to take care of their needs. The large number of out-patients seen is explained by this.

The following scale of fees was agreed to by the magistrate:

In-patients, including bed, dressings, food, lamp oil, and medications ... ... 200 cash per day, per person.
Out-patients, dressings and medications ... 50 cash per day, per person.
General anaesthetic ... ... ... ... ... ... ... ... ... $2.00 each.
Salaries of all employees.
All cloth bought for dressings and bandages.
Total number of in-patients received ... ... ... ... 237
Individual out-patients seen ... ... ... ... 1,275
Total number of out-patient dressings ... ... ... ... 5,800

Operations:

In-patients, under general anaesthetic ... ... ... ... 55
local or without anesthesia ... ... ... 120
Out-patients, without anesthesia ... ... ... 90

Results of compound comminuted fractures. These were all explored under an anaesthetic and loose pieces of bone removed, then immobilized in splints. Iozol solution was used for daily irrigation of the wounds. No operation was undertaken without the patient's permission with the result that several lives which were lost could have been saved by an immediate operation, that was at the time refused.

Fractures of femur:—Amputated, 2; improved 1; died, 1.
Not amputated, 7; improved, 4; died, 2; returned home, 1.
Fractures of tibia and fibula:—Amputated, 2; improved, 1; died, 1.
Fractures of tibia:—Not amputated, 5; improved, 4; no useful result, 1.
Fractures of skull, through both tables:—Improved, 4; died, 3.
Fractures of arm:—Improved, but with some ankylosis, 12.
Fractures of radius and ulna:—Amputated, 2; improved, 2.

The mortality for the ten weeks was 12, or about 5%.

A case of carbolic acid burn was brought to us from the military first aid station. It had been dressed by one of the assistants, who had read somewhere that wounds should be washed with antiseptic solution, such as carbolic acid, etc. Evidently no attention had been paid to diluting the acid. A few days later an officer was brought to the hospital in great distress. He had received a solution marked carbolic acid 5% to apply to his scrotum for orchitis. An investi-
A Vigorous Chinese Hospital.

"Last year there was published an account from your Ningpo correspondent of a very efficient Chinese undertaking in the form of a hospital carried on by the gentry in the hsien city of Tzu-chi which presented a bright contrast to many other contemporary Chinese undertakings, political and otherwise. The report for 1917 of this "Paoli" Hospital is just to hand, and shows that in every way it has kept up, or even increased, its high standard of efficiency. During the year under review no fewer than 23,000 out-patients were seen, and 907 underwent treatment as in-patients. There were 257 operations under a general anaesthetic, and 176 under local anaesthesia: opium smokers were cured, maternity cases were treated, and modern methods of curing diphtheria and typhoid by injection of antitoxins put into practice. Dr. Wu, who is in charge, regrets that, although new buildings have been added lately, he still has no isolation wards; but rejoices that kind friends have collected money to purchase an X-ray apparatus, which has been ordered from America.

"The illustrated report (in Chinese) is an excellent production. Besides recording what has been done, and giving lists of managers, committees, subscribers, staff, etc., and a full statement of accounts, (showing an expenditure of some $17,000 for the year), it also proffers advice as to the prevention and treatment of throat diseases, and especially of diphtheria; and has two excellent illustrations in colours of a typical diphtheria and scarlet fever throat respectively.

"This up-to-date hospital not only cures the sick, but also trains medical students, three of whom graduated at the end of last year. One of these has gone to France, though whether with the Labour Corps or not, the report does not state. There are now five men students, and one woman.

"The presiding genius, Dr. Wu, was trained in a mission hospital at Kashing, and is himself a Christian. He is assisted by Drs. Ch'een and Ying. The hospital has now been going on for seven years, with singular success, despite the fact that the committee, as printed in the Report, consists of no fewer than 98 members."—North China Daily News.
Medical Reports of Chinese Customs Service.


W. B. Russell, M.D., and John A. Snell, M.D., Customs Medical Officers.

Meteorological Report.—The following meteorological report has been compiled by Mr. B. Pedersen, Acting Tidesurveyor.

Medical Report.—The surgeons have been busy principally with the care of patients in the out-clinics and in-patient service of the Soochow Hospital. The health of the Customs’ staff has been fairly good. One member of the foreign staff was successfully operated on for acute suppurative appendicitis in the latter part of 1916; and early in 1917 another for toxic (exophthalmic) goitre. Two cases of severe pneumonia among the Chinese staff were treated in the hospital in April, one of them proving fatal. One of the Chinese staff was treated for measles; no further cases developed as far as we know, although there were many cases among the people in the city. Typhoid and scarlet fever and diphtheria appear to have been endemic in Soochow during the whole year. Whooping cough and mumps appeared in the Soochow University compound but there were only a few cases. Small-pox cases have been reported from time to time and all the staff have been vaccinated. Most of the foreign community have also had vaccination against typhoid and para-typhoid fevers.

Dr. W. H. Park’s resignation during his furlough in America was accepted in May and Dr. J. A. Snell was reinstated.

Early in the summer one of the surgeons sent a letter to the police department calling attention to the danger to the public health from uncovered fruit stands, flies, stagnant water which developed mosquitoes, etc. There was a very prompt reply and notices were sent to all parts of the city urging all to cover fruit stands. We hope some good was done but much more must be done to make Soochow, with all her stagnant canals, blind alleys, and surface wells, sanitary. Some cases of cholera were reported but there was some doubt as to the diagnosis. Various forms of diarrhea, dysentery, and malaria have held a large place in our work during the summer and autumn months. A few cases of beriberi—not so many as last year—have appeared in the barracks, but there was an outbreak in the local prison which caused several deaths.

A splendid X-ray machine has been added to the hospital equipment. With our added laboratory equipment and our special laboratory technician this makes it possible for more efficient work to be done in diagnosis as well as in treatment.
<table>
<thead>
<tr>
<th>Month 1916</th>
<th>Thermometer</th>
<th>Barometer</th>
<th>Rain Fall</th>
<th>Snow</th>
<th>Prevaling Winds</th>
<th>Weather Days</th>
<th>Water Marks</th>
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<td>November</td>
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<td>27th, -34</td>
<td>14th, -30.814</td>
<td>5th, -29.036</td>
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<td>2.16</td>
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<td>25th, -20</td>
<td>8th, -30.641</td>
<td>23rd, -30.060</td>
<td>30.410</td>
<td>1.35</td>
<td>6</td>
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<tr>
<td>1917</td>
<td></td>
<td></td>
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<tr>
<td>January</td>
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<td>7th, -13</td>
<td>31.92</td>
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<td>17th, -29.563</td>
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Satisfactory Operation for Abdominal Tumour.

One girl of about seventeen was brought to us in a very hopeless and pitiful condition, due to an enormous internal tumour. The pressure of the growth was so great that her breathing and heart's action were embarrassed, and she could not lie down. Her nutrition was interfered with, and death was not far off. As soon as we gave her chloroform her pulse became almost imperceptible, and breathing very embarrassed. Before commencing the operation I turned to the father and asked him if he wished us to proceed at all risks. He said yes, because he knew it was her only chance. We had already committed the case to God before commencing the anaesthetic, so we proceeded as quickly as we could. The pressure was so great that as soon as the muscles were separated the peritoneum split open itself the whole length of the abdomen! Fortunately there were not many adhesions, so we got the tumour out before long, and at once the girl began to breathe freely and the pulse became steady and strong. She made an uninterrupted recovery, and ten days later I was annoyed to find her walking about the ward! She put on flesh rapidly, and was soon hardly recognisable.—Roberts Memorial Hospital, Tsangchow.

Predisposing Causes of Tuberculous Glands in the Neck.

The stalks of the giant millet, or sorghum (is it so called because it makes your gums sore if you try to eat it?) are still almost universally employed as fuel in the country districts. The young women burn them under the cooking pots, and the room is quickly filled with acrid choking fumes. They are quite accustomed to this, and do not mind it, but the delicate lining of the nose objects to such treatment, and quickly becomes inflamed. Dust storms blow every few days in the spring, and aggravate matters, and soon ulcers begin to form. These give little trouble, however, until lumps begin to form in the neck. Consumptives there are in almost every family, and hygiene is unknown. Soon the inflamed glands get infected with tubercle, and the subsequent history of the patients not brought to hospital is a long misery of unsightly running sores, undermined health, and chronic abuse and illtreatment by heathen mothers-in-law, till frequently the chapter closes with suicide in the village well, or poisoning with matches. These cases of tubercular glands of the neck, together with tubercular bone and joint cases, provide us with the majority of the operations in the women's hospital. If they come before the glands have broken and become septic, a single and comparatively easy operation usually suffices; but alas! ignorance, suspicion, and procrastination rob us of many such chances, and repeated, exacting, and laborious operations become necessary, with, however, very satisfactory results in the end. Some of the bone cases live with us for months.—Roberts Memorial Hospital, Tsangchow.
Prevention of Beri-beri.

For years it has been noted that cases of beri-beri have occasionally developed in patients admitted to the wards for some other complaint. It was therefore decided to supply all ward patients with a good quality of red rice instead of the white, highly milled variety previously employed. The red rice is slightly more expensive than the white, but since this change was instituted there has not been a single case of beri-beri developing in the hospital. Bean curd is also furnished to the patients more liberally.—Canton Hospital.

Substitutes for Salvarsan.

Seventy-two injections of arsenic compounds were given intravenously during the year 1917.

The substances injected were as follows: Males, Females.

<table>
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<tr>
<th>Substance</th>
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<tr>
<td>Diarsenobenzol</td>
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<td>2</td>
</tr>
<tr>
<td>Neosalvarsan</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Novarsenobenzol (Billon)</td>
<td>39</td>
<td>20</td>
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<tr>
<td>Salvarosan</td>
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</tr>
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</table>

The novarsenobenzol has been obtained at a local pharmacy at a reasonable price and has proved quite satisfactory.—Canton Hospital.

Athletic Performance by Grateful Patient.

A famous exponent of old-fashioned Chinese military exercises, involving tremendous physical exertion, came to hospital with a large hernia which was rapidly getting bigger. Fortunately for them the Chinese hitherto have had a rooted superstition which forbids their practitioners to meddle with this complaint, even to run a skewer into one is strictly forbidden, so until recently they have with few exceptions refused operative treatment. Not long ago, however, Dr. Feng helped at an operation for hernia in a foreign child, and previously to that he had seen me operate on an unusually enlightened Chinese patient. He had read up the subject, and decided to take this man in and operate upon him too, in my absence, as he seemed to be ready for anything. The first I heard of it was some months later when the patient came, soundly cured, to give a complimentary exhibition of sword-play and military exercises, in honour of the hospital, attracting an enormous crowd to the compound.—Roberts Memorial Hospital, Tsangchow.

A Sorry Sage.

There is a man living not far from here who goes by the name of "the sage," because he is always ready to impart infallible information upon any point that any one likes to inquire about. Coming to the conclusion that his son, who had a hernia, was only suffering from an "air bubble under the skin," he urged him to try cutting it open, guaranteeing a cure if he would do so! The poor son of this sage was foolish enough to take his father's advice, with fatal consequences.—Roberts Memorial Hospital, Tsangchow.
Prevalent Eye Diseases in China.

In the in-patient and out-patient departments, entropion, trachoma, pterygium, cataract, leucoma, and hare-lips hold easily the important places. Trachoma, as an etiological factor is responsible for all the entropion cases seen in the hospital, and for practically all the leucomas. Pterygium occurs in those exposed to wind and dust and is seen chiefly among the farmer class.—Canton Hospital.

Difficult Operation for Stones in Bladder.

Among the major operations performed was a very difficult one for an unusual vesical calculus. The bladder had a diverticulum which was closely filled by a cup-like calculus of 5 cm. diameter, in which there was another calculus of 2.5 cm.—3 cm. diameter. It was not possible to empty the diverticulum, because the opening was too small, and the calculus adhered so closely to the walls that my fingers were soon tired and blistered trying to loosen it; so I had to resort to a chisel whilst an assistant supported the calculus by a finger through the anus. After removal of the cup-like stone another was found fitting to the bottom of the cup. There was also a stone fitting like a cap upon the calculus lying in the cup, and four smaller stones of 1 cm. diameter each. Altogether the eight stones weighed 70 gms. I do not find a description of any similar case in the series of 189 cases of Drs. Olpp and Kühne in The Diseases of China, so I think this case may be of general interest. The patient died a fortnight later from gangrene of the bladder.—C. I. M. Hospital, Hungkiang, Hunan.

A Narrow Escape.

In Medical Missions in India, January, 1918, Dr. Curr, of Inuvil, Ceylon, reports that "a rather unusual and interesting case was brought in early in the year from a village 12 miles away. The patient, who was pregnant seven months, had been seized by a crocodile while she was bathing at a tank and she made her escape by her brother coming up and laying hold of the animal. On admission to the hospital, after washing off the Tamil medicine which had been applied, there were twelve marks of large teeth on the patient's abdomen, some of which were fairly deep and the flesh torn. The wounds healed up under antiseptic treatment and the patient was discharged well in eleven days. We heard later that she had a safe and normal delivery at full time in her own home."

The Tongue an Unruly Member.

A curious story testifies to the hold which native methods of treatment still have, even amongst the superficially enlightened. The nurse was called out one afternoon to a sick child in a well-to-do Chinese house. Finding the child very ill she told the parents either to bring it next morning to the dispensary or to call in a doctor to the house. They took the latter course and called in a private practitioner, but became very uneasy when after two days' treatment the child was
not yet completely cured. A "wise man" was therefore appealed to, who pronounced as follows:—"This child has a Chinese illness, it can be cured only by Chinese treatment. You must procure the tongue of a crocodile, boil it, and give the child the soup to drink." The father journeyed to Johore, procured at great expense the desired remedy, and the child recovered! "It is very kind," said a Chinese youth, relating this occurrence, "of English doctors and nurses to come here to help our people, but it is a pity they do not learn the correct remedies for Chinese complaints."—Medical Missions in India.

HOMEOPATHY OR ALLOPATHY?

A less tragic illustration of native treatment and the principles underlying it is that of a man who came with a skin disease called the "mouse disease" because of the long subcutaneous burrows it forms suggesting mouse-holes. We have many cases of this sort, and get the most successful results from treatment. Before operating, Dr. Feng, with a twinkle in his eye, asked the patient why, as he had the "mouse disease," he had not tried the effect of swallowing a cat. The reply was prompt and unexpected. He had taken several without effect!—Roberts Memorial Hospital, Tsangchow.

A YOUTHFUL EVOLUTIONIST.

We had in the Mission Hospital (Neemuch, India) a patient whose husband is on war work in Africa. With the woman was her little four-year old son, who had been promised by his father that he would send him a monkey from Africa. Much to our amusement when the little fellow was presented with his newly arrived baby sister, he said, "Is this the monkey father promised to send to me?"—Medical Missions in India.

THE RELIGION OF CHINESE PATIENTS.

It is a mistake to suppose that because you read in the books that the Chinese are Confucianists, Buddhists, and Taoists, that therefore the vast mass of the population knows anything much about any of these religions, though it is granted their social system has been moulded by Confucianism, and their sense of the supernatural has been sustained by "Buddhism" and "Taoism" so called. But as to personal religion they are, if anything, lukewarm animists of a very primitive type. They receive all the Christian teaching we can impart as "Gospel Truth," and if any reference is made to idols they are the first to laugh. Opposition is only to what is "foreign," and once they have got sufficiently over their suspicion of foreigners to seek foreign aid they are ready also to listen to truth which is constantly presented to them as applying to all men everywhere without reference to nationality.—Roberts Memorial Hospital, Tsangchow.
The Nature of Infantile Paralysis.—Writing in the *Journal of Medical Research* (1918, 37, 391), Bristol reviews with considerable care the earlier work on the relation of infantile paralysis to animal diseases. He shows in an exhaustive table the analogies between the disease and canine distemper, the agreements in distribution and occurrence in seasonal prevalence, method of transmission, symptoms, etc., being most suggestive. His findings are as follows:

"I venture the suggestion that the condition known as acute poliomyelitis, or infantile paralysis, is merely the effect upon the nervous system of a common, widespread, infectious process, whose usual point of attack is either the respiratory or digestive system. We would conceive of this infection as clinically analogous to that of influenza, which may show respiratory, digestive, or nervous types.

Such an hypothesis would not only explain the so-called 'abortive' cases of poliomyelitis but would account for the unusual circumstances of the small total incidence of frank paralysis among those intimately exposed to the disease.

"I am inclined to accept Ligniere's classification of the so-called hemorrhagic septicemias in lower animals due to the various bipolar bacilli. He designates the disease in general as Pasteurelloses, and the micro-organisms causing the various types as Pasteurella. Such types correspond to the species of animal involved. Thus, Ligniere's specified Pasteurellosis canis (dog distemper), Pasteurellosis avis (fowl cholera), Pasteurellosis bovis (hemorrhagic septicemia of cattle), etc.

"May it not be imagined that infantile paralysis is nothing more than the nervous type of a widespread human Pasteurellosis, spread chiefly by very common healthy or convalescent 'carriers' or through direct or indirect contact with the infectious secretions and excretions of the acutely diseased? May not some of the human cases be due to the increase in virulence for man of the other closely related Pasteurella in lower animals which may be spread to man by direct contact with animals or their parasitic insects?

"With Kling, Petterson, and Wernstedt, we believe that 'when the fog now covering the unknown in infantile paralysis will disappear and allow us to see clearly the mode of infection, then we shall probably find that infantile paralysis is a common disease of childhood, generally displaying only very slight symptoms, but sometimes acquiring a more virulent character, giving rise to disturbances in the nervous system.'

"The chief theoretical suggestion is that infantile paralysis may be nothing more than the manifestation of a common, widespread human Pasteurellosis—the non-paralytic (a better term than 'abortive') cases, representing chiefly the digestive and respiratory types of the disease, while the paralytic cases may be included in the nervous type.

"Based on this assumption, the mode of spread may be considered analogous to that demonstrated for
all forms of Pasteurellosis in animals, namely: (1) directly, by contact with the fresh secretions or excretions of an infected individual (either diseased or a healthy carrier); (2) indirectly, by the carriage of the specific organisms by insects, or possibly in dust, uncooked food, or drink.

"We might believe that sporadic cases, small outbreaks, or local \textit{out-croppings} in epidemics of a human Pasteurellosis have their origin in lower animal \textquoteleft reservoirs\textquoteleft; but that severe, widespread epidemics, and the gradually increasing prevalence of the disease, are due more to the passage of a human strain of the organisms (of a steadily increasing virulence) directly or indirectly from person to person."

\textbf{Surgery.}

J. C. McCracken, M.D., F.A.C.S., Shanghai.

\textbf{FURTHER OBSERVATIONS ON THE RESULTS OF BLOOD TRANSFUSION IN WAR SURGERY.} By Robertson, L. E., and Watson, C. G. \textit{British Medical Journal}, 1917, ii. 679.—Since a previous paper, blood transfusion has been used in cases of severe primary hemorrhage, accompanied by shock. In four cases of this series the citrate method was used; one case was done with the Unger two-way stopcock, the remainder by the Lindeman syringe-cannula method.

The results have shown that certain cases heretofore considered as inoperable and others as exceedingly bad surgical risks may often be revived to a degree which not only permits of radical operative measures, but insures a good prospect of recovery; also that in other cases in which the post-operative condition is one of progressively increasing shock, due to the initial loss of blood, and to the severity of the operative measures required, blood transfusion is a permanent resuscitative measure of extreme value.

If the bleeding can be controlled, the ideal time is as soon as the patient is seen. If operative interference is necessary before the bleeding can be controlled, blood transfusion may be carried out before the patient leaves the operating table. Clinical observations appear to show that some degenerative changes take place in the organism when the exsanguinated condition persists for more than a few hours. For this reason it is advisable to give the blood as soon as possible after admission, if circumstances permit.

Other great factors in the production of shock are loss of body heat and physical exhaustion, which after transfusion can be controlled with warmth and rest for a few hours before operation. Acidosis incident to the shocked condition may be treated by the administration of sodium bicarbonate.

The benefit of blood transfused has its limitations, and it should not be used indiscriminately.

The amount of blood transfused has usually been 700 to \(t_000\) mls., sometimes less and at times more, but the most immediate and lasting results have been obtained with the large amounts. Cardiac dilatation has not been observed.

A wounded man who has lost much blood and has a blood-pressure below 90 mm. mercury is not a good subject for operation; with a blood-pressure below 70 mm. mercury he is in a precarious condition. In the cases of severe primary hemorrhage accompanied by shock,
blood transfusion frequently produces an immediate and almost incredible improvement.

The change from a pallid, sometimes semiconscious patient with a rapid flickering pulse to a comparatively healthy-looking, conscious, and comfortable patient with a slower and fuller pulse is dramatic evidence of the value of the transfused blood. In those cases in which readings were taken during the subsequent forty-eight hours it was shown that the rise in blood-pressure was well maintained.

The author reports 26 cases of primary hemorrhage in which transfusion was done. The results are classified as follows: life saving, 22 cases; immediately beneficial, but died from infection or operation, 9 cases; no benefit, 3 cases; death by hemolysis, 2 cases.

Primary Suture of Wounds.—G. Gross (Bulletin de l'Academie de Medicine, October 23, 1917) lays stress on Tissier’s work which showed that the advisability of immediate closure of wounds depends especially upon the nature of the germs with which the individual wound is infected. Development of the anaerobic organisms to which putrid changes in war wounds are due necessitates not only contused tissue or tissue deprived of its blood supply but also the simultaneous presence of one or more aerobic organisms. The extension of the gangrenous process depends on the aerobe present. In severe infections the aerobe present is always the streptococcus. Hence the conclusion of Tissier and Gross that any war wound not infected with the streptococcus is amenable, after suitable surgical measures, to immediate closure, and should thereupon heal without difficulty. As direct examinations of pus or serous discharge yield no precise indication, the decision should be based only on cultures. Of 549 wounded men upon whom operative work was performed in a hospital under the author’s direction, 430, or 78.8 per cent, were sutured. Of the 759 wounds sutured in these patients, 675 healed by first intention, or 88.8 per cent. In 496 of these the wounds involved soft tissues, though many were severe wounds, e.g., amputation for crushing injuries, through and through wounds at the root of the thigh, explosive injuries of the buttock, and deep missiles in the neck. There were 209 fracture cases. In forty-seven instances partial reopening of the wound followed suture. These included thirty-eight cases of slight infection and nine of gas formation, without any severe constitutional reaction. In thirty-seven additional cases, completing the series of 759, the wounds were voluntarily reopened upon definite discovery of the streptococcus in them. Free removal of injured tissues is a prerequisite to success in primary wound closure.
Tropical Diseases.


Early in 1917 the British War Office ordered the concentration of malaria cases in England at a number of special centres, partly for they might receive treatment by specially qualified medical officers, and partly in order to enable a comparison to be made between various lines of treatment which had been previously commended in medical literature, and partly for other investigations on malaria which might be possible. The large majority of the cases were infected during 1916 on the Salonika Front and were cases of benign tertian.

The treatments employed in the hospitals concerned are put into four categories:

Class A, called Anti-relapse Quinine Prophylaxis, consist of treatments designed only for preventing relapses as much as possible without attempting absolute cure.

Class B, called Short Sterilising Treatments, were aimed at achieving absolute cure with treatments continued only for a few days, though repetitions of the course may be made.

Class C, called Long Sterilising Treatments, consist of treatments aimed at absolute cure by longer courses, the distinction between Classes B and C being useful though not always very definite.

Class D, consist of various mixed treatments, or of treatments with other drugs than quinine.

In this connection, the following paragraph is quoted from Nierenstein's interim report of his numerous investigations of the chemical action of quinine:

"So far as it is possible to summarise provisionally the above results, it seems more or less apparent that there is a tendency for the excretion of the quinine passed to reach a concentration of 7 to 11 grains per litre of urine. This appears to be the case for all salts experimented with (except the lactate), and the fact does not appear to be altered by the different methods of administration. Thus these results flatly contradict all statements to the effect that quinine given intramuscularly or intravenously is more or less readily excreted than quinine given orally. Moreover, no one quinine salt appears to be more readily eliminated in the form of its base than another salt. These results have been obtained from 1,366 analyses made on 624 different specimens; and have since been confirmed in quite a number of estimations accumulated during January and February, 1918."

Several of the medical officers favour complete rest in bed during treatment, even for two or three weeks, especially when large doses of quinine are being given. Generous diet and a little beer or wine are usually given. Arsenic and iron are also favoured for the later stages of treatment, but it has not been possible as yet to obtain decisive statistical evidence in support of any of these views.

Out of the total of 2,460 referred to here, 682 or 27.7 per cent are known to have relapsed either during treatment or afterwards.

SUMMARY OF REPORT.

1. From the results of treating 1,040 old cases of malaria with
anti-relapse quinine prophylaxis, it would appear that comparatively small doses, amounting to about 60 grains a week, distributed in various ways, reduce relapses to about 10 per cent of the cases per month, and also diminish the severity of the relapses when they do occur. But 5 grains daily seem less effective, and 15 grains daily are no more effective than 10 grains daily and less well borne by the patients.

2. Treatments B, C, and D given to 1,420 cases, illustrate the difficulty of sterilizing cases entirely, but also seem to show that success in this tends to vary directly with the magnitude of the daily dosage. No permanent bad effects with large dosage have been reported.

3. On the other hand, old cases generally do so well under treatment A that it is a question whether efforts to establish early and absolute cure in them by methods tried in treatments B, C, and D are always very much worth while, especially as numerous cases under treatment A seem to recover by themselves, either completely or sufficiently to be able to return to light or full duty.

4. I cannot say that I have personally been able to note any marked superiority in any one of the three modes of administration of quinine—oral, intramuscular, or intravenous—as regards either the speedy reduction of the fever and the parasites (in relapses), or as regards complete sterilization of cases. Captain Meredith Harrison's method of using oral and intramuscular administration together is valuable when large dosage is employed. Very careful clinical and statistical work would be required to establish real differences in the exact results given by the various modes of administration.

Emetin and Emetine Bismuth Iodide in Amoebic Dysentery.— The following is a summary of a paper in the Journal R. A. M. C. (September, 1917) by Capt. R. E. Savage and Capt. J. R. Young on the results of treatment of fifty-nine cases of Entamoeba histolytica infection among soldiers from Mesopotamia and Gallipoli.

(1) Emetine hydrochloride injections were given to nineteen cases of E. histolytica infection—sixteen cyst carriers and three acute cases. Fifty per cent of the former were cured, and 33 per cent of the latter.

(2) Emetine injections in conjunction with (a) pulvipecacuanha, and (b) half grain emetine orally were given to seven and four patients respectively, with very good results. Six of the former were cured, and all the latter.

(3) Emetine bismuth iodide was given to thirty-three cases—seventeen cyst carriers and sixteen acute cases; 82.4 per cent of the cyst carriers were cured, and 50 per cent of the acute cases. The results in the cyst carrier cases corroborate those obtained in England.

(4) Emetine one-grain injections along with emetine bismuth iodide, one to two grains daily, were given to (a) two cyst carriers uncured by emetine bismuth iodide—one was cured, the other relapsed; (b) six acute cases uncured by the double iodide alone—one was cured, and the other five relapsed; and (c) two acute cases not previously given emetine bismuth iodide—one was cured, the other relapsed.

(5) Patients who have not previously had emetine injections appear to be cured with the double iodide, whether they are cyst carriers or acute; 88.9 per cent of such cases were cured.

(6) Emetine bismuth iodide causes the infection to disappear
more quickly from the stools than does emetine hydrochloride, and appears to prolong the negative period before a relapse, and consequently, a longer period of control seems necessary.

(7) Acute cases were negative on the average for twenty-one days before relapsing after treatment with emetine bismuth iodide.

(8) Emetine bismuth iodide has practically no effect on intestinal protozoal infections other than *E. histolytica*.

In discussing the treatment of patients who are infected with *Entamoeba histolytica*, it has become the custom to divide the cases into three groups: (1) acute amebic dysentery; (2) convalescent carriers; (3) contact carriers.

It is with cases of the first and second classes that we have been dealing.

Concerning the latter class, we think the term "convalescent carrier" is apt to be misleading. It is certainly more honest to look on these as acute cases which we have failed to cure, and which may again develop acute symptoms.

As the emetine bismuth iodide has been administered to both classes in the same manner we may consider the effects of the drug first on the individual before discussing its effects on the disease.

This drug has generally been given in one-grain doses twice or thrice daily. Most of the cases have had the larger daily dose continued until thirty-six grains had been taken.

The tabloids being keratine-coated are expected to pass through the stomach and be dissolved in the small intestine, thus freeing the drug near the site of the disease, and minimizing the chance of nausea and vomiting.

It may be said quite frankly that our experience has been that this drug in most cases does cause a good deal of vomiting irrespective of the method of administration.

The method we have adopted now as giving the least annoyance to the patient is as follows:

One tabloid given twenty minutes after a cup of cocoa at 10 a.m.

One tabloid given twenty minutes after the usual ward tea at 4 p.m.

One tabloid given twenty minutes after a cup of cocoa at 8 p.m.

In different cases the drug has been given experimentally with all the different meals with only one definite result, namely, that given after the mid-day dinner vomiting occurs sooner and more regularly than is the case with the other meals. . . .

Impelled by curiosity, we gave several patients the tabloids previously ground up into powder. Here, again, we met with variable results. Some patients who vomited after the entire tabloid retained the powdered one. All, however, preferred the entire tabloid on account of the nasty taste of the powder. In no case have we been able to persuade ourselves that vomiting had any adverse effect on the action of the drug as a curative agent, judged by the results obtained from microscopic examination of the faeces.

We have not found that this drug has any deleterious action on the heart. In no case was there any sign of dilatation after the course was finished, although many of the cases were up all day during practically the whole course of treatment.

As indicated above our method of administration enabled us to give patients such diet as their physical condition demanded or allowed, and a number of the cases were on ordinary diet almost from the beginning of treatment.
MISTAKES IN DIAGNOSIS OF ECTOPIC PREGNANCY.—Lytle (New York Journal of Medicine, January, 1917) states that in a series of ten cases admitted to the New York Hospital four of them were incorrectly diagnosed by the hospital staff. It is estimated that in at least 50 per cent of them the physician fails to make a correct diagnosis. The written descriptions of the disease as a rule describe it as it appears after severe internal hemorrhage has taken place, which is quite a different picture from that which obtains in the pre-tragic stage, before collapse from hemorrhage has occurred.

These cases if treated early present a very low mortality. Moreover, they are sufficiently frequent to make them an emergency likely to be found by every physician doing general practice. Among the cases presenting themselves at the out-patient department of Leland Stanford University, one in 131 cases of pregnancy was ectopic. In another large series of cases of pregnancy there was one case of ectopic pregnancy to sixty-two of uterine pregnancy, and Noble has estimated the condition present in three or four per cent of all the laparotomies done by him.

One of the most common mistakes in the diagnosis of ectopic pregnancy has been the diagnosis of uterine abortion, impending or incomplete. Of the 90 per cent who consulted a physician before rupture, in the series of 130 cases reported by Harris, a large proportion were told that an ordinary abortion was threatened, was occurring, or had occurred. Another kind of mistake is that of making the diagnosis of acute appendicitis first, when the patient complains of abdominal pain, with vomiting, but it should be emphasized that it is important to think also of ectopic pregnancy in all cases of abdominal colic in females in whom pregnancy is possible.

The writer asks: If then, we are not to require these severe symptoms to remind us of ectopic pregnancy, what are the symptoms that should make us suspect the condition?

Uterine hemorrhage is one of the most significant features. We should be suspicious of flow that is four or five days to a month overdue. This is usually scanty in amount and is spoken of as spotting. In many cases it is reddish-brown and does not clot, while in others it appears to be like a normal menstruation overdue. One must not be misled, however, by the fact that the catamenia are not overdue. In one series of cases only 50 per cent had missed a period. Nevertheless, any irregularity in bleeding should be a subject for close inquiry. The character, amount, and duration of any flowing, whether before or after the date on which menstruation is expected, should be most closely observed. Besides the flowing, pain is a most important symptom. It is usually the only important subjective symptom before there has occurred any interruption in the condition of the fetus in the tube. It is present in over 90 per cent of the cases, and is usually located over the seat of the disease. Sometimes it is constant and sometimes colicky. It may be absent when the patient is quiet, but present when the patient moves about the room. In the unruptured cases it is likely to be mild, as it is also in the cases of
tubal abortion, while in the cases of rupture it is often a very severe pain, cutting in character. The discovery of a tender mass on the same side of the uterus as the pain adds to the certainty of diagnosis. Faintness is sometimes experienced, even before rupture, and fever is the rule after blood has leaked into the abdominal cavity. Many are the combinations of conditions and symptoms in different patients. The diversity is so wide that mistakes are bound to occur. "No pelvic condition gives rise to more diagnostic errors," to quote DeLee. Mistaken diagnosis will be less frequent, however, when our mental picture of ectopic pregnancy is not the classical ruptured ectopic, but when we visualize these cases as they are before rupture, when the symptoms are mild and seem less urgent.

**Book Reviews.**


Every new theory or procedure in medicine and surgery has at the first to encounter criticism and often not a little opposition. A notable instance of this was the cold reception in many quarters given for years to Lister's advocacy of antiseptic methods of surgery. Perhaps this is as it should be, in accordance with the maxim that we should prove all things in order to hold fast only to that which is good. And adverse criticism of Listerism seemed to be justified when certain prominent surgeons announced in 1915 that "the treatment of suppurating wounds by means of antiseptics is illusory, and that belief in its efficacy is founded upon false reasoning." Fortunately, the recent work of Carrel and Dakin, although it also has encountered much opposition, seems to have placed antiseptic surgery on a more scientific, and therefore on more unassailable foundations. In his introduction to the work under review, Sir Anthony Bowlby asserts that whenever their method has been thoroughly carried out, it has accomplished all that has been claimed for it and has been of inestimable benefit to thousands of patients. It has also renewed faith in antiseptic methods in spite of the attacks on their utility during the early stages of the war, and has done the greatest good by setting a high standard of thorough excision and surgical cleanliness.

The aim of the authors is to show how surgical sterilisation of the greater number of infected wounds may be obtained. They insist on rigid adherence to the technique described, and state that the deplorable results obtained in several hospitals were due to surgeons who believed they were using the Carrel-Dakin method when in reality they were doing nothing of the kind, but had altered it to suit their own fancies. The following are the titles of the chapters: The Principles of the Technique; The Technique of the Manufacture of Dakin's Solution; The Technique of the Sterilization of Wounds—Mechanical, Chemical, and Surgical Cleansing; The Technique of the Sterilization of Wounds—Chemical Sterilization; The Clinical and Bacteriological Examination of Wounds; The Closure of Wounds; The Results. The illustrations are numerous and some of them show the wonderful, rapid, and complete closure of most extensive wounds. It is almost needless to say that every practising surgeon should possess a copy of this book, or at least should make himself well acquainted with its contents.

**A TREATISE ON CLINICAL MEDICINE.** By William Hanna Thomson, M.D., LL.D., formerly Professor of Practice of Medicine and of Diseases of the Nervous System in the New York University Medical College; Ex-President of the New York Academy of Medicine, etc. Second Edition Revised. Octavo volume of 678 pages. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, 24s. net.

In this handsome volume a physician of great experience and well known as a teacher of medicine deals with the treatment of disease from the point of
view of the general practitioner. As an introduction there are several interesting essays on such subjects as "catching cold," coughs, the significance of pain, emaciation, dyspnoea, and vomiting. There is also a chapter on the use of remedies and how they can be classified most conveniently according to their special applications.

The great value of the main part of the work lies in the numerous and helpful hints for the treatment of the diseases with which the author is most familiar, i.e., those which are common in temperate climates. For example, he describes from his own experience the remarkable case of a boy with total suppression of urine for eight days (on another page where the incident is again related it is said that the suppression lasted only two days) who passed into a state of coma and was thought to be dead by his attending physician. Adopting a procedure recommended by Brown-Sequard, the author ordered several tablespoons to be dipped in boiling water and lightly applied to the abdomen and back over the region of the kidneys. After ten such applications the boy opened his eyes for a moment. A high enema of normal saline was then given which was followed by the passing of a small quantity of urine. Recovery followed and fifteen years later the author received the wedding cards of his former patient. The optimism concerning the use of remedies in nearly all diseases and in the most desperate conditions cannot fail to act as a tonic to those who are inclined to therapeutic scepticism. As a supplementary work to one's favorite text-book on the Practice of Medicine this volume will be found most helpful.


The considerable number of books on syphilis which have been published recently, some for the medical profession and others for the laity, is evidence of the keen interest with which this great evil is being generally studied and of the determination that everything possible shall be done to check its ravages. In "Syphilis and Public Health" the whole subject is dealt with in a very satisfactory manner. The opening chapters give statistics showing the wide prevalence of syphilis in all parts of the world and the dreadful consequences which ensue to the innocent as well as to the guilty. The sources and methods of infection are next considered, and this is followed by a description of the methods which may be employed to reduce the incidence of the disease. The author discusses the ethics of venereal prophylaxis, and under public health measures presents carefully and impartially the difficulties attending all attempts to solve the sociological problem of prostitution. In an appendix the technic of the Wassermann reaction is given, also examples of various laws and regulations enacted for the prevention of venereal disease. To all who are interested in the struggle against one of the greatest evils of the time this work will be most valuable, as it presents a mass of trustworthy information and offers guidance for the direction of reformatory efforts into the most serviceable channels.


The author is already favorably known to medical practitioners and students by the publication of his "Index of Symptoms" and other very useful compilations. In the present work it is his object to present a more rational and comprehensive way of regarding the treatment of disease and the teaching of therapeutics than the one generally adopted. In nearly all text-books of medicine diseases are grouped according to the organ affected, the description of the symptoms of each disease being followed by the treatment appropriate to it. So far as therapeutics are concerned the author believes this is a wasteful and unscientific method. He maintains that the shortest practical way of teaching therapeutics is to place in the same group diseases which require the same treatment, and it will be found that this is scientific as the pathology of the diseases in each group will be usually found to be very similar. He has therefore arranged all diseases in about forty groups, giving the main treatment which will be
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found appropriate for all the diseases in the group, and the special treatment which may be necessary for any particular member of the group. This system is unquestionably less of a tax upon the time and memory than that which regards each disease as requiring its own distinct and separate treatment, and it rests more firmly on the principles which should underlie any rational system of therapeutics. To complete the work there are chapters on the Automatic Habit, Ungrouped Diseases, Convalescent Treatment and in an Appendix some useful hints are given to those beginning the practice of medicine. The little book can be cordially commended; it is certainly well worth its modest price.

Correspondence.

Correspondents are requested to write on one side of the paper only, and always to send their real names and addresses. The Journal does not hold itself responsible for the opinions or assertions of correspondents.

Botulism Among the Chinese.
To the Editor, C. M. J.,
DEAR SIR:—The Chinese on the coast of the Kwantung Province live principally on fish, rice, and potatoes, and every year they are subject to a very fatal form of disease brought about by eating a certain kind of sea fish which is called *kuai hu* in our local dialect. It is a fish about twelve inches long with a large head. The Chinese are extremely fond of it, so much so that they will eat it although quite aware of the risks they run. January and February are the only months of the year when the fish appear to be dangerous as food. The Chinese say that if the fish are deluged with rain they are more likely to cause disease. The liver and spleen seem to be the parts which contain the poison, and these are apparently the parts most relished by the Chinese.

The virulence of the poison seems to vary. The symptoms sometimes develop within one hour after partaking of the fish, and death may ensue in two to three hours, but it may not occur for 24 hours. The disease is not invariably fatal. Some cases I have seen recovered spontaneously after emesis. When the poison has not been a long time in the stomach, an emetic, lavage of the stomach, or a hypodermic of apomorphin, often saves the patient. But if more than two hours have elapsed since ingestion the risk of a fatal issue is very great. In the case of those who drink spirits with their meals—a very prevalent custom amongst even the poor classes here—the disease invariably ends fatally. Once the poison has passed into the circulation, the symptoms develop rapidly. The toxin acts principally on the central nervous system and it seems to act in an ascending direction. Weakness of the lower extremities followed by paralysis soon occurs. This is followed by symptoms of bulbar paralysis with dysphagia. In one's early cases the difficulty of passing the stomach tube at this stage, and the loss of the pharyngeal reflex when trying to excite vomiting, are very striking. The march of events is rapid. Before long the respiratory centre is attacked and then the vaso-motor centre, the pulse being palpable for quite some time after respiration has ceased. The Chinese themselves recognise that the "flushing of the face" (vaso-motor) is a sign of impending death.

The pathologist who investigated the nature of the poison for us said he could not find the minimal lethal dose for guinea-pigs. Apomorphin in the later stages fails to excite any response owing to paralysis of the vomiting centre.

Yours sincerely,
R. Chalmers.

Chivalrous Chinese Soldiers.
To the Editor, C. M. J.,
DEAR SIR: I want to pass on to you the following incident which is, in my experience at least, a very unusual one to find in the China of to-day.

While working among the Southern soldiers in the Mission Hospital at Chenchow, Hunan, this last spring, a Northern prisoner, unwounded, was brought to us for safe keeping, it being feared that his life would be in danger were he quartered on the street. He was placed upon orderly work which he did to the satisfaction of everybody. Noticing his popularity and the good fellowship that existed between him and the Southern troops, both well and wounded, I inquired the reason from one
of the regular nurses, and received this explanation:—

A few weeks before, after an engagement between the Northern and Southern forces near Liling, Hunan, the Southern forces retired leaving some of their wounded. This man (his name is Wen) during the fighting ran out of his place of concealment to where a wounded Southerner lay and throwing him over his back brought him back to the Northern lines in safety, this in spite of the constant firing from both sides which was going on at the time. Arriving inside his own lines he dressed the man's wounds and gave him some food. The Southerners resumed the battle the next day and were victorious, taking as prisoners a number of the Northerners, this man, Wen, being one. The prisoners were dealt with in truly Chinese fashion, but the life of Wen was saved through the wounded Southerner, whose life he had been the means of saving the previous day, begging the officers to keep him as a prisoner but not to harm him.

This story was corroborated by others of the hospital staff.

Yours sincerely,

G. T. TooTeLL.

Changteh, Hunan.

Venereal Disease in Colleges.

To the Editor, C. M. J.,

DEAR SIR: The statement is made in a recent issue of Medical Missions in India that venereal disease is common in the colleges of India, and the following resolution was passed unanimously by the Bengal Branch of the Medical Missionary Association: "Realizing the urgency of the whole social question of venereal disease and its prevalence among the teachers and students of high schools and colleges, be it resolved that the Bengal Missionary Council be requested to take immediately all possible steps which it may deem necessary to combat this evil."

It would be interesting to know the extent to which the same evil prevails among Chinese students. In missionary institutions, despite all efforts to prevent the students from going astray, cases do occur, though very rarely. What is the best way to deal with them? If allowed to remain in the college, the influence of a black sheep of this kind must be pernicious; if summarily expelled, he may do further harm when he reaches home if he is not under medical care. Moreover, his expulsion may cause other students with venereal disease to be afraid to report their condition to the physician in charge, and so they remain a source of danger to their companions. Perhaps some of our school physicians, unless they are in the happy position of never having come across such cases, will kindly express their opinion on this point.

Yours sincerely,

DISCIPLINE.

Correction.

Concerning his article "Retention Cyst, Female Breast," which appeared in the March issue of the Journal, Dr. G. Glass Davitt writes that the dimensions of the tumor, as given on p. 135, should be corrected so as to read: diameter of tumor 12.5 cm. (not 125 cm.); length of pedicle, 25.0 cm. (not 250 cm.); diameter of pedicle 1.3 cm. (not 13 cm). These errors were in the original manuscript.

NEWS AND COMMENT.

BIRTHS.

CADBURY.—On May 30, 1918, to Dr. and Mrs. Wm. W. Cadbury of Canton Christian College, Canton, a daughter (Jane Balderston).

NIEBEL.—On May 7, 1918, at Liling, Hunan, to Dr. and Mrs. B. E. Niebel, a son (Benjamin Williard).

MARRIAGES.

FINDLAY-FORGAN.—At Liaoyang, on July 31, 1918, Rev. J. W. Findlay, U.F.C.S., to Dr. Margaret Rose For- gan, also of United Free Church of Scotland Mission.


LEWIS-LAND.—On July 25, 1918, at York, South Carolina, U. S. A., Dr. Stephen C. Lewis of Chenchow, Hunan, to Miss Mary Land, daughter of Mr. and Mrs. James Davidson Land.
DEPARTURES FOR RED CROSS WORK IN SIBERIA.—Dr. A. W. Tucker of Shanghai and Claude M. Lee of Wushu, of American Church Mission; Drs. S. L. Lasell and W. G. Hittner of C. M. S. Hospital, Hangchow; Dr. O. T. Logan of Changteli.

U. S. ARMY APPOINTMENT.—Dr. Herman C. Bryan, of Pennsylvania Medical School, Shanghai, left for Manila on August 27, 1918, having received a captaincy in the U. S. military service.

Dr. Charles S. F. Lincoln, of St. John’s University, Shanghai, is at home in the United States on furlough.

Dr. J. Stobie, of the United Free Church of Scotland Mission at Ashilho, Kirin, is shortly going home for work at the Front.

Captain Edward Wilfred Kirk, M.B., Ch.B., Univ. Edin., R.A.M.C., Surgeon, Mission Hospital, Canton, China, 17 Greenhill Gardens, Edinburgh, has passed the requisite examination and been admitted a Fellow of the Royal College of Surgeons, Edinburgh.

RETURNED FROM FURLough.—Dr. Mary L. James, A. C. M., Wuchang; Dr. Marion Hook, C.E.Z.M.S., Foochow.

DEPARTURES.—For England, Dr. Hornby, of Shanghai; for Norway, Dr. J. E. Nilssen and family, of Norwegian Missionary Society.

GIFT FOR ISOLATION HOSPITAL, HANGCHOW.—During the celebration of the 60th anniversary of the birthday of General Yang, of Hangchow, Dr. Duncan Main received the gift of $600 from the General towards his new Isolation Hospital.

MEDICAL WORK IN HAINAN.—Much interesting information concerning the practice of medicine among the Chinese in Hainan will be found in the Hainan News Letter of the American Presbyterian Mission, July, 1918.

KEEPING OR SELLING OF MORPHIA PROHIBITED.—The Civil Governor of Kiaugsu has issued the following circular order, containing instructions from the Minister of Interior regarding the prohibition of injecting, keeping, and selling morphia:—

“'The morphia imported from abroad into our country is found to be of a more poisonous character than opium. Nevertheless, many of our people in the provinces take it habitually as a palliative for their craving for opium. In spite of reiterated orders for its prohibition, the people have persistently submitted themselves to be injected with this deadly poison, careless and regardless of consequences. The number of morphia slaves and victims is continuously increasing. If this evil is not put down, it will menace seriously the success of our anti-opium policy. ‘The Ministry of Interior hereby orders that persons keeping or selling morphia shall upon discovery be punished one degree more severely than in the case of opium.’”

DONATION TO PUBLICATION COMMITTEE OF C.M.M.A.—The China Medical Board has made a grant of $5,500 to the Publication Committee for the year beginning November 1st, 1918. Most of the money will be used in payment of salaries to Chinese translators.

A GRANDMOTHER OF TWENTY.—About two years ago a number of Chinese in the J. S. A. formed an association to restrict early marriages in China on account of (a) the land being unable to support the increased numbers and (b) that mission statistics showed that only one per cent of the children born had a chance of hearing the Gospel so as to understand and believe it. That marriages are too early in China no one will deny. The only way to counteract that is to teach the rising generations that the propagation of their species is not the chief aim of their lives, and, of course, it means the training of the girls to earn their own livelihood. It is hardly correct to say that China is the only country where three generations are produced in two. To mention one place only, the late Rev. James Neil—a recognized authority on Palestinian life—wrote in a Christmas Magazine in 1912: “It is no uncommon thing to see a grandmother of 20 in Palestine.” I have neither seen, heard, nor read of such in China.—North China Daily News.

CHINESE PROCLAMATIONS RELATING TO JIN-TAN (ŻŻ) PILLS. ADVERTISEMENTS.—Translation of proclamation issued by Yang, Special Envoy for Foreign Affairs of Kiangsu, dated May 17, 1916. *

* * *

In compliance with the above request the Commissioner for Foreign Affairs will direct the City and Mixed Court
Magistrates to take note and in the meantime issues this proclamation; and the public are hereby notified that "Jin-tan" pills are made by the Japanese Dispensary and that no one is permitted to make or sell imitations of them. Anyone doing so will be severely punished.

Let all obey.

Council Room, Shanghai, August 2, 1918.

Gentlemen,—The Council's attention has been drawn to the fact that you are endeavouring to advertise your "Jin-tan" pills in the Settlement by means of posters containing a facsimile of what purports to be a proclamation issued in May 1916 by the Special Envoy for Foreign Affairs. This proclamation does not bear either the seal of the Senior Consul or of the Council and accordingly its posting within the Settlement is absolutely unauthorised.

For your guidance I am directed to refer you to the informal agreement made between the Consular Body, the Taotai, and the Council, contained in the correspondence published in the Annual Reports for 1907, pages 42/7, and 1908, pages 43/6, wherein the posting of proclamations in the Settlement is restricted to such proclamations as have reference to matters of weight affecting the public welfare and to quote from the Senior Consul's letter to the Taotai of December 12, 1907, that "Other kinds of proclamations on minor matters will in future invariably be objected to and opposed." The proclamation set forth in your poster falls within the latter category and even had the Council's permission been sought before its posting within the Settlement that permission would have been withheld.

I am accordingly directed to inform you that the posting in the Settlement of the poster in question cannot be permitted and that such copies as have already been posted must be immediately withdrawn.

I am, Gentlemen,
Your obedient servant,
N. O. Liddell,
Acting Secretary.

Messrs. Toa & Co.

President Wilson and Red Cross Work in China.—Mr. Julean Arnold, as Field Representative of the American Red Cross in China, has received an appreciative message from President Wilson through Mr. H. P. Davison, chairman of the American Red Cross War Council. It reads: "President Wilson desires to felicitate the American Red Cross Chapters in China on their successful organization and operation. You will please express to those Americans, Chinese and other allied nationals, who have given such generous support to the American Red Cross in China, his very deep personal interest in this circumstance and his great gratification that so many persons in China should have thus associated themselves with us in the great work of the Red Cross."

The British in Shanghai and Red Cross Work in Siberia.—On September 5, 1918, a meeting of several British medical men was held in Shanghai to consider whether it was practicable for the British community in Shanghai to form and maintain a Red Cross Unit for Siberia. It was reckoned that a unit of fifty beds would require the services of at least three doctors and six nurses, six orderlies, one clerk, two coolies, and if an ambulance formed part of the equipment, a motor driver and two stretcher bearers—a total of 27 persons. The cost of equipment and maintenance for one year of such a unit would amount to $30,000-40,000. It was stated that there need be no concern regarding the money and supplies required. The difficulty was to find the medical men and nurses for the unit.

As an alternative scheme it was suggested that the British Government should be offered the provision of 50-100 beds in Shanghai for the treatment of medical and surgical cases capable of transportation.

After some discussion the meeting decided that the British medical men in Shanghai offer their services to look after 50 beds for wounded or sick patients sent to Shanghai from the Siberian front. The meeting also decided that it was advisable to wait for the communication from the Principal Medical Officer in charge of H. M. Forces at Vladivostok before discussing the formation of a Red Cross unit for service in Siberia. The generally expressed opinion was that if such a unit were urgently needed the British medical men in Shanghai would do their best to work together and make it a success.
URGENT APPEAL FOR 15 DOCTORS, 30 NURSES, AND SUPPLIES.

Early in September the American Red Cross headquarters in Shanghai received the following telegram from Dr. Teusler, head of the American Red Cross commission to Siberia, who is now in Harbin:

"Active fighting imminent. We require immediately fifteen more high grade doctors and thirty American, British, French, or Allied nurses to serve during term of acute need or permanently as desired. May be volunteers or salaried basis if necessary. Official Red Cross Service."

This telegram is evidently in reply to a message to Dr. Teusler notifying that there were few American nurses here, and asking, in view of the fact that several Russian and Belgian nurses had offered their services, if other nationals would be acceptable. Apparently the need is so great that doctors and nurses of any of the Allied nations will be welcomed by the American Red Cross workers in Siberia, and any such who care to offer service should apply immediately to Mr. W. A. B. Nichols, 18B Kiangse Road, or to Dr. R. C. Beebe, 5 Quinsan Gardens, Shanghai. Applicants must be prepared for immediate active work. The doctors will receive commissions as lieutenants, captains, etc. The American Red Cross will be responsible for the transportation of surgeons and nurses, their living expenses, equipments, and, if necessary, their salaries.

Drs. Tucker, Lee, Hiltner, Lasell, Logan, and other American physicians have already left Shanghai and the neighbourhood and a number from Japan, so the American Red Cross unit in Siberia already has a staff in the field, but one which must be much increased in every way, both in personnel, equipment and supplies.

Dr. Teusler, who was of St. Luke's Hospital, Tokio, was appointed by the American National Red Cross, Washington, to head the Commission in Siberia, other members being Mr. G. S. Phelps of the Y.M.C.A., Tokio, and Mr. E. W. Frazar of Tientsin, the latter being organizer. The Commission has established headquarters at the offices of Messrs. Fearon, Daniel & Co., Harbin, with stations throughout this new field of activity.

Supplies are being sent by the Central Committee for China of the American Red Cross, Shanghai, and the 20 China chapters are now instructed to concentrate their work on warm clothing for the refugees in Siberia, of whom it is expected there will be 30,000 to provide for this winter.