A BRIEF REPORT ON PANDEMIC INFLUENZA IN KOREA WITH SPECIAL REFERENCE TO ITS ETIOLOGY.


The great influenza pandemic made its appearance in Korea during the month of September, 1918. There seems to be no doubt that the infection came from Europe, via Siberia. The disease spread from north to south along the line of the Southern Manchurian Railway. The first cases seen by us in Seoul, the capital, were during the latter part of September. Before the middle of October the epidemic was at its height. The unsanitary conditions of Oriental life greatly enhanced the spread of the infection. At present it is impossible to estimate either the number of cases or deaths, as accurate information has not been received from the Japanese authorities. From one-quarter to one-half of the population must have been affected. Most of the schools were closed, due to the high case rate amongst the scholars and teachers. As elsewhere, the serious nature of the outbreak was due to the frequent sequelae of bronchitis, broncho-pneumonia, and heart failure. The symptoms were those of ordinary influenza but of a more exaggerated type. Headache, pains and aches in the limbs, with a rapid rise of temperature to 104° F. or 105° F. were common symptoms. The temperature usually dropped to slightly above normal within twenty-four hours if the case was uncomplicated. There was also frequent evidence of respiratory infection which varied in severity from a mild coryza to pneumonia. In some cases there was vomiting and nausea, while in some very acute cases the patient became delirious.

*Serial No. 9, from the Research Department, Severance Union Medical College, Seoul, Korea.*
Tokelau, "relapses" after treatment.

An old Tokelau case.

The arabesques of an old Tokelau case.

Tokelau (Tinea Imbricata) in Szechwan. (P. 223)
at the climax of the infection. The symptoms in general corresponded with those reported from other countries.

With regard to transmission of the disease everything points to droplet infection as being of paramount importance; numbers of mild carrier cases, a population of susceptible people, and a disease which infects the upper respiratory passages and causes a prolific secretion of infectious material, produce a combination which must result in a pandemic or widely spread epidemic.

_Bacteriological findings._ While the number of cases reported are few, the findings are of considerable interest. All were typical cases.

_Blood cultures._ These were made from seven patients and all proved negative.

_Sputum examination._ The sputum was examined in fourteen cases, in three of which the acute symptoms had subsided before this was done. Direct smears were made to bring out the small and lightly staining influenza bacillus. After microscopical examination a little of the sputum was washed and plated out on blood agar.

Of the fourteen (14) specimens examined, only three (3) showed the presence of Pfeiffer's bacillus. Two of these three cases were complicated with pneumonia. The other eleven (11) cases showed a variety of organisms. Pneumococci prevailed in three (3); almost pure _Micrococcus catarrhalis_ in one; the others gave a variety of streptococci, both Gram negative and positive, diplococci, etc. In two cases a diphtheroid bacillus greatly predominated.

We wish to draw special attention to three cases which are of particular interest.

_Case D._ This patient had a typical attack of influenza with no complications. About one month previous to the attack the sputum showed a pure culture of influenza bacilli. (This patient had been suffering for months from chronic bronchitis.) A vaccine was prepared and the patient had received two or three injections of the same. Two or three days prior to the attack the patient, then being quite free from influenza, brought a sample of his sputum to the laboratory for further examination and this showed an almost pure culture of the influenza bacillus. Sixty hours later the patient was ill with typical influenza. The same patient, about two weeks previously, when receiving an injection of influenza bacilli vaccine, stated that his wife and one child were very sick with epidemic influenza, and asked whether it would be possible for him to become infected. He was told that it was more than likely that the present infection and the vaccine would protect
him. This patient, whose sputum at times was teeming with the influenza bacillus, had been living with his family for weeks without infecting them, but to epidemic influenza all succumbed.

Here is a clear-cut case of a person who had carried, and was still carrying, an influenza bacillus infection, and further had received three injections of vaccine (Pfeiffer's bacillus), becoming infected and suffering from an acute attack of epidemic influenza.

Had the sputum in this case been examined at the time of attack only, the case would have been reported as "Influenza due to Pfeiffer's bacillus." Some may question whether the organism isolated was the true Pfeiffer's bacillus; all we can say is that it possessed all the characteristics of this organism, and was identical with those isolated from other cases.

Case S. About six weeks before the attack of epidemic influenza, this patient had suffered from acute coryza. Bacteriological examination of the discharge showed pure growth of a small, irregular, Gram positive bacillus, diphtheroid in character. At this time there were no symptoms of influenza; the case was one of simple coryza. Later, when the patient suffered from influenza, a pronounced coryza developed; this again showed the same small diphtheroid bacillus. The mild laryngitis which developed simultaneously gave a growth of pneumococci.

Case C. The patient had suffered nine months previously from bronchitis due to the pneumococcus. (Type not determined.) Vaccine treatment had greatly helped the patient and for six months there had been practically no excessive sputum. After recovery from the acute symptoms of epidemic influenza, a pneumococcal bronchitis remained. It is of course impossible to know whether the organism from the first infection had been carried over or not. Vaccine treatment again helped much in clearing up the bronchitis.

**DISCUSSION.**

In discussing these results we desire to open the question of etiology, as it is still doubtful whether Pfeiffer's bacillus can be considered as the specific cause of the present pandemic.

As evidence against Pfeiffer's bacillus being the cause there are the following points:

(1) The highly contagious nature of this disease, frequently spreading with lightning-like rapidity, necessitates a virus present in great strength even in very small quantities of the infected sputum. This we do not find to be the case, allowing Pfeiffer's bacillus to be the cause of the disease.
(II) The frequently small percentage of cases in which the bacillus is isolated.

(III) The disease attacking a patient who was at the time infected with Pfeiffer's bacillus.

(IV) The absence of marked anti-bodies to this bacillus except in cases where the bacillus had been isolated.

On the other hand, in support of Pfeiffer's bacillus being the cause of the pandemic, there should be noted:

(I) The relatively greater frequency with which Pfeiffer's bacillus is found than any other organism.

(II) The lack of evidence supporting the theory of an ultra-microscopic cause.

In connection with the question of etiology it seem to us that two mistakes have been made. First, in considering that the Pfeiffer's bacillus is the specific cause of the disease known to the clinician as influenza. There is evidence to support the view that clinical influenza may be produced by the pneumococcus, or certain strains of streptococci; that is, if we ignore the view of a filtrable virus and believe the disease is due to visible organisms only.

In the second place, a mistake seems to have been made by following the clinicians too readily in calling the disease influenza, before the influenza bacillus had been found consistently enough to warrant such a pronouncement.

The clinician has a right to apply the name influenza because he has arbitrarily decided upon such nomenclature for such symptoms. But the bacteriologist must follow slowly; influenza to him is a specific infection due to the Pfeiffer's bacillus. In the circumstances, we think the advance has been unjustifiably rapid.

Looking over a group of twenty specimens of sputum which were cultured on blood agar for the purpose of making vaccines, we find that eight showed the presence of Pfeiffer's bacillus, five in almost pure culture, and three mixed. These cases were clinically influenza, coryza, bronchitis, and asthma. The cultures were made during the winter of 1917-18. We mention this fact first to show that in Korea, amongst both natives and foreigners, infection with the Pfeiffer bacillus is common. However, the point we really wish to make is this: that before the epidemic came the influenza bacillus was a common parasite in respiratory infections; may it not be that some other organism plays the rôle of primary infection, while the influenza bacillus and the pneumococcus are frequently found owing to the frequency with which these organisms are carried?
The so called hog cholera bacillus, while found in almost all cases of hog cholera, has no etiological relationship to the disease, as the cause of it is a filtrable virus.

TRANSMISSION EXPERIMENTS WITH FILTRATES.

The following experiments do not lend support to the idea of a filtrable virus being the cause of the pandemic. Though few in number, they were carried out on human beings and are therefore of some significance.

Blood filtrates: Experiment A. Blood from two typical cases of influenza was collected in citrate, immediately centrifuged, and the supernatant fluid filtered through a Berkefeld "N." filter. Due to a lack of enthusiasm among the experimentists the filtrates had to be mixed, and one mil of each was given to a Korean doctor intravenously. The unfiltered bloods were also mixed; one of the writers and a Korean each received one mil of the pooled blood. The two patients from whom the blood was taken had been sick about twenty-four hours, were quite prostrated, and showed typical symptoms. The temperature of one was 104° F. and of the other 101° F. In neither case did the temperature rise any higher.

Results. The experiment we are afraid, means little. We were of course all exposed to the infection. The Korean doctor who received the filtrate came down with influenza on the third day. He was very sick for almost a week. The writer, who had taken the unfiltered blood, came down with influenza in forty-eight hours. The attack was light, although typical. The nasal secretions, which were profuse, gave a pure culture of a diphtheroid bacillus. From the laryngeal secretion an almost pure pneumococcus culture was obtained. The Korean doctor suffered from an acute bronchitis for about two weeks, but the influenza bacillus was not isolated. The Korean who had also received the unfiltered blood admitted afterwards that he had previously recovered from an attack of influenza. No symptoms developed in his case.

Experiment B. Two students who had already suffered from the disease were each given two mils of filtered blood from a typical case. The results were negative.

Experiment C. The sputum from another case was taken and thoroughly shaken with saline until a uniform suspension was made. This was not centrifuged to remove the coarser material, but the supernatant fluid was filtered. Cultures of the filtrate were sterile. Two other healthy students were each given two mils intravenously.
Result. Both of them were made definitely ill within three quarters of an hour after the injection. They reported the following symptoms: chills, vomiting, rapid pulse, headache, and pains. All symptoms gradually subsided and within six hours they had practically recovered. Apparently they suffered from an acute toxæmia.

The sputum used in this experiment did not show any influenza bacilli, but gave a mixed growth, the most prevalent colony being rather large, moist, grayish white, and opaque. This organism was seen on other plates; it is not the Micrococcus catarrhalis, although somewhat similar in morphology.

Experiment D. This was a similar experiment to the above, except that the sputum came from a different case. One man only was given two mls of the sputum filtrate; no results followed.

In all cases the filter used was a Berkefeld “N.” While these experiments are very limited they seem to show that the virus, if present in the sputum, is not capable of passing through a Berkefeld “N” filter candle. If the virus is present in the blood, the evidence is also against its passage through the filter as only one person out of four who received the filtrate developed the disease. It cannot be denied that with the epidemic raging, and the possibilities of natural infection so numerous, it was most probable that one of the four should succumb to ordinary infection. Having passed through the dangers of the epidemic as well as the fiery trials of the experiments, they considered themselves as being very refractory.

SERUM REACTIONS.

Complement Fixation Test. Samples of blood were taken from four patients who had first recovered (within one week) from acute influenza, and four samples were taken from normal individuals. The antigen consisted of a saline suspension of influenza bacilli. After many tests with these bloods it was decided that the antigen was unsatisfactory. A slight increase of antigen caused the negatives to become positive; while in a working strength good positive results could not be obtained with the supposedly positive sera. There did appear to be a slightly greater tendency to fixation of complement on the part of those who had been infected. However, in one instance a negative patient’s blood, i.e., the blood of a person who had suffered from influenza, gave as good fixation of complement as the best positive amongst the patients’ sera.

Agglutination Tests. Microscopic tests were made on the bloods used in complement fixation. The results were of the same nature;
while the patients' sera seemed to agglutinate slightly more than the normal sera, the result was not definite enough to be significant.

**Skin Test.** A heavy suspension of influenza bacilli was shaken and extracted with distilled water for two days; the bacteria were then removed by filtration and the filtrate used. Each member of a class of fifteen students was injected, $\frac{1}{2}$ mil being given intra-cutaneously. Within twenty-four hours a definite reaction occurred in all the students; there seemed to be no difference between those who had been infected and recovered, and the immunes or those who were at the time convalescing.

**Animal Inoculation.** Four guinea-pigs were inoculated intra-peritoneally with the pooled blood and pooled filtrate from two acute cases of influenza. Two pigs each received two mils of the pooled Berkefeld filtrate; the other two each received two mils of the pooled blood. Night and morning temperatures were taken daily for two weeks; nothing abnormal was recorded.

**CONCLUSIONS.**

Definite conclusions cannot be drawn from such limited work, but the results of our work and those of many others seem to indicate that (a) the etiology of pandemic influenza is still unknown; (b) that much more evidence is necessary to establish the relationship of the Pfeiffer bacillus to the infection; (c) that further experiments with filtrates of blood and secretions from acute cases are very necessary in order to determine the possibility of a filtrable virus.

**NOTE:** After the above article had been forwarded for publication an abstract was received of the work done by Drs. Nicolle and Ledlailly of the Institute Pasteur, Tunis, in the investigation of pandemic influenza. According to the abstract (*Journal of American Public Health Association*, December, 1911, page 947) they make this interesting statement: "The infecting agent seems to be a very small micro-organism, which passes through the Chamberland filter, and which is distinct from all other microbes hitherto described, and notably from the bacillus Pfeiffer. The subcutaneous injection of this organism into human beings produces the disease. Intravenous injection, however, does not convey the disease to either man or monkey." Our experiments were all intravenous, which may account for the failure to produce the disease.
RELAPSING FEVER IN FUKIEN.*

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While relapsing fever may not be an infrequent disease in China, it certainly cannot be considered one of its common diseases. Previous to the present epidemic of which we write, no “diagnosed case” has been met with in the Yenping region, Fukien, during the fifteen years of medical mission work there. We say “diagnosed case” advisedly, because, in the light of observations made during the present epidemic, and when we call to mind some of the perplexing cases of “malaria” which have not yielded to quinine treatment in the past, we believe that some of these cases may have been relapsing fever. We should add that careful blood examinations were not made in these doubtful cases.

Since June 15, 1918, until the present date, August 15, 1918, there have been between thirty-five and forty cases in the hospital and they are still coming. At one time we had as high as eighteen cases in, each representing different stages of the disease. All the patients so far have been northern soldiers, and, with one or two exceptions all have recently arrived in Yenping from Chang Chow (泉州) prefecture of Fukien, travelling via Foochow. One very sick soldier now in the hospital has been stationed in Yenping for the past three years, but he reports that a company of the newly-arrived troops were billeted in the same quarters with him, and that some of them were suffering from the same sickness. From the history of these men we are led to believe that they became infected somewhere between here and Foochow, most likely at Cui Kau or up-river from there. We draw our conclusions from the fact that none of them had his primary attack until after arriving in Yenping, and that in most cases the length of time that elapsed from the day they left Cui Kau until they had their first attack was from six to nine days. Of course the cases that are coming in now received their infection from the first victims. Two cases have undoubtedly received their infection while in the hospital nursing sick comrades. One of these was nursing a case of relapsing fever, but the other was looking after a patient with eye disease. The latter, however, was more or less intimately associated with cases of relapsing fever. None of the regular hospital staff has contracted the disease, although all have been constantly

* A paper read before the Fukien Medical Society at its Annual Meeting, August, 1918, at Kuliang.
attending the serious cases and have used only ordinary preventative measures.

As a rule, in most of our cases the symptoms were similar to those given in classical, text-book descriptions of the disease. In a number of cases, however, the symptoms differed somewhat from the usual, and of these symptoms we feel that a brief description may be of interest.

**Fever.**—In addition to the typical fever curve, starting with a chill and ending by crisis, thirteen of our cases had subsequent chills during the stage of high fever. This may be a malarial complication in some of the cases, but we think not in all. The chills occurred frequently, every day and in some of the cases twice a day, but they were shorter in duration, and not so severe, as the usual malarial chill. We did not find the malarial parasite in the blood of any of these cases. The chills had little or no effect upon the fever curve.

**Nervous Symptoms.**—Aside from the typical fever course the nervous symptoms were found to be the most conspicuous, although not always the same in different cases. Severe throbbing headache was constant during the febrile stage. Terrific shooting muscular pains were prominent in a large number of our cases. The most frequent site of attack was the lower extremities, but the abdominal muscles were attacked in three of the cases. Three of our cases had distinct convulsions, and more than half were delirious during the height of the paroxysm. Restlessness and a worried facial expression, resembling that of severe surgical shock, were frequently seen. In fact, if one were to see for the first time some of these cases during the height of an attack, and not know what the trouble was, a very unfavorable prognosis would invariably be made, so alarming are the symptoms. Between attacks vertigo, depression, and great weakness are the usual symptoms for the first few days, and many complain of a persistence of the muscular pain. After three or four days the patient is usually able to get up and begins to feel fine, and then is apt to have another attack. Many of our patients felt so well between attacks that they returned to their work, only to be brought back again in a day or two in a most distressing condition.

**Gastro-intestinal Symptoms.**—Coated tongue is the rule, and appetite is lost. Nausea occurred in practically all of our cases. Severe vomiting occurred in six and persisted all through the febrile attack. Constipation is usual.
Liver and Spleen.—The text-books mention enlarged and tender spleen and liver as cardinal symptoms, but we were unable to verify the statements in our cases. All have complained, however, of epigastric pain and tenderness, which may account for, or had something to do with, the constant nausea and vomiting.

Skin.—Three of the cases developed a rose-colored rash over the abdominal wall and lower extremities. Two-thirds of the cases had slight icterus, noticed particularly in the conjunctiva.

Blood.—A stained specimen taken during the paroxysm has shown the spirillum or spirochete in every case. We have been unable to find the organism in any of the cases during the afebrile state. In severe cases we have found one organism in every three fields. We have used only Wright’s and Leishman’s stains and have been greatly disappointed to find that after a few days the organisms were not distinguishable owing to fading of the stains.

As to prognosis, no deaths have occurred so far, and the only complication that has occurred during convalescence has been otitis media in one of the cases, three weeks after recovery. Aside from this case, convalescence has been rapid after the attacks ceased. Thus far no cases have developed more than three attacks, most of them have had only two, and three have had only one. The text-books report a mortality of from 2% to 10%, and in a severe form, called the bilious type of the disease, it reaches 60%. Fortunately we had no cases of this type.

With regard to treatment, recent observers speak in the highest terms of the value of salvarsan and allied preparations in the treatment of relapsing fever. Some even go so far as to describe it as a specific. Others, while recognizing its extreme value in a large percentage of cases, report many failures. Unfortunately, we have been unable to procure any of these products at the present time and so are unable to report on their efficiency. We have been obliged to fall back on expectant treatment and, so far as final results are concerned, we are led to believe that it is as good a line of treatment as any found thus far. The disease is a self-eliminating one. However, if salvarsan will relieve the distressing symptoms and cut short an attack in even half the cases, it will be an invaluable addition to our resources in treating the disease. We have used salicylates, aspirin, and morphine to relieve the muscular pain. Cold sponge baths have been used with good results in controlling the fever, and were gratefully appreciated by the patients.
INTRAVENOUS INJECTIONS OF TYPHOID VACCINE IN THE TREATMENT OF VARIOUS DISEASES.

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The use of typhoid vaccine, given intravenously in the treatment of diseases and morbid conditions other than typhoid fever, was suggested to the author by certain reports appearing in current medical literature.*

All the patients referred to in this article were treated at the Canton Hospital, except two (C.C.C., A. and C.C.C., B.) which were treated at the Canton Christian College.

At first, fresh vaccine was purchased such as is used for typhoid vaccination. The expense of this, however, proved to be such a drawback to its general use that some old vaccine was tried, that is, some that had passed the time limit marked on the container. The reaction and the beneficial effect of this seemed to be identical with the fresh specimen. Since then practically all the vaccine used was furnished by the firm of Burroughs, Wellcome & Co., of Shanghai, which generously provided me with all the "expired" vaccine that I required. Thus the first batch was labeled "not to be used after December 25th, 1917." This was received in January, 1918, and was used for six months without any apparent deterioration. Later, other lots of the vaccine were received.

The solution for injection was prepared by mixing the contents of an ampule of typhoid vaccine with sterile normal saline solution in such proportion that one mil should contain 100,000,000 bacilli. This was then kept in a sterile glass bottle and used as occasion demanded. No deterioration was evident, even after a week. The initial dose was generally sixty to seventy million bacilli; afterwards the quantity was increased by ten million in each injection till as many as 100,000,000 were given at a dose. An ordinary hypodermic needle was used and the solution was injected in a vein at the elbow or forearm, or in infants in the external jugular vein. Not a single case was encountered in which it was necessary to cut down on the vein. After the injection there was a chill in from half to one hour, followed by

fever which persisted from four to twelve hours causing headache and malaise. In a few cases there was fever for two or three days. In two cases we have seen serious symptoms following the injection, but in the series here reported nothing alarming was noted although more than 200 injections were given. Injections were given every three or four days, or at longer intervals when there was a tendency to relapse.

The conditions treated by typhoid injections may be summarised as follows. There were altogether fifty-one cases: acute arthritis, 4 cases; rheumatic fever, 1 case; chronic arthritis, 16 cases; gonorrhoeal arthritis, 5 cases; syphilitic arthritis, 1 case; neuralgic pains, 12 cases; psoriasis, 5 cases; lichen planus, 2 cases; eczema, 4 cases; erythema induratum, 1 case. Total, 51 cases.

**ACUTE ARTHRITIS.**

There were four cases diagnosed as acute arthritis, Nos. 18/1151, 18/1187, 18/1285, and C.C.C., B. Three of the patients were male, and one female. One case was complicated with malaria. In another the phalangeal joints were affected; salicylates were given with some benefit, but complete relief followed one injection of vaccine. In another case the shoulder joints and one knee were painful; sodium salicylate and aspirin gave some relief, but after five injections of vaccine the knee and one shoulder were free from pain; only one shoulder joint remained unimproved. The other two cases were completely relieved by doses of vaccine.

While in these cases salicylates were given in addition to the vaccine their usefulness seemed to be limited to a certain degree of improvement only, whereas the injection of vaccine was followed in a few hours by marked relief and seemed to be the chief factor in bringing about a complete cure.

**RHEUMATIC FEVER.**

Only one case of rheumatic fever was treated, No. 17/1434, a young girl with heart complications and a septic temperature. Injections were followed by marked relief of pains, but the condition relapsed after each injection. The patient had been sick for seven months and left the hospital against advice, before she was completely cured.

**CHRONIC ARTHRITIS.**

Sixteen cases diagnosed as chronic arthritis were treated with the vaccine, viz., Nos. 17/1025, 187, 18/150, 18/187, 18/464, 18/637, 18/663, 18/706, 18/760, 18/775, 18/835, 18/876, 18/909, 18/957, 18/1015, 18/1282. Of these patients, four were female and twelve male.
Two gave a history of syphilis and three of gonorrhoea, although in no case did either of these diseases seem to be a causative factor of the arthritis. In three cases only one joint was affected, the knee in two, and the hip in one. In thirteen cases two or more joints were involved. Four of the patients were given potassium iodide, and nine were given some salicylate preparation. The benefit from these drugs was only partial and the immediate relief afforded by the vaccine injections seems to indicate its influence on the final result. Two cases were discharged cured, seven were very much improved, and seven showed some improvement. In every case the initial injection of vaccine gave marked temporary relief. Several patients with stiff or ankylosed joints required chloroform anesthesia to permit the breaking down of adhesions. The pain, however, was relieved by the vaccine.

GONORRHOEAL ARTHRITIS.

Under this heading five cases were treated with typhoid vaccine, Nos. 17/1432, 17/1522, 17/1634, 18/776, 18/989. Only one of the patients was a female. In all the cases, but one, more than one joint was involved. Immediate relief followed the injections in every case. One patient was considered cured, and the other four much improved. In several cases only the first three or four injections gave relief and subsequent doses gave little benefit. In one case gonorrhœal phylacogen was given without immediate relief. The vaccine caused all symptoms to improve.

SYPHILITIC ARTHRITIS.

Disp. No. 18/1618. This was the only case of syphilitic arthritis in which vaccine was used.

NEURALGIC PAINS.

There were twelve of these cases, Nos. 17/1614, 18/589, 18/643, 18/796, 18/799, 18/843, 18/1133, 18/1134, 18/1201, 18/1210, 18/1215. The first was a case of inoperable cancer of the breast; the patient suffered intense pains, which nothing seemed able to alleviate. After the dose of vaccine the patient slept like a child. The pain recurred and ultimately the vaccine lost its effectiveness. Nos. 18/589, 18/796, 18/799, 18/843 were all men with gun-shot injuries involving nerves. After healing of the wounds, neuralgic pains persisted, requiring morphine to alleviate them. Vaccine injections brought rapid and permanent relief. No. 18/463, was a case of neuralgia of the chest due to fibroid phthisis. In No. 18/1133 the pains were due to pressure...
of a perinephritic abscess and in 18/1215 the pains were caused by osteosarcomata. In all these cases the pains were greatly relieved. No. 18/1201 had one injection of vaccine to relieve the severe pain from an inoperable sarcoma of the neck. No relief was afforded. In 18/1210 decayed teeth were found to be the cause of facial neuralgia. Before the teeth were extracted considerable relief was given by an injection of vaccine. No. 18/1134 was a case of headache due to gumma. Vaccine was given by mistake before syphilitic treatment ultimately produced a cure. The most severe neuralgic case was No. 18/877, suffering with tic douloureux. The patient, a girl of 22, had suffered for more than a year. The paroxysms came every ten minutes causing the patient to seize her head in her hands. Five injections of vaccine were given in ten days. For 24 hours after each injection there was complete relief of all pains, afterward slight headache began to be felt. The condition returned with severity six months later.

**PSORIASIS.**

Nos. 17/1565, 18/36, 18/177, 18/1048 and C.C.C., A. were all pronounced cases of psoriasis, and in no affection was the beneficial result of vaccine more striking. As a rule, two or three injections were given, with a marked relief of itching and fading of lesions, and the cure was greatly hastened by the application of a weak chrysarobin ointment 2%—4%. All the cases were temporarily relieved, but relapses occurred sooner or later.

**LIChEN PLANUS.**

Cases Nos. 18/142 and 18/711 were diagnosed as lichen planus. There was considerable itching and elevated purplish areas. In both cases the elevated areas became flattened and disappeared, and the itching was greatly relieved, though there was return of itching later.

**ECZEMA.**

Cases No. 18/432, 18/696, Disp. 18/1083, and 18/1146. Three of these patients were adults with chronic dry eczema. Vaccine caused marked temporary relief, but the itching recurred in two or three days. The other case was that of an infant whose face was covered with a moist eczema. The body also was greatly involved. Injections caused a slight temporary improvement only.

**ERYTHEMA INDURATUM.**

Case No. 18/481. Hard painful nodules on limbs. Various forms of treatment were tried without avail, but after two injections of vaccine the indurated areas rapidly healed and there was no recurrence.
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CONCLUSIONS.

1. Commercial typhoid vaccine, or typhoid paratyphoid vaccine, prepared for prophylactic inoculations, has unique and very marked therapeutic properties if injected intravenously.

2. This vaccine appears to lose none of its therapeutic efficacy if diluted with saline solution, or if given as much as six months after the date of expiration marked on the container.

3. In acute arthritis, associated with little or no fever, injections of vaccine will generally complete a cure which has been only partially accomplished by salicylates, aspirin, etc.

4. In rheumatic fever temporary amelioration of symptoms, at the least, may be expected by the use of vaccine treatment.

5. In chronic arthritis, whether it be rheumatoid arthritis, or chronic monarticular affections, the pain is always temporarily and usually permanently relieved, and swelling and crepitus in joints may be greatly decreased. In these chronic conditions the vaccine alone is not sufficient to complete a cure, but it is a most valuable adjunct to other well-known measures of treatment such as the use of salicylates, hot air treatment, electricity, massage, etc.

6. In gonorrhœal arthritis typhoid vaccine appears to be as effective as gonorrhœal vaccine, and in conjunction with other measures is a valuable addition to our therapeutic armamentarium.

7. In syphilitic affections typhoid vaccine is effective in relieving pain, though it is not in any sense equal to the recognized antisyphilitic remedies.

8. In various forms of neuralgic pain, which can otherwise only be relieved by morphine, typhoid vaccine is most effectual, e.g., the pains of carcinoma or sarcoma, and the pains following gunshot wounds with injury of nerves. Not only is the pain temporarily relieved, but it may be permanently checked after two or more injections. In tic douloureux typhoid vaccine may act far more effectively than morphine.

9. Psoriasis can be temporarily cured by vaccine.

11. Lichen planus can be temporarily cured by vaccine.

12. The itching of eczema may be greatly relieved temporarily by vaccine.

13. Erythema induratum may be cured by the vaccine.
CASE HISTORIES.

I. ACUTE ARTHRITIS.

No. 18/1151. Male, aged 56. Began to have attacks of acute arthritis five years ago. Present attack lasted two months. Improved, but has relapsed again. Apparently of gouty nature. Later developed pain in phalangeal joints; was given sod. salicylate and improved, but after one injection of vaccine the pains in joints were completely relieved. Result, cured.

No. 17/1187. Male, aged 25. Pains in both shoulders and right knee, lasting two weeks. Received five injections of vaccine in fourteen days. Left shoulder and knee recovered. Right shoulder not much improved. Result, improved.

No. 18/1285. Female, aged 26. Had malaria also. Two months ago began to have pains in shoulders. Systolic murmur heard over heart. Was given salicylates. Two injections of vaccine in seven days were followed by immediate relief. Result, cured.

C.C.C., B. Male, aged 48. Duration of disease about two weeks; pain and swelling of shoulder. Relieved in part by aspirin. After one injection of vaccine complete relief followed.

II. CHRONIC RHEUMATIC FEVER.

No. 17/1434. Patient, Chinese female, aged 20. Disease began seven months prior to admission and there have been several exacerbations since then. Pains come in paroxysms accompanied by severe hyperpyrexia. Knees swollen; soreness and stiffness of all joints. Received six injections of vaccine in twenty-four days. There was severe reaction with marked relief of all symptoms, but a tendency to relapse. Refused further treatment. Result, improved.

III. CHRONIC ARTHRITIS.

No. 18/464. Male, aged 21. Marked rigidity of four limbs and spine, especially the spine. Pain not marked. Duration of disease three years. Was given sodium salicylate and massage. Received nine injections of vaccine in sixty-seven days. Slight improvement of limbs, but rigidity of spine little improved. Result, improved.

No. 18/637. Male, aged 46. Began ten years ago to have pains in knees and ankles which were worse in the spring. Patient unable to walk; both knees flexed and rigid. Marked crepitus of joints. Legs were forcibly straightened under chloroform. Patient received eight injections of vaccine in two months. Was given salicylates and potassium iodide. The vaccine gave immediate relief. Patient became free from pain. No crepitus in joints. Able to walk about freely. Result, cure.

No. 18/663. Male, aged 19. Pain began three years ago. At present cannot extend legs. Knees swollen and painful. Ankles and shoulders also affected. Given sodium salicylate. Received ten injections of vaccine in thirty-nine days. After some injections there was immediate relief, but not after others. Stiffness and some pain still in knees. No pain in shoulder or ankles. Result, improved.

No. 18/706. Male, aged 53. Pains in ankle thirty years ago. Since then several attacks of arthritis. At present marked rigidity of neck. Pains in back and hips. Received two injections of vaccine in one month. Immediate relief. Also given salicylates which also relieved. Result, improved.

No. 17/1025. Chinese, male, aged 20. Had gonorrhoea with phimosis. Also beriberi, with pain and swelling in ankle, knee, hip, elbow, and phalangeal joints, for two months. Pains remained unimproved after recovery from gonorrhoea. Two injections of mercury gave slight temporary relief. Sod. salicylate had no beneficial effect. Received five injections of typhoid vaccine in sixteen days. All
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pains and stiffness entirely disappeared. Each injection followed by very great relief in a few hours. Left hospital feeling well.

No. 18/7. Male, aged 20. Pains of knees and ankle joints, also weakness. Duration over one year. Received a few doses of sod. salicylate. After one injection of vaccine he left the following day, saying that he was free from pain and stiffness. Result, much improved.

No. 18/150. Female, aged 42. First attack of rheumatism in knee twenty-seven years ago. Similar attack three years ago. Present attack began nine months ago with severe pain. The right knee stiff, flexed, swollen and painful. Cannot walk. Limb straightened under chloroform. Placed on splint. Five injections of vaccine given in sixty-three days. Immediate relief of pain and decrease of stiffness. Patient able to walk with a stick. Result, very much improved.

No. 18/187. Female, aged 32. About five months ago, following birth of child, developed severe pains in right hip joint. At present the right hip and knee markedly flexed. Attempts to extend limbs cause severe pains. Limb straightened under chloroform. Received four injections of vaccine in fifteen days. Marked relief of pain after each injection. Result, ankylosis still present and slight pain. Improved.

No. 18/760. American, female. Had inflammatory rheumatism thirteen years ago, followed by two subsequent attacks of the same disease. Free from pains for ten years, but four years ago had a severe attack affecting all joints. Was given rheumatism phylacogen, and was greatly relieved, but pains returned in two months. Went to Battle Creek Sanitarium in the United States and recovered in about three and a half months. Return of trouble began five months ago, the pain affecting the ankles, shoulders, wrists, fingers, and toes. Potassium iodide, salicylates, etc., were given without marked relief. Received seven injections of vaccine in one month. Each one was followed by marked relief, and at the end of treatment patient was free from pains, but with slight stiffness remaining. She remarked that the intravenous injections of vaccine were much less painful and distressing than the subcutaneous injections of phylacogen. Result, very much improved.

No. 18/775. Female, aged 42. Swelling and pain of right knee for over one year. Pains in right arm for ten days. Knee straightened under chloroform and placed in plaster cast. Three injections of vaccine given in thirteen days. Each gave relief and patient left hospital free from pain. Swelling still present in knee. Result, much improved.

No. 18/835. Male, aged 42. Disease began four years ago with pains in right foot. Marked ankylosis of joint. Received five injections of vaccine in three weeks. Very marked relief of pain and rigidity. Result, improved.

No. 18/876. Disease began six months ago, pains in left hip. Worse in wet weather. Ten days ago the pains were so severe patient could not walk. Extension applied without relief. Received one injection of vaccine which was followed by great relief, but there was some return of pain in two days. Refused further treatment. Result, much improved.

No. 18/909. Male, aged 21. Developed pains in left hip six months ago, then left knee was affected and later the right knee. Eight injections in fifty days. The first three injections gave marked relief, but the later injections very little. Joints forcibly extended several times under chloroform anesthesia. Result, slightly improved.

No. 18/957. Male, aged 38. Sixteen months ago developed pain in right hip and then in both knees. Received two injections of vaccine in six days. Was also given salicylate and potassium iodide. Some pains still present. Result, improved.
No. 18/1015. Male, aged 30. Six years ago had fever and then gradual swelling of left knee. Recovered, but two years ago pain and swelling returned, and knee gradually became flexed at an acute angle. Painful. Received four injections of typhoid vaccine in five weeks. Pain disappeared. Given chloroform twice in order to straighten limb, after which he could walk quite readily. Result, much improved.

No. 18/1282. Male, aged 16. Disease began two months ago with swelling of joints of legs and fingers. At present joints are very painful. Received one injection of vaccine which was followed by moderate relief.

No. 17/1432. Chinese, female, aged 33. Patient has a leucorrhoeal discharge in which gonococci can be demonstrated. Also has severe pyorrhoea. Had an attack of arthritis three years ago. Present attack began three months ago, with pain and swelling of both ankles. Can neither stand nor walk. Cannot extend arms because of soreness in elbow joints. Was given aspirin and sodium salicylate, which gave some relief. Received five injections of vaccine in eighteen days. Each injection accompanied by marked immediate relief. After three injections there were practically no pains. Later there was some return of pain in one ankle. Result, much improved.

No. 17/1522. Male, aged 30. Had gonorrhoea five months ago, followed by pains in right heel, both knees, then in joints of arms, and the back became painful. Was given sodium salicylate and potassium iodide. Received seven injections of vaccine in twenty-one days. Nine days after last injection great improvement was noted in all joints. Left knee still swollen. Immediate relief followed several of the injections. Result, very much improved.

No. 17/1634. Male, aged 24. Patient suffered from syphilis as well as gonorrhoea. Had a chancre and bubo. Pains in right knee, left elbow, left shoulder. Treated with salicylates, mercury, and potassium iodide for two weeks without any relief. Gonococcus phyllocogen given without marked relief. Received five injections of vaccine. Several of these gave marked temporary relief. Final result, considerable relief. Very much improved.

No. 18/777. Male, aged 30. Suffered with pains in joints for more than four weeks. A month’s treatment at hospital gave little relief. Afterwards he received five injections of vaccine in two months. There was immediate relief, and patient became very much better. Result, very much improved.

No. 18/989. Male, aged 27. Developed pains in right elbow and wrist, following gonorrhoea. Salicylates gave slight relief. Three injections of vaccine in thirteen days were followed by rapid improvement, with loss of pain and swelling. Result, recovered.

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No. 18/1618. Patient had three injections of novarsenobenzol with relief of symptoms. Two weeks after last injection the pains returned, and he was given two injections of vaccine in three days, with relief of all pain. Result, improved.

No. 17/1614. Neuralgia from cancer of breast. Patient aged 51. Inoperable carcinoma of left breast, oedema of arm, metastasis to right breast. Pain so excruciating patient could not sleep. Received five injections in eleven days. Very great relief of pain afforded, and patient slept for first time for weeks. Result, improved.

No. 18/589. Neuralgic pains in right arm following gunshot wounds. Male, aged 42. Shot through right forearm, both bones fractured. After knitting of
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bones and closure of wounds patient suffered severe pains in arm, requiring hypodermic injections of morphine. Received two injections of vaccine in seven days which afforded complete relief of pains without recurrence. Result, recovered.

No. 18/643. Pleuritic pains in fibroid tuberculosis. Female, aged 48. The left chest is flattened and consolidated, marked contracture. Patient complains of very severe pleuritic pains extending into abdomen. Tr. iodine locally applied and strapping gave no relief. Potassium iodide was given without effect. Four injections of vaccine given in fourteen days. Relief of pain immediate. Left hospital with almost no pains, but condition of chest unchanged. Result, much improved.

No. 18/796. Neuralgic pains after gunshot wounds. Patient was wounded twenty-four days before admission, the bullet entering near third dorsal vertebra and escaping at third interspace on right side. Paralysis of legs. Motion returned to limbs, able to walk. Severe pains in wounds, although these had healed. Received two injections of vaccine in four days, after which all pains disappeared. Result, cured.

No. 18/799. Neuralgic pains following bullet wound. Male, aged 30. Patient was wounded by bullet entering left shoulder and escaping in the midline of neck anteriorly. Healing of wound complete. Shoulder, stiff and painful. No improvement after twenty-five days' treatment. Received four injections of vaccine in nineteen days. Each injection followed by marked relief. Pain entirely relieved and stiffness much less. Result, cured.

No. 18/843. Bullet wound of right thigh. Male. After healing of wound there remained severe tenderness and pain in calf of leg. Received six injections of vaccine in thirty-three days with marked relief after each, but effects were not permanent. Result, improved.

No. 18/1133. Neuralgic pains accompanying pernephritic abscess. Male, aged 33. A month ago patient began to have pains in back and stiffness of left hip joint. Received one injection of vaccine. Pains in left limb disappeared, and were much less severe in back. Felt so much better that he refused operation. Returned later for operation. Result, improved.

No. 18/1134. Syphilitic neuralgia. Female, aged 36. Severe pains through head, for last two months. Depressed scar on forehead. History of syphilis. Received two injections of vaccine in three days, but potassium iodide was started on day before vaccine, followed by relief. Later, novarsenobenzol was given with complete relief of all pain. Result, improved by vaccine.


No. 18/1210. Facial neuralgia. Male, aged 27. Pains in face developed six months ago, with numbness, radiating over head and neck. Eiglit years ago had an attack of earache with headache. Had an injection of typhoid vaccine which was followed by moderate relief. Later, two decayed teeth were removed with subsequent complete relief of pain.

No. 18/1215. Pains caused by multiple osteo-sarcoma. Female, aged 21. Swellings of left hand and dorsal portions of both feet, beginning fifteen months ago. Severe tenderness and pain. Knee joint also painful. Three injections of vaccine in seven days gave much relief of pain and tenderness. Knee joint entirely relieved. Operation performed later showed tumors to be osteo-sarcomata.

No. 18/877. Tic douloureux. Female, aged 20. More than a year ago developed attacks of lancinating pain beginning in front of ear and radiating over head. On admission attacks occurred every ten minutes, patient seizing head in hands because of severe pain. Received five injections of vaccine in ten days. Prompt relief. Slight recurrence on the second day after the injection. Left very
much improved. She returned to the hospital six months later (Hist. 18/1923) with return of the severe symptoms. After leaving the hospital the last time, she had very slight attacks of pain three or four times a day till two weeks ago when pains returned. One injection of vaccine was given with slight relief. Operation was decided on but patient left hospital.

VII. PSORIASIS.

No. 17/1565. Female, aged 17. Skin eruption began to appear four years ago on dorsum of both feet, then on fingers, more recently on elbows and knees. Treated one month in dispensary without improvement. Received five injections of vaccine in twelve days, also applications of two per cent chrysarobin ointment. All signs of disease disappeared except an occasional spot; the itching was quite relieved. There was a slight relapse three months later with itching of feet. Relieved by further injections. Result, very much improved.

No. 18/36. Female, aged 17. Lesions on face and left leg, itching. Received two injections of vaccine. Lesions paler and less itching. Treatment incomplete. Improved.

No. 18/177. Male, aged 18. About ten years ago an itching eruption appeared on legs; last year it appeared on neck and temples. Treated for two weeks without improvement. One injection of typhoid vaccine caused all itching to cease. Treatment incomplete. Result, improved.

No. 18/1048. Male, aged 42. Patient gives history of syphilis. The body is covered with a scaly psoriasis with itching eruption. After a month's syphilitic treatment patient showed no improvement. Ten injections of vaccine in 26 days, with application of four per cent ung. chrysarobin. Lesions have almost disappeared and itching has ceased.

C. C. C., A. Male, aged 31. Duration of disease 19 years. Eruption appeared first on the head, then on body, face, etc. Skin never entirely free, although every kind of treatment has been tried. Patient received five injections of vaccine in ten days, also applications of three per cent chrysarobin ointment. All signs of disease entirely disappeared, except one small spot on leg. Relapse after two months. Result, temporary cure.

VIII. LICHEN PLANUS.

No. 18/142. Female, aged 19. Several months ago pimples appeared on hip; these increased and now there are numerous small flattened papules, purplish in color, over face, legs, back, soles of feet, and palms of hands. Slight itching. Potassium iodide and mercury gave no relief. Six injections of vaccine given in fifteen days. Itching decreased after each injection. Nodules became flattened and changed in color to that of normal skin. Result, very much improved.

No. 18/711. Female, aged 29. Purplish papules, slightly elevated, on face, arms, and legs; much itching. Local applications gave no relief. Received twenty-six injections of vaccine in three months. Areas all flattened. Itching entirely relieved, but it tended to recur between injections. Result, much improved.

IX. ECZEMA.

No. 18/432. Female, aged 40. Has had severe itching on dorsum of foot, also hand. Skin everywhere rough and thickened. Duration of disease seven years. Received four injections of vaccine in twelve days. Itching has almost entirely ceased. Result, recovered.

No. 18/696. Female, aged 52. Severe itching of both feet and arms. Forearms the worst. Unable to sleep. Duration about eight months. Local applications gave little relief. Received two injections of vaccine in five days.
Tokelau (Tinea Imbricata) in Szechwan.

This caused immediate relief, which continued for three days after the last treatment and the patient then went home. Result, much improved.

Disp. No. 18/1083. Male, aged two years. Following vaccination 20 months ago the baby developed severe eczema of face and scalp, and an eruption resembling psoriasis on extensor surfaces of arms and legs. All previous treatment of no avail. Received eleven injections of vaccine in jugular vein during three months. Each injection caused temporary improvement of face. The eruption on body almost disappeared. The condition relapsed if no injections were given for a few weeks. Result, improved.

No. 18/1146. Female, aged 31. Began to feel itching of left leg about five months ago. After two weeks' treatment received no relief. Had six injections of vaccine and after each there was marked decrease of itching. Constant tendency to relapse. Result, much improved.

X. Erythema Induratum.

No. 18/481. Female, aged 16. Syphilis, mitral stenosis. About three months ago there appeared on the legs indurated areas which were very painful and with a tendency to break down. Potassium iodide and ung. hydrarg. gave no relief. Received two injections of vaccine in eight days which caused rapid and permanent recovery. Result, cured.

Tokelau (Tinea Imbricata) in Szechwan.

H. Jouveau-Dubreuil, M.D., Institut Bactériologique de Chengtu.

Tokelau, or tinea imbricata, is considered to be a disease peculiar to warm and humid countries, and is found chiefly, so say certain authors, in islands and in districts near the sea. It is certainly common in the archipelagoes of the Pacific, where it was noted and described for the first time, and in the Malayan peninsula. In the south of India, in Ceylon, and in Indo-China, where we often had occasion to observe it, it is less frequent. As regards China, in his work on Tropical Diseases, Manson tells us: "Strictly confined to hot climates . . . . it has been found to extend . . . . northward as far as Foochow and Formosa on the coast of China." Jefferys and Maxwell, in their Diseases of China, do not give much more accurate information: "Tinea imbricata," they say, "is confined to hot countries. Its distribution in China is difficult to arrive at, and we have no sufficient data to go on. It does not extend in a northerly direction further than a line parallel with the north of Formosa, but is probably found with frequency south of the Tropic of Cancer. In South Formosa it is a fairly common disease and we are never long without a case in the hospital of Tainan."

With such comments in mind, it is peculiarly interesting to mark the presence, and even the comparative frequency, of the disease in
Szechwan, which is a province very far from the sea and where the climate is temperate. Chengtu, its capital, is situated Lat. 31°. Its mean temperature during the three summer months is from 24° C. to 25° C. (75° F. to 77° F.); during the winter, from 5° C. to 6° C. (41° F. to 42.8° F.), giving an average for the year of 16° C. (60.8° F.). The climate, therefore, can be considered very mild, even cold during some months. Now cases of indigenous tokelau are far from being rare, and two or three cases are treated in the French Hospital each year. This gives the disease a geographical and climatic range far more extended than was formerly believed.

It is important to know, however, if its appearance in this region is of recent date, or whether it has always existed here. There are indeed certain writers who think that this mycotic disease, formerly restricted to certain islands of the Pacific, reached the continent in the course of the last century when commercial relations were considerably multiplied, and that now it continues to spread further and further to more extensive regions. Its presence in Szechwan seems to prove that temperate regions are not safe from its visits.

The disease is evidently contagious, but how is it communicated from a sick man to a man in perfect health? Simple contact is probably not sufficient; it seems necessary that for actual receptivity there must be inoculation either by scratching or through an open sore. As a matter of fact, taking the last three cases which we have had under observation, the first patient, a small hawker, caught it eight years ago, probably in the bed of a hotel which, it should be noted, he frequently changed. He cannot tell in what circumstances he caught the disease, for he has never been in contact, as far as he knows, with anyone who was affected by it.

The second patient, an assistant to the hawker just mentioned, caught it from him by sleeping constantly in the same bed and always completely naked, as is the habit with people of the poorer classes in Szechwan. In this case it is very interesting to note that contagion only took place after the men had lived together for eighteen months.

The third case was that of a coal merchant. He contracted the disease seven years ago in the course of his itineraries from inn to inn. For four years at night time he has slept with his brother, both quite naked; the latter has remained in perfect health.

It is known that in individuals who have been afflicted with the disease for several years, in spite of the fact that nine-tenths of the skin is covered with infected scales, certain regions remain free and seem to enjoy an absolute immunity. The sick man scratches himself
almost continually, his body is covered with small open places due to the action of his nails, yet the parts which remain healthy do not become the seat of fresh inoculations; but they are affected by neighbourhood, and diminish in size very slowly as the infected area increases.

The cases which we have seen were of several years' duration; consequently, so far as they are concerned, the disease had time to extend over the surface of the whole body. At this stage, the characteristic "cockades" are rarely found; and in several places, more particularly on the face, their aspect does not permit of a diagnosis at the first inspection. A most striking feature of the disease—specially clear on the breast, the sides, and the neck—are the very irregular "arabesques" formed by semi-circular patches touching each other on their extremities, thus making an extremely complicated design of curved lines. These lines are more or less continuous, sometimes long, but they never cross each other. When one patch seems about to meet another, it always stops short at a certain distance. The size is very variable; the smallest are not more than two cm. in diameter, the largest nearly twenty. They are not very often concentric; when they are, there are generally merely two curves, in rare cases three, which appear to have the same centre.

When the scales are long, the design is not easily distinguished, but after the first treatment, when they have fallen off, it becomes perfectly visible, and at the same time the rash which marks the root of the growth also appears. In very old cases, when the diagnosis presents difficulties, an application of chrysophanic ointment will remove any doubt.

However extensive and chronic the disease may be, there are always portions of the skin which remain unaffected. These healthy parts, owing to the progress of the disease in a constant succession of outward curves, have their outlines clearly defined, like the promontories and capes of an island, and are most distinctly marked by the very abrupt change from the affected portions of the skin. In two cases we have observed that the skin at this point shewed a very pronounced hyperchromia, contrasting very strongly with the achromia of the affected parts.

Jefferys and Maxwell, in Diseases of China, who describe the disease as it occurs in Formosa, state that it never attacks the face. In Szechwan, on the contrary, we always find the face more or less covered with scales. Most frequently it is covered by a light, powdery desquamation, especially on the eyebrows, cheeks, upper lip, and to

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the edges of the eyelids. But there are other cases in which very
typical circles are found, similar to those which form on the rest of the
body. In no case is there any falling out of the eyebrows or beard.

The skin covered with hair remains generally not only unaffected
but the scales even stop at about half a centimeter from the point
where hair commences, thus leaving a band of perfectly healthy skin.
However, it is not always so; we have seen a case in which the back of
the head was badly attacked by scales, and where under microscopic
examination the presence of the parasite was shown. There was no
alopecia.

The skin of the hands and feet becomes coarser, depressed, and as
if laminated at certain points.

We have never found the nails striated or changed in any manner
whatever, but the folds of skin which surround them are quilted with
epidermic cells full of parasites.

Itching is incessant, but is less severe than in cases of scabies, in
which many striae caused by scratching, secondary infections, and other
lesions are observed.

The general state of health of the patients was not altered; on the
contrary, all the patients under our charge were robust and in excellent
health. They looked on their complaint rather as an unpleasantness
than as a cause of suffering, and did not consider themselves worse
off than those afflicted with scabies of which so many cases are
found here. In this province, where the temperature necessitates the
wearing of clothes even in the summer, in cases of tinea imbricata only
the lesions on the face are apparent, and as these are rare and much
less visible than those on the body, afflicted persons are not inconve-
nienced by the repulsive appearance given by the disease in tropical
countries.

On examination under the microscope of an epidermic scale from a
diseased portion of the skin, when care is taken to place the side which
adjoined the skin uppermost and it is moistened in a solution of
liquor potassæ, immediately the bushy and packed net-work formation
of the mycelium becomes apparent. The filaments are made up of
successive segments more or less rectangular, and are fairly regular
as regards shape and dimensions. The sides have a double contour.

In the cases under investigation, the evolution at first was rapid
but grew less active after the first year. At the same time there was
never a period when the disease either stopped or showed signs of
retrogression. It progressed very slowly but relentlessly towards the
complete invasion of the skin.
For treatment, we have used chrysophanic acid ointment, ten per cent, mixed with vaseline. It is the only therapeutic agent which we have employed, because it is truly specific. At the end of two applications, given at an interval of about four days, the scales drop off, leaving only a fine red tracery showing where they had been. At the end of another week even these marks completely disappear and the skin resumes a normal healthy aspect. The achromia persists, however, for some time, and it is easy to distinguish the parts which were affected from the rest of the skin. The patient is very satisfied, as he believes that in fifteen days he has obtained the cure of a disease which has worried him for years.

If the treatment is stopped at this point the lesions reappear where they were before, except that on the back they are much more rare and scattered. This happens very often for, in spite of all advice to the contrary, these patients usually leave the hospital at the end of a very short time, say about ten or twenty days. This recrudescence does not occur at the points where the scales were formerly implanted. The pattern which now appears is entirely different from the old form. There are now circles which, at the outset, are many in number but quite distinct from each other; at certain points they almost unite; elsewhere, to a great extent, they are separated by healthy skin. Their appearance is therefore quite characteristic and could not possibly be confused with a case of tokelau in which the disease had been recently acquired for the first time. Indeed, in new cases the centres of the infected circles are much less numerous; sometimes there is only one, and then the disease usually takes several years to spread over the whole body. When there is recrudescence the centres above mentioned can be counted by hundreds, and general infection is almost immediate. The only parts of the skin which remain unaffected are those which were originally healthy, as if they had a kind of immunity.

If at this stage treatment is recontinued, the scars at once yield, but only to reappear directly treatment is abandoned. Everything has to be done over again, and the disheartened patient ends by abandoning all attempts to obtain the cure of his disease.

On the other hand, it is well known that in its early stages tokelau can be cured. Further, in cases due to experimental inoculation, a complete cure is always obtained. How does it happen that there is this persistence when the disease is extensive? The first thought that comes to the mind is that the parasite, deeply embedded in the skin, is not completely destroyed by the remedies applied, and recommences to spread from the moment when it is no longer interfered with. That this
is true as regards certain portions of the body is very probable, but we do not believe it is true when the disease shows itself everywhere. As a matter of fact, after the first period of treatment, certainly after the second, large portions of skin appear perfectly healed, and have remained free from infection although neighbouring infected patches have threatened to overrun them in their progressive advance. Furthermore, the healed portions are found most often on the back, a region, be it noted, where it is difficult for the hands to reach them. But the breast, sides, and stomach are rapidly attacked. Hence we believe that the recrudescence of the infection is due above all to contaminations engendered by the hands. It should be remembered that in tokelau the skin of the palms is coarsened, cracked, and sometimes covered over with a veritable epidermic shell. Even when the nails are not actually infected the folds which separate them from the surrounding tissues are filled with epithelial cells infiltrated with the parasite. When it is so deeply seated, it is reached with difficulty by the chrysophanic acid. Consequently, it is comprehensible that the moment treatment ceases, the organism begins once more to generate at the affected parts, and new seeds of the disease are sown in the healed portions by scratching. If only a few germs should remain they may be easily transported to other parts, for the patient, long after the apparent disappearance of the lesions, continues to scratch himself from mere habit, and also because the itching of the disease has never entirely ceased.

The treatment should be conducted as follows: on the first day, the patient anoints with the chrysophanic acid ointment only one part of the body, as the legs, making use of a brush in order to work the application thoroughly into the skin, and taking great care not to allow any portion of the skin of that part, no matter how small, to remain untreated. On the two following days, if there has been no symptom of drug intoxication, the ointment is applied to the trunk of the body, and to the neck. Finally, the face is treated, and care must be taken to wash the patient carefully and to remove the ointment by gentle rubbing with alcohol if there are signs of conjunctivitis. If this should happen, the treatment can still be continued, but use must be made of a "traumaticin" for which the following formula has been advised by Jeanselme: chrysophanic acid, 10 grams; gutta-percha, 10 grams; chloroform, 80 grams.

With intermissions of one or two days, if necessary, the treatment is started again, and gone through twice completely in exactly the same manner. From then onwards, that is to say at the end of about ten to fifteen days, nothing further need be done except to apply the
ointment daily on the hands and feet, special care being taken concerning the portions of the skin immediately adjoining the nails. The patient must be constantly examined, and at every part of the body where reinfected circles appear a coating of ointment rubbed on with a brush must be applied. If no lesions reappear during two weeks of careful scrutiny, all treatment may be stopped and the patient merely kept under surveillance for a period of fifteen days to a month, after which he may be considered cured.

From the above directions it can be easily seen that when a patient will not submit to remain quietly in hospital for fifty or sixty days, it is much better not to undertake to treat his case at all, for to do so is almost certainly to court failure.

CONCLUSIONS.

1. Tokelau, which is usually considered to be a disease confined to warm countries, especially those near the sea, is not rare in Szechwan where the climate is continental and temperate.

2. When the lesions are old they are much less characteristic than in the initial stages, and when doubts exist as to their true nature the best means of securing a true diagnosis is to apply the treatment for a short period after which new characteristic circles will appear.

3. The cause of numerous recurrences and difficulties in the treatment of the disease can be found in the difficulty of destroying the parasite in the hands and in the interstices of the nails in which it is deeply embedded.

THE SIGNIFICANCE OF CHARCOT-LEYDEN CRYSTALS IN THE FÆCES AS AN INDICATION OF AMOEbic COLITIS,*

Captain Hugh W. Acton, L.M.S., Mesopotamian Expeditionary Force.

The importance that should be attached to the findings of Charcot-Leyden crystals in the fæces as an indication that amœbic colitis is present has not been sufficiently realized by the majority of workers on this subject. Thus Stitt states: “It is well to remember that Charcot-Leyden crystals which are always absent from bacillary dysentery stools are not infrequent findings in the amœbe containing stools; of course these crystals appear in other intestinal parasite infections.”

* Reprinted from the Indian Journal of Medical Research, October, 1918.
Castellani, describing the symptomatology of ankylostomiasis, states: "Occasionally a little blood and mucus are present, and Charcot-Leyden crystals may also occur." Again, describing the symptomatology of amoebic dysentery, he states: "The motions . . . . when examined by the microscope, reveal leucocytes, mucus, Charcot-Leyden crystals, amoebae, bacteria, and at times shreds of tissue." From the above quotations it would appear that these crystals were associated with amoebic and helminth affections of the intestine. After nearly two years' experience in this hospital, examining on an average about 500 stools a month, I came to regard the presence of these crystals to be an almost certain indication of the existence of an amoebic colitis and not to be associated with helminth infections. In the absence of amoebae, I did not hesitate to diagnose the case as amoebic dysentery when pus, mucus, and Charcot-Leyden crystals were found, and the results obtained by treatment with emetine justified the conclusion. To test mathematically whether the experience corresponded with the actual findings I analysed my figures, after I began to realize the importance of these crystals. The following tables give the result of this analysis.

RESULT OF ANALYSIS.

(1) The absence of association with intestinal entozoa.

From my records I extracted the last four hundred cases of intestinal entozoa, as in the earlier part of my work I often omitted to record the presence of these crystals.

Table I gives the results.

<table>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Charcot-Leyden crystals present</td>
<td>22</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>32</td>
</tr>
<tr>
<td>Charcot-Leyden crystals absent</td>
<td>231</td>
<td>96</td>
<td>47</td>
<td>26</td>
<td>9</td>
<td>3</td>
<td>6</td>
<td></td>
<td>368</td>
<td>400</td>
</tr>
<tr>
<td>Total</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>400</td>
</tr>
</tbody>
</table>

The total cases do not correspond with the actual findings owing to the presence of double and triple infections, hence the number of ova is greater than the number of cases. Out of 400 cases of intestinal
entozoa infections, Charcot-Leyden crystals were found in 32 cases, or an eight per cent incidence. Of these 32 cases, in 28 Entamoeba histolytica cysts or minuta forms, were also found. Thus we may assume that in the absence of amœbic infections, Charcot-Leyden crystals are rarely found with pure intestinal entozoa infections.

(2) The association with amœbic dysentery.

In order to obtain 100 cases that contained Charcot-Leyden crystals, I extracted 1,561 cases from my records. Out of these, 397 showed amœbæ in the stools. The following table gives the association of Charcot-Leyden crystals with the different clinical types of amœbic dysentery.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute amœbic dysentery with adult Entamoeba histolytica—blood, pus, mucus ...</td>
<td>17</td>
<td>188</td>
<td>205</td>
</tr>
<tr>
<td>Sub-acute amœbic dysentery with pre-adult, minuta forms or cysts—little blood, pus, mucus ...</td>
<td>36</td>
<td>68</td>
<td>104</td>
</tr>
<tr>
<td>Chronic amœbic carrier, cyst forms only—normal stool, sometimes mucus ...</td>
<td>28</td>
<td>60</td>
<td>88</td>
</tr>
<tr>
<td><strong>Total ...</strong></td>
<td><strong>81</strong></td>
<td><strong>316</strong></td>
<td><strong>397</strong></td>
</tr>
</tbody>
</table>

The above table shows that these crystals are more commonly found in chronic amœbic dysentery than in the acute cases, whilst they are present in 20 per cent of these amœbic cases.

(3) The association with non-amœbic dysentery.

Out of the same 1,561, there were 561 cases of dysentery where no amœbæ were found. The following table gives the association of Charcot-Leyden crystals with the different clinical types of non-amœbic dysenteries:
A word of explanation is required about these three groups.

In the acute bacillary type, the stool had all the typical characters of this type of dysentery. In the intermediate type, the stools were mixed with a large amount of faecal matter; microscopically, the blood cells were darker in colour, the pus cells often more degenerated. The chronic types included cases that were getting better as the result of treatment and were transfer cases. This table shows that there is practically no association between these non-amœbic types of dysentery and Charcot-Leyden crystals.

(4) The association of Charcot-Leyden crystals with protozoa.

The protozoal findings in the 100 cases with Charcot-Leyden crystals were next plotted, and the result is shown in the following table:

<table>
<thead>
<tr>
<th>Entamoeba histolytica adult</th>
<th>Entamoeba histolytica minute and cysts</th>
<th>Entamoeba coli</th>
<th>Entamoeba mazana</th>
<th>Lamblia intestinalis</th>
<th>Tetramitus mesnili</th>
<th>Trichomonas hominis</th>
<th>Nil</th>
<th>Total cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>63</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>14</td>
<td>20</td>
<td>100</td>
</tr>
</tbody>
</table>

This table shows that *Entamoeba histolytica* was present in 80 of the 100 cases. Thus the correlation co-efficient of *Entamoeba histolytica* with Charcot-Leyden crystals, works out at $\gamma = +0.8$, which indicates a very high degree of association.
The character of Charcot-Leyden crystals. They vary in size from 10 to 70 μ. They are generally long in the acuter types of amoebic dysentery, and short in the chronic types and carrier cases. Their usual length is about 30 μ. They vary in shape; some are long acicular forms. The common shape is the pointed whetstone, whilst rhomboidal, lozenge-shaped and sheaves are occasionally seen. Their colour in fresh specimens is of a greenish tinge. They are more commonly found in subacute and chronic types of amoebic dysentery. They are soluble in acids and alkalis, but not in alcohol. After treatment for some time they may persist for a time after the minuta and cysts forms have disappeared. They are similar to the crystals found in seminal fluid, which are stated to be crystals of ethylene-imine.

Conclusions.

(1) There is no association between Charcot-Leyden crystals and intestinal eutozoa.
(2) Charcot-Leyden crystals are more commonly present in the sub-acute and chronic types of amoebiasis than in the acute type.
(3) They are rarely found in the non-amoebic dysenteries.
(4) The association between Charcot-Leyden crystals and Entamoeba histolytica is very high, = Υ + .8.
(5) The presence of Charcot-Leyden crystals in the absence of amoebae is indicative of amoebic colitis.
(6) These crystals persist for some time after the amoebae have disappeared as the result of emetine treatment.

References.
Stitt, 1915. Practical Bacteriology.

Neuritis of Ulnar Nerve due to Adherent Cicatrix: Liberation and Elongation.

L. Casabianca, M.D., Canton.

The frequent occurrence of traumatic lesions of the peripheral nerves during the present war, has brought about a revival of some of the methods of treatment which were formerly used to restore nerves to their anatomical and functional integrity.

Among these operations "elongation" had often been performed, but always with results which were unsuccessful, due either to bad judgment or to faulty technique. This led to the total abandonment of
the method, so that for some years it has been entirely banished from
the surgical code. At the present time, however, this method has
regained favour, and when performed skilfully good results have been
obtained without any danger to the patient. The following case serves
to illustrate its value.

Patient, a Chinese, aged twenty-six years, native of Kwangsi,
attended a dispensary where for three weeks he received treatment
without any improvement. He was then placed under our care in
order to undergo surgical treatment.

This patient, a soldier, about three months before had been
wounded by a rifle shot. The bullet inflicted a fistulous wound in
the lower third of the inner side of the left arm. After being
wounded the patient felt formication and pain about the hand.
The pain increased gradually as the wound closed, until it reached
its maximum one month after the healing of the cicatrix. Evidently
it was a case of causalgia, a condition which, since the war
began, has been more fully defined as traumatic irritation of a nerve
after a wound, with hyperæsthesia of the cutaneous area supplied
by the nerve, accompanied by pain in this same area, of varying
intensity, increased especially by emotion. In this patient the ulnar
nerve was adherent to the cicatrix and the median nerve was also
involved.

The patient suffered horribly, always moaning and crying. Many
sedative medicines were tried with an ephemeral and imperfect effect.
He felt intense burning pain over the palm of the hand with the
exception of the little finger and the ulnar side of the hand region where
there was formication. The pain was increased by noise, intense light,
movement, the shaking of the floor, or the presence of many persons
around the bed. To obtain relief the patient constantly moistened his
hand with a wet linen cloth. When he had to go to the water-closet he
first soaked his feet; he said this lessened the painful shaking of the
hand caused by walking. For about a month the patient felt some
formication in the feet. The pains were exclusively diurnal, a very
interesting fact; they started and gradually increased from about
6 a.m. and gradually disappeared toward 6 p.m. During the night he
was relatively free from pain.

Examination showed that at the place where the bullet had made
its exit there was a fibrillous cicatrix, three cm. long, situated along the
course of the ulnar nerve, about eight cm. above the olecranial groove.
Compression at this point caused intense formication of the hand, over-
coming for a moment the pain. The little finger and the cubital edge
of the hand were anaesthetic, but at any other point the palm was hypersensitive. Within the limits of the above mentioned area of anaesthesia there was no sudation. The sensibility was normal at the back of the hand. The skin of the palm of the hand was thin, red, and shining, and showed in a striking way what the English call "glossy skin." The muscles of the hand, of the fore-arm, and even of the arm were atrophied. The patient was quite willing to undergo any kind of operation, even amputation of the arm, so he said, provided that he could be relieved from the pain.

Accordingly, an operation to free the nerve was performed under chloroform anaesthesia. An incision six cm. long, partly parallel and partly tangent to the cicatrix was made and the cubital nerve exposed. It was within a fibrous sheath which was closely adherent to the skin. A deep incision four cm. long, was made to free it and then it was hidden in a muscular groove made in the triceps. Excision of the cutaneous cicatrix. The muscles were sutured with catgut, the skin with Florence thread.

From the day after the operation the patient acknowledged a considerable decrease in the pain, estimating the improvement in the Chinese way as four-tenths less than it had been. The cutaneous sutures were removed eight days after the operation, the wound healing per primam. For nearly a month the subsequent neuritis was treated medically in different ways without much result; soaked bandages, soothing liniments, a touch of the cautery along the course of the nerve, all were tried. The improvement noted after the operation seemed to be diminishing. The patient besought me to cut all the nerves of his arm, as the pain, he said, made him as impotent as if he were paralyzed.

At the second operation the vasculo-nervous bundle was opened at about the middle of the inner side of the arm by an incision six cm. in length. The median nerve was lengthened with a weight of twelve kilograms, and the cubital nerve with a weight of nine kilograms. As no special lengthening instruments were at hand, the elongation was effected with copper weights hanging to a clip attached to the nerve in the form of a figure of eight. Afterwards I made manually a slight elongation of the peripheral end of the nerve. Suture in one direction with Florence thread.

After the operation the patient admitted the absence of all spontaneous or incited pains. A few days later the sutures were removed; healing per primam. The patient remained in the hospital three more weeks in order to receive treatment by massage and electricity for the
muscular atrophy. He is now perfectly well and one can press his
hand in any direction without giving him the least pain. The muscular
atrophy is gradually disappearing and the contractility is improving.
The little finger and the cubital edge of the left hand are still anaesthetic.

IMPLANTATION OF URETERS INTO RECTUM.
BERGENHEIM'S OPERATION.*

A. L. Ludlow, M.D., Seoul, Korea.

Clinical history of patient: Korean, female, aged thirty-seven
years; was admitted to the gynecological service of the hospital,
August 13, 1917. As Dr. J. W. Hirst was on his vacation the case
was referred to me for operation.

Family history. Negative.

Previous history. Patient has had small-pox, measles, and typhoid
fever. Menses began at the age of seventeen. Patient married at age
of eighteen; the first child was born when patient was twenty-one years
old. Has had three other children and one miscarriage.

Present illness. After the birth of the first child there was some
laceration of the perineum. After the birth of the last child there was
a marked rectocele and vesicocele. A native Korean doctor treated
this condition by applying some caustic liquid medicine to the pro-
lapsed parts. This resulted about four months prior to admission to
hospital in the protrusion of the posterior wall of the bladder at the
vaginal opening, as shown in the accompanying photograph, the anterior
part of the bladder having been burned away. In addition there was a
rectovaginal fistula about an inch in length, just within the vaginal open-
ing. The protruding bladder wall was inflamed; upon lifting it up
the openings of the ureters could be plainly seen sending forth little jets
of urine. With the constant flow of urine and the trouble arising from
the rectal fistula, it is needless to state that the patient was in a very
filthy condition.

The general physical examination of the rest of the body revealed
nothing of special interest.

Operation. The first operation was performed on August 20, 1917.
Patient was placed in lithotomy position. Even under the anestheti"
Implantation of Ureters into Rectum.

it was impossible to invert the bladder wall. An incision was made in the center of the protruding mass beginning at the site of the urethra, of which there was only a small portion left, and extending downward. With a catheter in the left ureter as a guide, the bladder wall was gradually cut away and the ureter (together with a rosette of mucous membrane about one cm. in diameter) was stripped back extraperitoneally for a couple of inches. The same procedure was performed on the right side. Both ureters being thus freed, the remainder of the bladder was cut away.

The peritoneal cavity was opened during the operation and the uterus and adnexa found to be normal. The peritoneum was closed and the cut edges of the bladder approximated as much as possible. Upon cutting away the bladder wall the cervix uteri, which before could not be seen, was exposed; it appeared to be normal. About two cm. from the anus there was a rectovaginal fistula with hard edges. Through this opening forceps were inserted into the rectum and passed through the rectal wall at a point about two inches higher up; the ends of the ureters were then seized and implanted into the rectum. The fistula was closed and a tube inserted into the rectum.

In the implantation of the ureters, it is important to observe the following rules given by Buchanan:

1. Each ureter should pass in a direct course, without kink or twist, to the point of entrance into the bowel.
2. There should be no injury by forceps, knife, or needle of or near the ostium that could cause cicatricial narrowing of the passage.
3. The intestinal portion should keep its position without tension.
4. No injury should be done to the ureter by retention sutures.
5. The ureteral catheter should be used as a guide in dissection during the operation but not as a conductor of urine afterward.
6. No dilatation of the sphincter ani should be practised, a rubber tube being sufficient to prevent distention of the bowel.

The patient made a good immediate recovery from the operation, but in a little over a week there was leakage from the fistula. To correct this, another operation was done by Dr. Hirst. At the time of the patient's discharge from the hospital, September 17, 1917, there was still a little leakage through the fistula.

Subsequent history. Patient returned to the hospital in the latter part of December, and was again operated on for the fistula on January 17, 1918, by Dr. Hirst. Since that time several operations have been made in an effort to heal the fistula, but at the present time (February 1919) there is still some leakage. There is, however, no sign of ascending infection of the kidneys and the patient's general health is good.

**Comment.**

This case illustrates one of the conditions following the use of cauterization by native doctors. Not infrequently cases of prolapse of the uterus or protrusions of the walls of the vagina are thus treated. Two cases have been observed where, shortly after conception had taken place, the cervix was burned and the patient came to full term, requiring vaginal section to remove the child.

Some of the rectovaginal and vesicovaginal fistulae produced by cauterization present so much cicatricial tissue as to make repair exceedingly difficult or well nigh impossible.

In 1894, B. Bergenheim of Nykopings, Sweden, implanted the ureters separately into the rectum by the extraperitoneal method. A few years later George A. Peters, of Toronto, Canada, performed the same kind of operation and published a description of it without the knowledge of Bergenheim's work. Accordingly, in America and Great Britain it is called Peters' operation.

This operation is usually performed in cases of exostrophy, a congenital malformation which is fortunately not common.

The method seemed applicable in the above case and proved very satisfactory.

**Transplantation of the Ureters into Intestines**—In *Surg., Gyn., and Obstet.*, 1917, April, p. 482, Baird, Scott, and Spencer discuss the transplantation of the ureters into the intestines. They transplanted the ureter into the pancreatic duct of a dog. Ascending infection travels up the ureter by the lymphatics, and may, they conclude, be prevented by transplanting the ureter into an opening simulating a normal intestinal opening. A valve action is not essential. The entire urinary output cannot be drained into the upper intestinal tract, as its absorption gives rise to toxic symptoms ending in death within twelve days.
VULVAR STENOSIS: ABNORMAL DILATATION OF URETHRA.

W. CHALMERS DALE, M.B., B.S., Wukingfu.

A primipara, aged thirty-three, came to full term. Labour was conducted in her own home, under the charge of a native midwife. The child was born dead and the perineum was lacerated. Sepsis followed, with prolonged suppuration.

A month and a half after child-birth, coitus was attempted but was found impossible owing to stenosis of the vulva. A native woman was called in to dilate the aperture, with the result that the woman had severe pain and lost a considerable amount of blood. Further coitus was not attempted.

Two months later the patient came to the Wukingfu Hospital for treatment. She was a well nourished, healthy-looking woman. At the first examination, made much too cursorily, one finger was passed easily into what was taken to be the vulval orifice, and it was determined to dilate this a few days later.

At the time of the operation, the woman was anæsthetised and, before dilating, an attempt was made to pass a catheter, but no urethral orifice could be found anterior to the supposed vulva. A closer examination showed that this opening was the external urethral meatus, much dilated and surrounded by a ring of prolapsed mucous membrane. The middle finger passed easily through this into the interior of the bladder. Behind this orifice was discovered a very small opening, with difficulty admitting the tip of the little finger. This was dilated with a bougie and the cervix could then be felt in its normal position. Apart from the stenosis at the vulva, there was nothing abnormal about the genital tract.

The edges of the dilated urinary meatus were freshened and the opening partially closed till it reached its normal size, the prolapsed mucous membrane being invaginated as this was done. The vulva was then fully dilated with bougies; this was performed with very little laceration, and without any difficulty. Since the operation a full sized bougie has been passed each day. So far, everything appears to be going on well.

The question as to how the urethra came to be in the condition described is rather difficult to answer, as no one with medical training saw the patient before she arrived at the hospital and by that time the condition was fully established. In the main it was probably due to
the healing and cicatrization of the lacerated tissues dragging on the urethra, aided perhaps by muscular contraction. Piersol (*Human Anatomy*, p. 1926) states that the lower end of the urethra is embraced by the anterior fibres of the sphincter vaginae muscle, and Graves (*Gynecology*, 1918, p. 545) in the chapter on "Genital Atrophy" states that "the urethral membrane may be literally dragged outward by the contraction of the epidermis of the vestibule, forming an eversion or ectropion, a condition that has somewhat the appearance of a urethral caruncle. It usually gives little trouble, but the pouting membrane may become irritated and cause great annoyance." If the atrophy of senility can produce such effects it is reasonable to suppose that cicatricial contractions and adhesions may produce even greater. Undoubtedly, the woman called in dilated the urethra under the impression that she was dilating the vagina, thus causing great pain and sudden, profuse hemorrhage. According to Morris, "the whole tube is sufficiently dilatable in most cases to allow the careful introduction of the finger while the patient is under an anesthetic (*Human Anatomy*, p. 1194). Coitus in this particular case was impossible, but the last mentioned author refers to a case recorded in 1697 by William Cowper, in which, as a result of imperforate condition of the hymen, the urethra became the channel of sexual congress.

The points worthy of comment appear to be: (1) that at no time since labour has there been any incontinence of urine; (2) that the bladder and urethra have not been infected in any way; (3) that the injury to the passages appears to have been confined entirely to the vulva, and that no inflammation of vagina or uterus resulted from the suppuration round the vulva.

It will be interesting to hear from more experienced practitioners as to whether such a condition as this is at all common in China.

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**A CASE OF HEMATOMOLPUS.**

**JESSE HAYES BALDWIN, M.D., CHANGLI.**

On March 1st, 1918, a girl of fourteen was brought to the Changli Hospital suffering from suppression of urine of some two days' standing.

Examination showed a bulging mass in the vulva and above the pubes. The hymen was found to be imperforate and appeared to be about to burst when she strained, which was almost constantly.

We passed a soft rubber catheter into the bladder without difficulty and drew off the accumulated urine. After some persuasion the parents
consented to a slight operation being performed on the patient. The vulva and adjacent parts were cleansed and painted with tincture of iodine. An incision was then made in the hymenal membrane under cocaine anesthesia which allowed the fluid to escape. We estimated the amount of this fluid to be 20 ounces. A sterile dressing was applied to the vulva and the patient was put to bed where she remained a short time. Further examination, treatment, and operation were refused, the girl and the parents declaring that she was well. She left the hospital on the fourth day, in apparently good condition, and has not been heard from since.

According to Reed's *Text-book of Gynecology* (1904), "many cases described as instances of imperforate hymen are really examples of atresia of the lower end of the vagina." "On the other hand, undoubted cases of atresia hymenalis do occur." In some cases there is "a hymenal membrane hidden by the projecting vaginal sac." In this case I did not notice any such membrane. I am confident that this septum was not the result of inflammatory adhesions but was a congenital malformation. It may possibly have been a congenital atresia of the lower end of the vagina, but I am inclined to think it was an imperforate hymen.

Kelly, in his *Medical Gynecology* (1908), mentions the condition of "imperforate hymen" and of "atresia of the vagina higher up."

Reed states that in this condition "every month, colicky pains recur with increasing severity," at the menstrual period, "there is some difficulty with micturition and defecation, which passes off in the intermenstrual period." In this case inquiry failed to elicit any history of pain or inconvenience, though I think it extremely probable that such pain did occur, but was overlooked or attributed to other causes.

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**THE NEEDS AND PROBLEMS OF SMALL HOSPITALS IN CHINA.**

J. Preston Maxwell, M.D., F.R.C.S., L.R.C.P., Yungchun, Fu.

Considered from the medical standpoint, the needs and problems of the smaller hospitals in China fall naturally under three headings:

I. Administrative. II. Medical. III. Nursing.

There is no doubt that for many years to come there will be difficulty in the adequate financing of these hospitals, making it practically impossible to staff them with foreigners as seems most desirable. More than this, even if the finances are forthcoming, it is very doubtful
whether the men and women will be available. Hence the problem resolves itself into a consideration as to how far the needs may be met by a trained native staff.

I. Administrative.

It is an undoubted fact that in the past a great deal of the strength of the medical missionary has had to be devoted to administrative work to the detriment of his missionary and professional work. One of the practical difficulties is inherent in the Chinese nation, and that is the disinclination of a Chinaman to take a straight course and to put down his foot. Compromise is a splendid thing under certain circumstances; but tact and firmness are much more valuable in a large hospital, and the writer has his doubts whether it will be possible as a rule to train local men, in their own region, to give adequate help in hospital administration. What we want is a class of men trained by the Y. M. C. A., having had a course over and above this in the special work of hospital administration, who should be available for the needs of the inland hospitals. These men should be trained in accounting, statistics, catering, and whatever else is necessary to enable them to become efficient assistants to the medical missionary. A great deal of such training could be given in one of the large centers in an intensive course. It will be argued that the needs of each region are so different that the men would find themselves generally at sea in their new positions; but if the training has been flexible enough they would soon adapt themselves to local circumstances, and one would hope that if such a course could be worked out, men might be chosen and sent for training from the regions in which they were to be employed.

II. Medical.

The greatest need of the doctor is for efficient medical assistance. I look forward to the time when those in medical teaching centers will act as the referees of the country hospital. With the efficient postal system at present prevailing it should be possible for them to perform most of the laboratory tests for country hospitals, thus placing within the reach of the latter the Wassermann reaction, the more difficult bacteriological examinations and serum tests and the like; also opportunities for obtaining expert opinion on anything obscure in the nature of tumors, etc. Over and above this I look forward to the time when we shall have a special class of pathological assistants who could carry out locally all the usual examinations of urine, blood.
faeces, and sputum; do a certain amount of bacteriological work; attend to the preservation of specimens and to their transmission, if necessary, to the teaching centers for examination.

There should be no insuperable difficulty in sending lads, who have had a good school education, from these country hospitals for a short course, say of a year's preparation as clinical clerks in pathology, to one of these teaching centers that they may be fitted to do the above work in a country hospital. This teaching can be done by the doctor himself, as the writer has proved in his own hospital, but it would be infinitely better done at one of the teaching centers and should be able to be put into effect without much machinery or expense. Attendants on a small X-ray installation might be trained in the same way, and they would add immensely to the efficiency of the work done in hospitals without involving a very large outlay. These men should also be trained in photography and be able to aid the doctor in this respect.

Whilst the training of assistants for the next few years must remain to a large extent in the doctors' hands, as soon as possible the principal assistants in all hospitals should be men who have been through one of the medical colleges. It may be possible in due time for the teaching centers to have short postgraduate courses which the assistants who have not had the advantage of a full medical course, but who have proved themselves practically useful, might be permitted to attend; not with the view of conferring any status on them but to enable them to become more efficient and, of course, increasing their value to the hospitals which employ them.

III. The Nursing Problem.

Here again we are confronted not only with a financial problem but also with a question of supply, and it seems to me that the solution will again have to be found on the field. It raises the question of male and female nurses in their relation to the Chinese. There is little doubt in my own mind that in due time the female nurse will win her way in China as she has done everywhere else, but I hesitate to give my assent to the introduction of a number of young women in training into the men's wards of our southern hospitals. At the present time the best solution of the problem for the general hospital seems to be to employ male nurses for the male wards, and female nurses for the female wards, all being under an efficient foreign nurse. She should have no real difficulty, if she is the right woman, in maintaining control over the men nurses as well as the women nurses, providing that she has the hearty and loyal backing of the doctor and his first assist-
aut. China differs so much in different regions that there must be a
good deal of modification of the methods in various places. And
whilst male and female nurses may be trained in any hospital, the
foreign nurse in charge should have under her management at least one
male and one female nurse who have been trained in a recognized
teaching center and are certified.

What will be needed is a Control Bureau to which all the hospitals
could apply for trained Chinese nurses and which could also arrange
for placing nurses sent from an inland hospital for training.

As to the special relation of the medical teaching center to the
doctor himself, there should be arranged courses of postgraduate study,
short in duration, which he should be allowed to attend with the
acquiescence and co-operation of the missionary boards. One or two
central libraries for China should be formed from which he should have
the privilege of borrowing books for a limited period by post, and the
librarian should undertake the looking up and transcription of refer­
ces for those who are compiling papers for the press. In due time it
would be well if a proper hospital survey could be undertaken which
should report on all hospitals as to their equipment and management.
Of course this would have to be done by an independent committee,
but its report would be of great value to all the societies concerned,
even if it did cause a certain amount of heartburning.

One thing is certain and that is that we are rapidly nearing a time
when something of this sort will have to be done, or some of the
hospitals will gradually be crushed out of existence for lack of funds
and the impossibility of obtaining an adequate staff under the con­
ditions prevailing.

In closing let me add that I am more and more impressed with the
value of the smaller inland hospitals. They should be strengthened
with all the means in our power both from the missionary and medical
standpoint; but there is no reason why, with proper arrangement, a
large portion of the burden which at present rests heavily upon many
of the doctors' shoulders should not be materially lightened and their
work thereby rendered more efficient and pleasant.

FUNCTIONS OF A DISPENSARY.—The aim of a modern, far-seeing, public
dispensary is well expressed in a recent annual report of the Boston Dispensary:
1. To relieve misery by prompt and efficient medical, nursing, and social
   service;
2. To diminish the financial burden upon the sufferers, their employers, and
   the public;
3. To prevent disease as well as cure it, by education of patients and of the
   community in measures of personal and public hygiene.
The China Medical Journal.

VOL. XXXIII.  MAY, 1919.  No. 3

All communications on Editorial Matters, Articles, Letters, Exchanges, and Books for Review should be addressed to the Editor of the JOURNAL.

Changes of address, departures and arrivals of members of the Association should be notified to the Business Manager, Dr. R. C. Beebe, 8 Quinan Gardens, Shanghai. Members are requested to invite all missionary physicians who come to China and other parts of the East to join the Association.

Every member of the China Medical Association, who has paid his dues for the current year, is entitled to a copy of the CHINA MEDICAL JOURNAL for the year, postage free. To those not members, the subscription to the JOURNAL is $5 Mex., per annum. In remitting by cheque please specify "Shanghai currency."

Editorial.

The Executive Committee desires to remind all members of the Association that our next Conference will be held in Peking early in 1920. The local committee of management has its preparations well under way, and if all will co-operate heartily we may be sure that the Conference will be one of the best and most helpful in our history. Instead of meeting all together for the consideration of every subject presented, sectional meetings will be held, each devoted to one or more of the principal branches of medicine, surgery, and sanitation. This will make it possible for a greater number of scientific papers to be read, and will give more time for their discussion. It is hoped that as many members as possible will prepare interesting original papers that can be subsequently printed in the JOURNAL. Business matters will be attended to during the closing sessions. Some of our members who have been on war service will doubtless attend the Conference, and we may confidently expect they will present to us fresh and very helpful ideas concerning the extension of our work. Let us all do the best we can to make the Conference a great success.

One very important matter which should be given careful consideration concerns the ways and means to bring our hospitals, large and small, to a state of efficiency, each having a full medical and nursing staff and adequate equipment. As we have said before, this question is of particular interest to...
physicians in charge of small hospitals who are obliged to work under circumstances disadvantageous to themselves and their patients. Very often the sickness, furlough, or resignation, of the physician in charge means the closing of the hospital for a longer or shorter time, as may be seen by several hospital reports noticed elsewhere in this number of the Journal. Reinforcement is urgently necessary and appeals are constantly being made. At present, however, a missionary physician in appealing for help is not able to present his case with the strength and confidence that would be his if he could state that he was supported by the united opinion of the medical profession in China. The Conference should express its opinion clearly on this point and state with precision what it considers absolutely necessary in the way of staff and equipment for the hospitals in this country. The mission boards and churches at home will then know exactly what is required and will do their utmost to meet the needs specified to the great advantage of all concerned.

As an Association we are much indebted to Mr. Boynton, of the China Continuation Committee, who has compiled the statistics of medical missionary work in China, published in or with the China Mission Year Book, in such a manner as to enable us to view our work as a whole. In the following table, based on Mr. Boynton's figures, much useful information is condensed.

<table>
<thead>
<tr>
<th>Missions</th>
<th>Foreign physicians, men</th>
<th>Foreign physicians, women</th>
<th>Chinese physicians</th>
<th>Total physicians</th>
<th>Hosp. Beds.</th>
<th>Hosp. Beds.</th>
<th>In-patients</th>
<th>Aver. no. of in-patients to each physician</th>
<th>Total no. of patients</th>
<th>Aver. no. of patients per physician</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anglican</td>
<td>26</td>
<td>8</td>
<td>30</td>
<td>64</td>
<td>2,152</td>
<td>18,399</td>
<td>286</td>
<td>402,370</td>
<td>6,287</td>
<td></td>
</tr>
<tr>
<td>Baptist</td>
<td>26</td>
<td>5</td>
<td>20</td>
<td>51</td>
<td>35</td>
<td>995</td>
<td>10,580</td>
<td>207</td>
<td>293,633</td>
<td>5,757</td>
</tr>
<tr>
<td>China Inland</td>
<td>11</td>
<td>2</td>
<td>3</td>
<td>16</td>
<td>14</td>
<td>428</td>
<td>4,411</td>
<td>276</td>
<td>128,786</td>
<td>8,048</td>
</tr>
<tr>
<td>Congregational</td>
<td>21</td>
<td>3</td>
<td>13</td>
<td>37</td>
<td>27</td>
<td>1,075</td>
<td>10,405</td>
<td>281</td>
<td>410,032</td>
<td>11,080</td>
</tr>
<tr>
<td>Lutheran</td>
<td>16</td>
<td>2</td>
<td>9</td>
<td>27</td>
<td>21</td>
<td>589</td>
<td>4,539</td>
<td>168</td>
<td>194,107</td>
<td>7,189</td>
</tr>
<tr>
<td>Methodist</td>
<td>50</td>
<td>15</td>
<td>44</td>
<td>109</td>
<td>55</td>
<td>2,213</td>
<td>24,133</td>
<td>221</td>
<td>531,312</td>
<td>4,865</td>
</tr>
<tr>
<td>Presbyterian</td>
<td>83</td>
<td>41</td>
<td>63</td>
<td>187</td>
<td>102</td>
<td>5,287</td>
<td>38,627</td>
<td>206</td>
<td>450,736</td>
<td>4,763</td>
</tr>
<tr>
<td>Other Soc. and Missions</td>
<td>37</td>
<td>5</td>
<td>30</td>
<td>72</td>
<td>24</td>
<td>973</td>
<td>8,093</td>
<td>112</td>
<td>434,091</td>
<td>6,029</td>
</tr>
<tr>
<td></td>
<td>270</td>
<td>81</td>
<td>212</td>
<td>563</td>
<td>320</td>
<td>13,712</td>
<td>119,097</td>
<td>213</td>
<td>3,285,067</td>
<td>5,834</td>
</tr>
</tbody>
</table>
Unfortunately, these figures cannot be taken exactly as they stand. For instance, Mr. Boynton estimates that from one-third to one-fifth of the number of foreign physicians mentioned in the table were on furlough, on war service, or were not engaged in active practice. This means a reduction of the number from 351 to about 260, and a corresponding increase in the estimate of the work done by them.

The figures in the next table show the reduction which has taken place in the medical missionary force in China during the war.

<table>
<thead>
<tr>
<th></th>
<th>1914</th>
<th>1915</th>
<th>1916</th>
<th>1917</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missionary physicians, Men</td>
<td>358</td>
<td>277</td>
<td>267</td>
<td>270</td>
</tr>
<tr>
<td></td>
<td>137</td>
<td>106</td>
<td>93</td>
<td>81</td>
</tr>
<tr>
<td>Total</td>
<td>495</td>
<td>383</td>
<td>360</td>
<td>351</td>
</tr>
</tbody>
</table>

During this period, therefore, there has been a loss—we may be sure it is only temporary—of 144 foreign missionary physicians. On the other hand, the number of Chinese physicians connected with mission hospitals rose from 191 in 1915 to 212 in 1917, a gain of seventeen. But the loss as a whole is much greater than it seems as not a few of the 212 Chinese physicians are not able to undertake the same work and responsibilities as their foreign colleagues.

A careful study of the first table shows that our hospitals are not as strongly manned as they should be. On the average, 486 of the 563 hospital buildings have only two physicians to each building or hospital, and 77 hospitals have but one physician each; if we allow for sickness, furloughs, etc., the position is much weaker. It may be an extreme case but it appears that in one Chinese city there is a foreign physician, without either foreign or Chinese medical colleagues, who is in charge of a hospital of 110 beds. In this hospital there were treated during the year 1,418 in-patients, and in the dispensary 24,130 dispensary patients were attended to during the year. Very little calculation is needed to prove that this is all together too heavy a burden for one man to carry. Think of the number of physicians that would be on the staff of a hospital at home of this size and doing so much work.
It may be said that the missionary physician should not attempt to do more than he can properly perform. In the circumstances, however, he is scarcely a free agent as the Chinese, when they are sick, insist on coming to him no matter how hard pressed he may be; *nolens volens*, he must do what he can to help them. A partial solution of the difficulty, as suggested by Dr. Maxwell in his paper on the subject in this issue of the *Journal*, is that each hospital should have a strong, permanent staff of Chinese physicians. Yet for a long time to come China will need the service of all the foreign physicians she can possibly obtain.

At the last meeting of the Executive Committee a letter was received from Dr. Geo. C. Worth, of Kiangyin, in which he proposed that the following resolution should be brought before the next Conference:

**An Appeal for more Physicians.**

Whereas, Many thousands of doctors and nurses, hitherto engaged in war service for Great Britain and America are now being set free owing to the cessation of war; and

Whereas, Among these doctors and nurses there are many who are both spiritually and professionally well qualified to undertake medical missionary work; and

Whereas, Many of them have no definite opening before them and are thus peculiarly open to the call to the great work of the mission field; therefore

Resolved, That the China Medical Missionary Association publish a strong appeal to these doctors and nurses to devote their lives to the cause of Christ in the mission fields of the world, making an especially earnest appeal for China.

Resolved, That this appeal be not only published in religious and secular papers but be put into the form of a pamphlet for widespread distribution among the medical forces at home and at the front.

The committee highly approved this resolution and decided that it would be in accordance with the wishes of members of the Association to publish the appeal at once, while possible candidates are still undecided as to their future course, rather than wait.
nearly a year for the action of the Conference. Accordingly, the following appeal has been issued, copies of which will be sent to all missionary boards, and to a large number of religious magazines and papers. We must all hope and pray that many well-qualified and earnest men will respond.

An Appeal for Medical Missionaries to China.

The war is over; the struggle to uphold ideals of truth, justice, and freedom has been won. With the demobilization of the armies of the allied nations millions of men will be set free either to resume their former occupations or to enter upon new fields of service. Among those being released are many well-qualified physicians who will find it difficult to return to the beaten paths of life at home because they have become aware, as never before, of the deep needs of people in other lands, and wish to respond to their appeals for help. To these professional brethren, if they have not irrevocably decided upon their future course, the China Medical Missionary Association, by its Executive Committee, makes an earnest appeal to consider the claims of China where noble service can be rendered to the people of a great nation, not only by the prevention and relief of disease and suffering, but also by inculcating and helping the people to realize the social and spiritual ideals of Christianity on which the peace and happiness of mankind depend.

As to the medical needs of China, with its estimated population of 400 millions, these are so obvious to medical men as hardly to require setting forth. But the statement of a few facts may not be uninteresting. Even if we include Japanese physicians, who attend principally to their own people, it is doubtful if there are two thousand scientifically trained physicians in the whole of China, Manchuria, and Mongolia. At the end of 1917 there were 351 foreign medical missionaries in these countries, 270 men and 81 women; working with them were 212 Chinese physicians. About 120,000 in-patients were treated during the year, and 3,165,970 dispensary patients. These figures may seem impressive, but a
little calculation based on the vital statistics of other countries will show this is but a small part of the work that should have been done. In the province of Shensi, with a population of 8,800,000, there are only two foreign medical missionaries in active practice, and other qualified physicians are extremely few. Yet it is in Shensi, and the contiguous province of Shansi with its population of 10,000,000 people with nine missionary physicians, that epidemics of pneumonic plague gather strength and become a menace to the whole of China and to other countries. In every branch of medicine and surgery there is an unlimited field in China for work and original research. Further, teachers for mission medical schools are urgently required so that the Chinese medical profession, which is still in a very early stage of growth, may be constantly recruited by thoroughly well-trained physicians who will take part in the work of medical missions, uphold the honor and dignity of the profession, and bring Christian influences to bear generally upon the practice of medicine in China. The important mission of Public Health Education, for which the China Medical Missionary Association is partly responsible, has barely begun, and there are many forms of social service waiting for the leadership or co-operation of physicians. So much sickness and physical wretchedness exist in China as alone to constitute a very powerful appeal to the sympathy and practical help of Christian physicians. As expert independent testimony to the great need of medical work in China it may be noted that the Rockefeller Foundation, among its various projects to promote the health and happiness of mankind, is establishing hospitals and medical schools for the Chinese and is giving generous aid to medical missionary institutions in China.

There is another plea, however, which we deem peculiarly appropriate at the present time. The objects for which the allied nations struggled need to be interpreted to the Chinese and the fruits of victory made secure for them as for other nations. One outcome of the war will probably be the formation of a genuine League of Nations, inclusive of China, by which it is hoped to secure the peace of the world. But the foundations of the League will never be sure unless they rest upon the sincere and practical recognition of human brotherhood in the belief that all men are
the children of God and therefore should be kind and helpful to each other. By whom can this ideal be more clearly and practically interpreted to the Chinese than by physicians of other nations who make it their life work to minister to the sick and unfortunate among them? In the past, when the Chinese were not so well disposed to foreigners as they are now, missionary physicians and nurses were most successful in winning the goodwill of the people. And this message of the spiritual brotherhood of mankind it is most necessary to proclaim at the present time among the millions of extremely poor and ignorant Chinese, if the country is to be saved from the social upheavals and deadly strife between class and class which are occurring in other lands.

It should be added that the work of the medical missionary does not stand by itself, but is closely connected with other agencies which are unceasingly, and not unsuccessfully, working to help and uplift the Chinese people. In the words of a writer, quoted in one of the foremost medical publications of America: "The usual missionary programme with its three-fold emphasis on education, medicine, and religious teaching, is in China the agent of reconstructing whole communities and of creating a new type of life. In hundreds of cities and villages to-day these effects are evident: an increase of general intelligence; a greater capacity on the part of the training obtained in church and school; a decrease of prevalent diseases; cleaner and more beautiful homes; a new appreciation of the dignity of womanhood; a deeper interest on the part of the community in the welfare of the defectives and of the poor; the breaking down of fixed and hardened social customs and a greater ambition and zest in life on the part of young men and women; a new spirit of unity and co-operation in the Christian community; the breaking down of the bondage of superstition and a release of high spiritual hopes and aspirations. While all these effects are not evident in every community, they are the obvious effects of Christian missions in China."

In conclusion, we again appeal to you to come to China, help to present to the Chinese people all that is excellent in our Christian civilization of the West, and thus enable them to take their part in establishing a world-wide peace based on the laws of righteousness,
the recognition of human brotherhood, and the increasing spiritual
ennoblement of humanity.

The Executive Committee of the
China Medical Missionary Association.

Shanghai, February 27, 1919.

SCHOOL OF MEDICINE, SHANTUNG CHRISTIAN
UNIVERSITY, TSINAN.

The past term's work at the School of Medicine, Tsinan, has been
a very encouraging one, for in spite of the fact that two members of the
staff have been on war service in France, and another on furlough, ten
foreign teachers and one foreign-trained Chinese instructor have been
engaged in the work of the School, all of whom, with one exception,
are whole-time members of the staff. Of this number, four are new-
comers to Tsinan, and the following brief particulars of their previous
record may be of interest.

Dr. Philip S. Evans, Jr., B.A., (Yale), M.D., (Johns Hopkins). A
well-known member of the American Southern Baptist Board. Was
engaged in medical missionary work at Yangchow, and subsequently
occupied an important position in the School of Medicine of the
University of Nanking. Has just returned from a year of special work
in Physiology at Johns Hopkins, and has been appointed in charge of
the Department of Physiology at Tsinan.

Dr. Thornton Stearns, A.B., (Davidson) '06; M.D., (Johns
Hopkins) '12: Surgical Interne, Massachusetts General Hospital,
1912-13; Orthopedic Interne, Mass. Gen. Hospital, 1913-14; Assistant
Resident Pathologist, Johns Hopkins Hospital, 1914-15; Resident
Surgeon, University of California Hospital, 1915-16. Came to China
1916 as member of American Presbyterian Mission North. Spent two
years at language study and in mission hospital work, and has now
joined the surgical staff of the School of Medicine.

Dr. Louis H. Braafladt, A.B., (Decorah, Ia.) '06; M. Sc., (Chicago);
M.D., (Rush). Received Master's Degree at Chicago for research work
done in the Department of Physiology. Assisted Dr. E. R. LeCount,
Pathologist at Rush Medical College, for one year. Came to China in
1916 as member of the Norwegian Lutheran Church of America.
Spent two years in language study and in mission work, and has now
been appointed in charge of the Department of Pathology.
Mr. Tsung-yi Cheng. Brother of Pastor C. Y. Cheng of the China Continuation Committee. Was educated at the North China Union Arts College, Tungchow, and received three years special training in Pharmacy at the Union Medical College, Peking. Went to America on C. M. B. Scholarship, and followed a two-years course in Pharmaceutics in the University of Maryland. Is taking charge of the Department of Pharmacy at the School of Medicine during the absence of Mr. Pailing in France.

The coming of these new teachers has meant a great additional strength to the laboratory work of the School, and regular laboratory courses are now given in every branch of the curriculum with the exception of Experimental Pharmacology and Preventive Medicine, for which subjects expert teachers are now being sought. The equipment of the laboratories has also been considerably added to within the last few months, so as to include apparatus, etc., for each member of the various classes, where such was not already the case.

Since instruction is given in Mandarin, the strengthening of the Translation Department has also become a vital necessity, and a Translation Department has therefore been formed in connection with the School for this purpose. Dr. T. Gillison and Dr. P. L. McAll have been specially appointed to this work, and, together with two members of the C. M. M. A. Publication Committee (Dr. Neal and Dr. Shields), constitute the Department, whilst a fifth man has just been asked for from one of the English Missions. This staff, together with several well-qualified Chinese teachers and translators, should be able to make a considerable advance within the next few years in the production of the necessary text-books, etc. Dr. McAll is at present on furlough, but Dr. Gillison has been at work in Tsinan for some months, and is now organizing the activities of the Department.

The nursing staff of the Hospital attached to the Medical School has also received a most welcome addition to its force during the last term, in the person of Mrs. Ratcliffe, whose services the Canadian Presbyterian Mission is generously lending, pending the erection of the hospital in Honan at which Mrs. Ratcliffe is ultimately to work. This brings the staff of foreign nurses at Tsinan up to five, and with the Training School, which now includes 35 male and female Chinese nurses (almost all of whom are Middle School graduates), the nursing work of the large University Hospital is becoming established upon a thoroughly efficient basis.

Although the Hospital was only built three years ago, and contains over 100 beds, the ward accommodation is already proving insufficient,
both for the clinical instruction of the students, and to meet the needs of the large number of patients who seek assistance, and an appeal is now being made for a considerable extension of the buildings. In this connection it may be mentioned that the gratifying news has just been received of a gift of £1,000 from the S. P. G. for a first-class X-ray installation for the Hospital. With this long-needed addition, the hospital can justly claim to be as well furnished with all modern equipment as any hospital in North China.

The student enrollment for the term totalled 132, in addition to 36 in the Pre-medical Department, these students representing no less than 16 provinces of China and Manchuria. In spite of coming from such widely distant centres, there has been an excellent spirit of unity in the School, the various provincial groups being assimilated without much difficulty.

In connection with the religious life of the students, the most encouraging events have been the continued success of the Bible classes, and the deep impression which was made by a series of meetings organized by the Students' Y. M. C. A. and conducted by Pastor Cheng, which were held in December last. They were excellently attended, and many have testified to the spiritual help which they then received. Unfortunately Pastor Cheng was only able to stay four days, but his time was fully taken up with meetings and personal interviews.

Twelve Bible classes were held each Sunday morning throughout the term, attended in all by an average of about 90 students, who took the major part in the discussions week by week.

Whilst progress has thus been made in the development of the School, there has also been a marked advance in the home organization, resulting in the formation of two Joint Boards for the University, in North America and Great Britain respectively, each consisting of elected representatives of the contributing Missions, together with certain co-opted members. The British Board has now been completed, with representatives of the Baptist Missionary Society, Society for the Propagation of the Gospel, London Missionary Society, and Wesleyan Missionary Society, and five co-opted members, its personnel including Sir William Osler, Regius Professor of Medicine in the University of Oxford, Dr. Alexander Macalister, Professor of Anatomy in the University of Cambridge, and Sir Alfred Pearce-Gould, K. C. V. O., Vice-Chancellor of the University of London, etc. The composition of the American Joint Board is not yet completed, but it will contain representatives of the American Presbyterian Boards, North and South,
the Norwegian Lutheran United Mission, and the Canadian Presbyterian Mission. There are thus eight separate Mission Boards which are now contributing to the financial support of the School of Medicine.

Steps are now being taken to re-organize the Field Board of Managers, so as to include representatives of these eight Missions in China, and also a limited number of co-opted members.

With the termination of the European War, it is confidently hoped that this present year will see several further accessions to the teaching staff. Two men are actually under appointment in England (teachers of Internal Medicine and of Obstetrics and Gynecology respectively), and three others are promised from Great Britain, whilst negotiations are taking place which it is hoped will lead to the appointment of two further representatives from North America within the next few months.

THE CHINA MEDICAL BOARD, ROCKEFELLER FOUNDATION.

A comprehensive and interesting review of the beneficent activities of the Rockefeller Foundation in various parts of the world has recently been issued in pamphlet form by Dr. George E. Vincent, President of the Foundation. In the section on China it is stated that in this country the Foundation is working out a demonstration of modern medical education, and the following account is given of the progress already made and of what it has planned to accomplish in the near future.

On September 24th, 1917, the Minister of Education of the Chinese Republic laid the corner stone of a new institution, the Peking Union Medical College, which the Board is building in the Chinese capital. This group of laboratories, hospital wards, service buildings and staff residences will embody all the approved features of a modern medical center. The external forms will, however, be in harmony with the best traditions of Chinese architecture, and will thus symbolize a desire to make the college not something imposed from without, but an agency which shall in time become an intimate, organic part of a developing Chinese civilization.

In order to prepare students to enter the new medical college it has been deemed best to establish in Peking a pre-medical school which among other things shall ensure proper grounding in physics, chemistry, and biology, also in the English language, in which instruction in the
College is to be conducted. Such a school was opened in Peking in September, 1917, with a faculty of five instructors and a student enrollment of eight. Six members of the college faculty have been ap-

pointed. Unless the war creates still further difficulties it is expected that with a complete staff and fully equipped new buildings, the college will open its doors to students in September, 1919.
The program for China calls also for a medical school and hospital at Shanghai. The war has made necessary the postponement of this building project. The difficulty of securing a staff, the high cost of building materials, the unfavorable condition of foreign exchange, all forbid a present beginning. But during the year 1917, the Shanghai Medical School has been incorporated, trustees have been appointed, a provisional charter has been secured from the Regents of the University of New York, and an acting dean, Dr. H. S. Houghton, has been chosen; plans for buildings are being prepared.

Instead of establishing a separate pre-medical school in Shanghai, the Board has decided to help certain existing institutions to strengthen their curricula and increase their staffs. To three missionary colleges of unquestioned rank, funds have been appropriated toward the cost of laboratories and equipment, and for additional instructors. In order to establish standards for the guidance of the Board in making future grants, the Trustees have expressed a willingness to finance an educational survey to be made by experts under the auspices of a joint committee on which the leading missionary societies will be represented. A survey of this kind should result in a classification of institutions, the setting of minimum standards and the working out of a comprehensive educational program.

HOSPITAL SUBSIDIES AND TRAVELING SCHOLARSHIPS.

The medical schools in Peking and Shanghai cannot be successful in isolation. They must work in close relations with the preparatory schools, with the hospitals, with the medical missionaries, and with the modernly trained native physicians who form the nucleus of the new medical profession which is gradually being created to meet the needs of an awakened China. This co-operation has already taken the form of grants to schools which have been mentioned, and of subsidies to missionary hospitals. During 1917 nearly $50,000 was given to hospitals in a dozen centers (see accompanying map) of Northern and Central China.

For a number of years the China Medical Board's hospitals will provide a sufficient number of internships for the graduates of the Peking and Shanghai schools, but in time it will be necessary to place students as interns in outside hospitals. The strengthening and standardizing of a number of such hospitals is so important that the Board has been willing to have a share in stimulating progress in this direction. A study of the situation serves only to make one realize more
vividly how much has been accomplished by devoted and self-sacrificing medical missionaries in China.

The new schools and hospitals in Peking and Shanghai will enable the medical missionaries to keep abreast of current discoveries and procedures in medicine, surgery, and public health. Frequent short courses at one of these schools will prove in some respects more valuable than study at long intervals in the medical institutions of the United States and Europe. Pending, at any rate, the completion of the new schools, the China Medical Board is granting fellowships and scholarships to medical missionaries for study in the United States. Aid is also being given to native physicians, nurses, and students to pursue courses in American institutions.

A substantial beginning in the encouragement of student migration on a world-wide basis has been made. During the year 1917, Foundation funds to the amount of $45,487.24 enabled 57 individuals to come to the United States for training. The group included: 31 medical missionaries from China, one Brazilian doctor, 12 Chinese physicians, 7 Chinese students, 3 Chinese pharmacists, and 3 Chinese nurses.

The possibilities of extending this plan under the auspices of international committees are being considered. Overtures have come recently from French and Japanese sources. While there will be no concerted scientific boycott after the war, international intercourse in research and teaching will inevitably seek many new channels. The United States will undoubtedly play an increasingly important part in the scientific collaboration of the world.

THE FOUNDATION AS AN INTERNATIONAL FORCE.

The many normal activities of the Rockefeller Foundation are not isolated items, each independent of the others. They all fall into a world-wide organization in the interests of scientific knowledge applied to human welfare. Research, medical education, public health administration, surveys and commissions, exchange of specialists, student migration, are different aspects of a large plan and purpose of worldwide service to mankind.

At last peace has come but it cannot quickly bring universal confidence and good-will. There may be years of suspicion and bitterness, of misunderstanding and recrimination; there is sure to be keen industrial and commercial competition. Is it too much to hope that such work as the Foundation is doing in many parts of the world may tend at least to emphasize the common interests of mankind in turning science from the destruction to the healing and the happiness of men?
Hifukwa, Hitsunyokikwa Zasshi
(Japan. Zeitschr. f. Derm. u. Urol.)

H. Nakano.

The author is one of those unfortunate individuals who are unable to eat lobsters or crabs without suffering from an intense urticaria, hence he has a personal interest in this investigation. Mori has reported previously in this Japanese journal (Vol. vi, No. ii) on an extraordinary inflammation of the prepuce due to the toxines of the lobster, but aside from this publication the author has not found any other reference to the subject in Japanese medical literature.

Being uncertain as to whether the cause of the urticaria and other symptoms was an idiosyncrasy on the part of the patient, or whether there really is a poisonous substance found in the body of these crustaceans which could produce, under certain conditions, serious or annoying symptoms, portions of the liver, muscle, and eggs of the spiny lobster belonging to the genus Pencaus were separately dried, finely ground, and emulsified in water. After a thorough shaking in a machine the solutions were filtered and injected in varying doses into the peritoneal cavities of mice. The liver filtrate killed every time in doses as small as 0.2 mil in five hours, and in doses of 1 mil in two hours. The other filtrates were practically inactive, except the muscle solution which killed a few of the animals injected.

Filtrates which had been heated to 60°C. or boiled at 100°C. were without toxic action, if the filtration occurred after the heating. Liver substance boiled thoroughly in water, triturated and filtered was inactive; but an emulsion of the liver, made in water in the proportion of 1:5, was almost as active as that made with the dried material. These preparations killed in doses of 0.5 mil in four hours and of 1 mil in three hours.

Repeated filtrations had no more effect upon the toxicity than when performed a single time.

Other species than the spiny lobster, e.g., Palinurus japonicus Gray, were tried but their livers were less toxic. Similar preparations of muscle of the spiny lobster were still toxic so that a number of the experimental animals died. The eggs gave no reaction.

The organs of the rabbit and its serum, also guinea-pig tissues and eggs of the hen were tried in the same way but proved non-toxic.

The thought arose as to whether split products might be responsible for the symptoms and to ascertain if this was the case livers were placed in bladders and dialyzed in distilled water. The evaporated residue, purified with lead acetate, was found to be quite toxic. After further purification the alcohol precipitate was found to carry the toxicity. Part of this substance was soluble in water but part was not. These fractions were about equally toxic. The filtrate obtained after
the treatment with alcohol as above was slightly toxic and after further similar
treatment yielded a substance similar to the chief derivative.

The chief toxic substance was brown in color, non-crystalline, which burned
with a pleasant odor and scarcely leaving a trace. It gave a negative Biuret test,
no reaction with sulphuric or salicylic acids, was feebly positive with Nessler's
reagent, slightly acid to phenolphthalein, and did not reduce Fehling's solution.

Doses of 0.1 gm. injected intraperitoneally in mice produced some immediate
death; in others there was great difficulty in respiration after the lapse of half a
minute, followed by paralysis of the limbs. These symptoms disappeared in half
an hour. Later, the animals scratched their heads frequently and licked their
bodies, flanks, and limbs almost constantly.

A further report on this subject is promised later.

(478) **Viper Poison, Changes in the Kidneys and Adrenals caused by.**

By. **E. Habito.**

The viper, *Trimeresurus rinkianses Hilgd.,* is one of the poisonous vipers
of the Orient and produces in the kidneys of experimental animals the signs of an
acute nephritis with hyperemia, and hemorrhage of the glomeruli and of the inter-
stitial blood vessels. The uriniferous tubules are extensively necrosed and the
lumen filled with casts. There is also fatty necrosis in the adrenal.

(479) **Collargol Exanthem.**

**S. Nagai.**

A patient (not Japanese) was being treated for severe gonorrheal rheumatism
in the usual manner, but without relief. Collargol was injected intravenously
every day, or every two days, in doses beginning with 8.6 mils of a 1% solution.
In all 86 mils of this solution were administered, but with indifferent results.
This course was interrupted by the development of a definite rash directly
attributable to the medication. A little fever and chilliness usually followed these
injections.

A sudden rise in temperature took place shortly after a treatment, the man
vomited several times, and soon an erythema appeared on the back of the hand
and the instep. This more or less disappeared on pressure, but became more
permanent in character as it developed. There were perhaps twenty lesions on the
hand; only an occasional one was seen elsewhere on the body. At first the size
was that of a millet seed, but later it was somewhat larger. The center of each
lesion became darkened and the erythematous character disappeared. In the
center of these now black areas appeared light colored spots which became
somewhat like vesicles. The skin over them was quite thin and confined a small
amount of bloody serum containing a few leucocytes. No gonococci were found
in these lesions, and unsatisfactory tests for silver were negative. The bluish-
black spots persisted long after all local and constitutional symptoms had cleared
up. A bit of skin was cut out and a spot examined microscopically. The center
was necrotic and the adjacent tissues infiltrated with polymorphonuclear
leucocytes. The prickle cells in the involved area were mostly degenerated and
vacuolated. Outside the blood vessels slight traces of a brownish pigment were
seen, the nature of which was presumed to be exogenous; probably the pigment
was partly silver. The lesion was undoubtedly embolic. Urinary examination
failed to reveal any trace of silver.

**Hifukuwa, Hitsunyokwa Zasshi**

(Japanese Journal of Dermatology and Urology)

Vol. xvii, No. 11. 

November 20, 1917.

(480) **Calculi of the Bladder Treated by Lithotripsy.**

**G. Inoue.**

In two years the author had thirty-six cases of vesical calculi and treated
twenty-nine in the manner he describes. He had no difficulties or complications
but he emphasizes the point that he determined the size and nature of the stone by cystoscopy before attempting to crush it. Many of these patients were not in a hospital and were operated upon under a local anesthetic.


Urine removed with a catheter thirty minutes to two hours after rabbits had been injected intravenously with suspensions of tubercle bacilli, was found to contain the organism, as indicated by the disease produced when it was introduced into guinea-pigs. This was equally true of the human and of the bovine type. Kidneys removed two hours after this passage exhibited a certain amount of parenchymatous degeneration, and albumen was found in the urine in increased quantities.

Jiji Shimbun

(Medical News)

No. 984. October 25, 1917.

(482) SCLERODERMA, CASE REPORT. Pp. 1369-88. N. Masugami.

The author believes that scleroderma is connected with lymphatic disorders rather than with disturbances of internal secretion.


The present investigation was primarily to determine the effect of surface area and depth of liquid in the latrines in relation to the viability of hookworm larvae. The cultures used had been artificially reared, and the liquid had been obtained by centrifuging a portion of the contents of a closet and diluting it to the specific gravity desired. The solutions were used immediately after preparation; in one case to simulate conditions following rains, and in other instances after 24 hours to allow for bacterial readjustment, thus resembling conditions obtaining normally. There was no noticeable difference in the results as detailed later, and so no further light was thrown upon the oxygen requirements of the organisms from this standpoint.

Exp. I. Tubes, 1.5 cm. in diameter; liquid 2-3 cm. deep; 19.26° C.; sp. gr. 1.010,--1.015. Some of the hookworm larvae alive after 144 hours. Sp. gr. 1.020, and above, dead in 24 hours.

Exp. II. Same, at incubator temperature. All larvae died in 24-48 hours.

Exp. III. Same conditions as in Exp. I, except that liquid was exposed in dish 9 cm. in diameter and 0.5-1. cm. deep. Sp. gr. 1.010. A few of the larvae lived for 48 hours. Sp. gr. 1.015, a few lived for 24 hours. Sp. gr. 1.020 and above, the larvae died in 24 hours.

Exp. IV. Similar to Exp. II, but with conditions of Exp. III. All larvae dead in 24-48 hours.

Controls of common water for Exps. I-II and Exps. III-IV, gave living embryos at the end of two weeks; but those under cultivation in hollow ringed slides did not live well when mixed with the dilutions mentioned above.

It was noticed that larvae could not reach the surface by crawling up the smooth sides of the tubes but could readily do so when inert matter was present.

Maggots were occasionally found in and about latrines and the wash water from these yielded on centrifugation several hookworm eggs. The opinion is therefore expressed that this constitutes an additional reason for the exclusion of flies from all collections of night soil.

Tuberculosis, Effect of an Alkaloid derived from some member of the Rutaceae upon T. bacillus, with reports of clinical cases. Pp. 1449-61. T. Wakabayashi.

The alkaloid mentioned, the exact source of which is not stated, is said to resemble berberin in most respects. In dilutions of 1:5000 in glycerine broth it stops the growth of tubercle bacilli; and in strength of from 1:50,000 to 1:100,000 produces a definite increase in the phagocytic power of leucocytes toward the tubercle bacillus and typhoid organisms.

Applied to experimental animals infected with tuberculosis, the only noticeable effect was prolongation of life. This was hardly considered a fair test inasmuch as chronic tuberculosis in animals is difficult to produce. The clinical tests were few and unconvincing.

The substance tested was soluble in a mixture of glycerine and distilled water and in that form was injected into the body in the proportion of 1 gm. to 250 mils. The toxic dose for dogs was 2.5 mils per 230 gms. body weight. In sublethal doses it was absorbed readily from the subcutaneous tissues where it was non-irritating.


The hemoglobin value was reduced 5%-6% in three cases under the care of the author, while the decrease in the red cells amounted to 12-27%. Traces of free hemoglobin remained in the blood for some days after the attack. The intensity of the paroxysms depended upon the extent of cooling of the body with ice water. The actual number of red cells destroyed was 500,000 to 1,500,000.

The leucocytic count rose from 10-50%, and the polymorphs constituted 77%-84% of the total. Lymphocytes were decreased in number during the attacks, but in the intervals were increased from 15-18%. No change was noted in the mast cells.

Gunidan Zasshi

(H Journal of the Military Surgeons of Japan)


The author has entered into a long discussion of the methods of isolation and cultivation of the organism and mentions several little points of interest. Salts of glycyrrhizic acid accelerate the growth of the T. bacillus when sufficiently diluted. Also thick decoctions of rice bran and of Armillaria edodes Sacc. favour the growth. Strangely enough, the salts of glycyrrhizic acid when applied to
the treatment of tuberculosis in animals were found to inhibit the development of the disease and were not harmful to animal or man.


About two-thirds of the cases of pleurisy were of tuberculous origin. The carrying of burdens too heavy for the individual is regarded as predisposing to the disease.

Tokyo Iji Shinji
(Tokyo Medical News)
No. 2050. November 17, 1917.


The question of the etiology of typhus fever is a very vital one in Japan. The discovery of a bacillus by Plotz and of a spirochète by Futaki stimulated great activity in this form of investigation, but neither observation has been verified. Bacilli have not been found by most workers and this has lead to the question of the identity of the Oriental form with that occurring in other parts of the world. (Reviewer's note. This agrees with the findings of Schofield in our laboratory, who noted the rise in temperature on the tenth day but was never able to find any bacilli in either guinea-pigs or cultures.)

The dramatic conclusion of the Futaki affair had the effect at least of calling attention to the fact that spirochætes occasionally occur in the kidney, but the exact kinds found there and their significance have not been fully made out.

Fifty kidneys from cadavers contained spirochète-like bodies in the tubules and other portions, as demonstrated by the Levaditi method in 26 instances; and they were found in 15 out of 26 kidneys removed surgically. The organisms occurred in the casts or debris in the lumen of the tubules, but were not found in the interstitial tissue, the epithelial cells, or the blood vessels, with the single exception of those of the glomerulus. The casts were generally hyaline, but were occasionally granular in composition. There was no evidence to connect the spirochætes with any definite disease, nor to indicate that they could be the cause of disease and as such had been eliminated by the kidneys. The occasional occurrence in the glomeruli might possibly suggest this explanation.

Again, there is the possibility that these organisms represent an ascending infection of some saprophytic form from the smegma, and that the finding of several in a single cast, here and there in a section with none between might indicate a local multiplication of the organisms.

At least three types can be recognized; they do not occur singly but are always mixed together. These are not all sharply differentiated from S. pallida, but morphologically they certainly are not the same. Other evidence of syphilis was not found in any of these cases, hence the circumstantial evidence is against this hypothesis.

Type I is small with regular turns. Type II is irregularly coiled and often with deep turns. Type III is gently waving. The second type is much the most common.

The presence of the organisms in surgically removed kidneys precludes the possibility of post mortem invasion as the explanation of their presence.


From the standpoint of immunological studies the identity of these spirochetal forms is considered established. Immune blood serum of high titre was pro-
duced by injections of cultures from the two kinds found in rats and was used with much success in the prevention and cure of Weil's disease.

Tokyo Iji Shinji
(Tokyo Medical News)
No. 2051. November 24, 1917.


Cultures of spirochetes were grown in semi-solid horse-serum agar and centrifuged to sediment the organisms. The washed organisms were autolysed in saline and purified by filtration. This solution had definite antigenic powers and could be used for passive as well as for active immunization.


The effect of the rays from a quartz lamp, 100 volt, D C. 4 ampère, for more than one and a half minutes at a distance of 10 cm. was sufficient to protect animals from hemorrhagic jaundice. The spirochetes were not all killed by this procedure but were decreased in number and rendered less virulent. Those which were adherent to the skin, or were in the superficial layers, were probably completely eliminated.


Blue pyoktanin is said to be a compound of penta-methyl-p-rosanilin (C₂₄H₂₈N₅Cl), hexamethyl-p-rosanilin (C₂₅H₃₀N₅Cl) and hydrochloric acid. It is decolorized by alkalies and the color is restored by acids, thus producing a reaction much the same as found in the Endo media.

Another form is combined with dextrose to determine the formation of gas also, and is kept in tubes which are melted for use and inoculated at 50°C. The third type is a combination with peptone solution for the simultaneous test for indol. The colon bacilli and typhoid bacilli are very well differentiated but not dysentery bacilli.

Tokyo Iji Shinji
(Tokyo Medical News)


An affection of the skin well known to the Japanese farmer is called "Koe mače" which means "bitten" or "affected" by manure. It does not often call for treatment, but it has a uniform symptomatology and is liable to recurrence. Those who weed fields in the morning or at night are subject to it, especially when the vegetation is wet with dew or rain. It is less common in dry weather. On the other hand, those who work in flooded fields or in streams do not contract it. The season extends from May till October; the disease is not found in the winter time. The bare hands and feet are the parts commonly affected.

A short time after beginning work in the fields the patient notices a smarting and itching of the exposed parts, and small red spots appear later. Slight swelling is seen about the red spots, but the lesion does not spread. Great itching persists and is very troublesome at night; the patient often goes to the extent of
burning the place as a counter irritant. Secondary infection frequently follows
the scratching and an impetigo-like lesion results. Small white blisters make
their appearance in the adjacent areas, due perhaps to the friction. This part of
the picture has been given the name of "Mizu make" the former word meaning
"water." The acute symptoms last about three days after which the local lesions
gradually disappear.

About three days later a violent cough begins, which soon causes hoarseness
and results in the expectoration of some bloody sputum. This lasts from three to
ten days and the symptoms then gradually disappear.

The natives have learned that oils of various kinds rubbed on the exposed
parts will prevent the disease, so they use mustard or rape-seed oil and sometimes
vaseline. This treatment seems to be reasonably effective.

Histological examination of the lesions was made by the author and partly
reported upon. The implication is that the worms found penetrating the skin
were hookworm larvae but a fuller report is promised later. The adjacent blood
vessels were found engorged and the tissues full of round cells.

(496) Rat-bite Fever, Spontaneous Transmission from Guinea-pigs to

Infected guinea-pigs were continuously kept with healthy rabbits until the
latter began to show signs of the disease similar to those observed in experiment-
ally infected pigs. The hair began to fall from the head about the ears and neck
and the dorsal part of the thorax, and the eye-lids became swollen and lost their
hair. Fever was associated with corneal congestion. Controls in which blood
from infected guinea-pigs was injected into healthy rabbits exhibited the same
disease picture.

Attempts to ascertain the cause of the infection by examination of the blood
of the animal failed. However, injection of some of this blood into healthy
guinea-pigs produced in them the typical disease. Agglutination of spirochetes
with the serum of the spontaneously infected animals and those used as controls
was successful up to a dilution of one to eight, whereas the control with normal
serum failed to show any clumping. Levaditi stains of the internal organs did not
show any organisms.

As to the means by which infection occurred nothing is said. No mention is
made of possible bites or scratches by other animals, or infection from rough places
in the cage which might easily have been contaminated by the close association.


Saikingaku Zasshi
(Journal of Bacteriology)

(498) Leucocyte Counts in Monkeys Injected with the Virus of
Typhus, Tsutsugamushi (Japanese River Fever), and Small-pox. Pp. 979-1020.
M. Kotas.

These diseases have many phenomena in common, hence the reason for their
comparative study. The Japanese monkey, Macacus fuscatus, was used for the
experimental injections and a preliminary blood count was made. The averages of
21 counts were: total leucocytes, 10,890, (6,430 to 22,150). The differential counts
gave: neutrophiles, 42.23%; lymphocytes, 50.84%; large mononuclears and transi-
tionals, 3.62%; eosinophiles, 2.84%; basophiles, 0.48%. The changes in the course
of the diseases are as follows:
Lymphocytes, and Eosinophiles.

Dear,
Incr., Incr., Incr.,
Incr., Incr., Incr.,
Incr.,

Blank spaces in this table mean that no change was observable.
Young animals have higher counts than older ones.
Tuberculosis in animals is manifested by an early increase in the total count and in the neutrophiles (?)


The Shiga type of organism was common and very virulent from the month of May until autumn with only occasional cases of dysentery with other types present. The latter cases were milder, more easily treated and were sporadic in occurrence. The Shiga type was practically the only one found during the remainder of the two years and this strict limitation in its occurrence was a matter of some surprise.

Report from Research Department for Infectious Diseases, Imperial University, Tokyo.
Dated June 30th, 1918.


Clinically this disease is recognized by recurrent attacks of high fever with progressive anemia. The mortality is from 30% to 80% and varies with the epidemic.

The causal organism has been considered to be ultramicroscopic and not cultivatable. Last July, Miyagawa and Takemoto found an organism, which they considered to be a spirochete, in the lymph glands, liver, and kidneys, of a horse suffering from this disease. Recently, attempts to cultivate the organism have been made and inoculations of it into horses made to test its pathogenicity.

In Noguchi tubes cultures were obtained from the blood of sick horses, and the organism thus grown could be carried to the third generation and could produce the disease in healthy animals. It was found possible also to recover the organism, or to carry it from one animal to another. Animals thus affected were very anemic and had nucleated red cells in their blood. This direct transmission from an animal was possible when the blood was fresh, but did not succeed when it had been citrated and kept at incubator temperature for 120 days. However, three transfers on artificial media after 130 days incubation made it possible to produce infection in a horse. Serum from a horse which had recovered from the infection was injected into another animal together with a culture of the organism, very little protection being afforded to the latter because of the presence of the serum. This was different from what would have been expected in case of a bacterial infection.

Animals artificially infected were found to have the organisms distributed in the organs in the same way as in those spontaneously sick of the disease.

Pfeiffer's phenomenon demonstrated very little spirochætolytic power.
Culturally the organisms grew in cotton-like or globular colonies in the middle of the tubes, but neither at the very top nor at the bottom of the anaerobic tubes.

As found in the circulating blood the organism stains with Giemsa, but the cultivated form does not. When partly decolorized there appear to be deeply stained granules scattered through the body. Silver impregnation methods demonstrate these also, as do carbol fuchsin, gentian violet, and Laeffler's cilia stain with the use of tannin. The length is from 3.25 \( \mu \) and from 3.1 \( \mu \) in diameter. The turns are rather shallow and number 5-7. The cultivated organism is quite variable in form and has a short terminal filament. Segmentation was both transverse and longitudinal. Motility was rather sluggish.

The name suggested for the organism is *Spirochaeta equi infectiosa*.

**Kyoto Igaku Zasshi**

*(Kyoto Journal of Medical Science)*

Vol. xv, No. 4. July 1918.


A neutral solution of cerium tartrate was used for experimentation on dogs and frogs. Cerium is an energetic agent that inhibits the contractions of the heart muscle because of a direct injurious action upon that organ. In toxic doses the same action is intensified; in consequence, the blood pressure sinks rapidly and respiration fails. Repeated doses did not produce inflammatory changes in the kidneys, but two animals died of edema of the lungs.


The kidneys were removed from certain native Japanese animals and the length of time the animals survived after the operation was noted. The averages only are given. White rat, 1 day 5 hrs. 30 min.; cat, 1 day 18 hrs. 30 min.; guinea-pig, 2 days 1 hr. 15 min.; dog, 3 days 2 hrs. 19 min.; puppy, 3 days 22 hrs. 4 min.

 Interruption of the kidney circulation for different periods had the following results: for 45 seconds, no evident effect; for seven minutes, albuminuria lasting for a few days; for more than ten minutes, uremia which proved fatal after several days.


H-ion concentration appears to be the all-important factor concerned.


The author claims he has proven that Benda's work *(Zeitschr. f. Biol. 45, 1914)* is not a satisfactory support for the principle of the independence of excitability and contractility.


This is a statistical study of the relation of the stomach and liver so far as metastatic growths are concerned, and it discusses the paths of transmission. The assertion is made, but without attempting to prove it, that the hepatic artery is capable of aiding this spread in some cases. Liver growths occurred in 47% of the cases, a number which seems higher than is usually given for this condition. Men seem more predisposed to this distribution as evidenced by 44 cases out of 87
for men, and 14 out of 36 for women. The more cellular types of malignant
growth, such as adenocarcinoma, etc., were those most frequently found meta-
tasized in the liver.

**Tokyo Igakukai Zasshi**

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


(506) *Enzyme studies with especial reference to Trypsin.* Pp. 99-
119 in the supplement. Text in German, summarized by the author. Y. Masai.

Using casein as a substratum and determining the amount of enzyme action
by the use of a tannic acid solution, the result of tryptic action is directly pro-
portional to the amount of enzyme as long as the substratum is in excess. The
action is not increased by globulin or spleen enzyme, and that ferment in the
urine is not enhanced by the addition of intestinal crepsin. The action of a
pancreatic infusion from the cow and pig, and that of the spleen, is definitely
more effective when combined than the sum of the action of any two acting
singly. This phenomenon is especially noticeable in the case of the first.

Tryptic activity is increased by crepsin, but the rapidity of the action of
intestinal and yeast crepsin is not so much increased as is that ferment found in
the urine. Casein or its split products acted upon by trypsin are less resistant
to the action of urine enzyme or crepsin than that which has not been so treated.

The action of pancreatic extract or globulin is not totally inhibited by serum
albumen. The action of tryptic enzymes obtained by the treatment of pancreatic
extract with ammonium sulphate to the point of ½ saturation is totally inhibited
by a sufficient amount of serum albumen, the inhibition being proportional to
the amount of the latter.

In human urine no enzyme has been isolated with certainty which is actively
proteolytic in alkaline solution, whose activity is inhibited by serum albumen
and which is inactivated by heating to 45°C.

The most important points in the foregoing, in the estimation of the author,
are the findings that pancreatic trypsin can be supplemented by crepsin from the
urine, the intestine, and from yeast. This distinguishes trypsin as an enzyme
which is better able to initiate proteolysis than it is to continue and complete the
process.

**Tokyo Igakukai Zasshi**

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


(507) *Wound Secretion and foreign bodies embedded in wounds.*

(M. Moteki.

This article is a summary of the bacteriological investigations carried on in a
Japanese Red Cross hospital in Paris, of the flora found in wound secretions at
different stages of the healing process, and of the organisms which are carried in
by foreign bodies which remain embedded in the tissues.

The secretions contained streptococci in 95% of the examinations; staphylococci
in 85%; and *B. perfringens* in 36%. Several others were encountered in from
2-10% of the cases. In all, twenty-eight different varieties were identified and the
combinations were very numerous. Tetanus was found in only 0.2% of the cases.

There seems to be a transient flora represented by a wide variety of forms
which eventually gives way to a single form as healing progresses. The strepto-
coccus is the most persisting form, with the staphylococcus as a close second. *B.
coli, B. perfringens* and *B. pyocyaneus* do not last quite so long. The presence of
a foreign body greatly increases the length of time during which the transient forms persist, although an actual examination of the bodies when removed does not always reveal an especially abundant flora.

Tokyo Igakukai Zasshi
(Mitteil. d. med. Gesellsch. z. Tokio)


(508) CEMENT INHALATION AND ITS EFFECT UPON HEALTHY AND UPON TUBERCULOUS LUNGS. Pp. 2-37, 7 illustrations. S. Nagai.

The observation was made that tuberculosis is uncommon among the workers about lime kilns; hence the question arose as to whether or not the lime might have a restraining effect upon any tubercle bacilli that might gain entrance to the lungs. Former efforts to investigate the matter were unsuccessful for want of proper technic and apparatus. The author sought to meet this want in the form of a specially devised dust blower run by a water wheel. Lime dust alone and lime dust mixed with tubercle bacilli were agitated in the air in which guinea-pigs were confined and proper tests made of the lesions produced after varying lengths of exposure.

The results were again negative in that there was no demonstrable beneficial effect produced upon simultaneously or previously produced tuberculosis, although the dust alone had no apparent detrimental effect upon the lung tissues, as ascertained by microscopical examination of test animals and controls. The dust was taken up the lungs and deposited in the interstitial tissues and was from time to time eliminated.

(509) MENTAL DISEASES IN JAPAN, THE PRIVATE CARE OF PATIENTS, AND TREATMENT. Pp. 38-82. S. Kure and G. Kashida. 85 photographs, 72 figures and 15 statistical tables. The last of a series of articles in this publication, the others being in No. 10, pp. 2-36; No. 11, pp. 41-80; No. 12, pp. 39-66.

This series is most timely in calling the attention of readers to the lamentable conditions surrounding the confinement of all persons suffering from mental disorders. The State provision for such cases is very limited; in consequence, the majority of them must be kept at home. A systematic investigation was made by these authors with the result that the existence of 140,000 mental defectives was discovered. The exact conditions surrounding 361 were investigated and are here described, the photographs and drawings illustrating the houses in which the patients were kept and the relations of these to their surroundings. Most of the patients were under the unskilled care of the family, although some were being treated by the Shinto priests and the Buddhist monks. Hydrotherapy and other well-known remedies were applied, if any attention at all was bestowed upon them.

The lunacy laws as they exist are reviewed and suggestions are made for their amplification to meet the present needs, and there is a full discussion of the various conditions obtaining for the transportation of these unfortunates, the criminal charges on which they were committed to confinement, and the frequency of the police inspection. Fully 80% of the patients are men; only 4% are provided for at State expense, the families of the remainder being responsible for their care and keeping. The better class of people furnished 12% of the cases; the middle class, 37%, and the poorer classes 51%, of which more than half were from the very lowest grade of society. The farmer class furnished 65% of the patients. Without exception these persons had committed some act of violence or other violation of the criminal code and were confined for that reason. Nearly 60% had been confined for at least five years, many over fifteen years.
Dementia praecox was the commonest form of mental derangement, followed by dementia paralytica, manic-depressive states, idiocy, etc. There is no mention made of the part taken in the etiology of these cases by syphilitic infection.

The rooms in which these unfortunates are confined are generally small, patterned after the native style of architecture, but differing in the wooden bars and locks which are strongly constructed. A fourth of the rooms are integral parts of the houses; another fourth are connected with barns, and the remainder are more or less disconnected from the main buildings or are located in a nearby field. The common size is 1-1/2 “tsubo” (36 or 54 sq. ft.) of floor space. The height of many of the rooms is so low that the occupants cannot stand erect. Windows and sides are so constructed that very little light can enter and there is very little protection against wind and driving rain. The sanitary arrangements are most simple, consisting merely of a hole through the floor in one corner of the room with a bucket placed on the ground underneath. The floors are not well above the ground, and are often wet from the dampness of the soil which rises in the posts. The whole aspect is one of misery and desolation, and the circumstances are such as to prevent absolutely the recovery of any person so confined. Food, clothing, bedding, and the necessities of life are most sparingly supplied, and baths are very infrequent. A mentally defective person is considered by his family as lost to them and as long as he lives he is a burden to all concerned. The treatment is probably not intentionally cruel but is rather that of neglect. Many of these cases might be improved under better treatment; what is needed is more enlightenment of the people as to the nature of mental maladies.

Tokyo Igakukai Zasshi
(Mitteil. d. med. Gesellsch. z. Tokio)


The author takes exception to the teachings of the von Noorden school in regard to the influence of the thyroid upon metabolism and presents the following points for consideration. He is unable to find any function of the thyroid the absence of which prevents the production of glycosuria following adrenalin injections. Furthermore, the adrenalin with its glycosuria counteracts the cachexia following thyroid extirpation as well as other forms of high grade weakness. The conclusion drawn is that the influence of this organ upon carbohydrate metabolism has not been proven.


The essential parts of the apparatus are a 3-holed Woulfe bottle in the center hole of which is a mechanical stirring device; and a pump patterned after the old Allen pump and re-patented in Japan. The latter consists of a circular loop of rubber tubing in which rotates a wheel bearing two smaller wheels placed opposite each other that make compression on the tube in a progressive manner. The shaft connects with a pulley wheel of much larger diameter, which in turn is run by a small motor of low gear and evidently attached to the stirring device. A drawing of the construction is given in the text.

In a series of experiments on animals and man the authors found that autoplastic transplantation was uniformly successful, but that homoplastic transplants would frequently not grow. The question of the effect of blood relationship on the success of the grafting is not entered into, but the astonishing statement is made that pieces of skin can be successfully used after being kept in saline for eleven days at a temperature of 70 °C. Ten photographs and drawings illustrate the growth of the transplants.

Myoma of the Bladder, Primary growth with Metastases.

Case report. Pp. 29-34. K. Takagi and M. Masudzu. 2 figures.

A typical myoma of the submucosa reached the size of a child's head and filled the bladder. The serosa was not involved. The myoma cells were spindle-shaped with sharp ends, and were mixed with numerous degenerated elastic fibers. A few metastic nodules occurred in the lung and some calcified masses were found in the liver and stomach. No differentiation of the growth from sarcoma is given.

Carbohydrate formation from fat in the Metamorphosis of the Silkworm.


The author contributes a little to the solution of the problem of carbohydrate formation from fat by presenting some analytical data to suggest at least the presence of this change in the various stages in the life of the silkworm. He finds that during the quiescent period the glycogen decreases rapidly, but the fat declines very gradually. This phenomenon agrees with that seen in the hunger condition of mammals. If during the waking period food is still further withheld, the glycogen content of the body reaches its lowest level and then begins a definite destruction of the fat.

The sugar content remains constant. During pupation the protein and glycogen elements share in the change, but the fat to the slightest extent only. During the chrysalis stage all elements eventually decrease, but the idea is strongly suggested by the author that the fat is the source from which the carbohydrate is renewed. The latter element is so transient in nature, and remains unchanged for such a short time, that absolute proof of the change is difficult.

Intestines, Rupture by Contusion of the Abdominal Wall, an Experimental and Clinical Study.

Pp. 121-158. German text. T. Miyata.

This article consists of a general discussion of the treatment and the significance of the various symptoms. Thirty-five cases are reported and the details of treatment are outlined.
Medical Reports.


Statistical Summary.—Situation: Latitude 31° 15' N.; Longitude 121° 29' E.; Elevation: approximately sea-level; Area within Municipal limits: 5,584 acres or 22½ sq. miles; Density of population: 122 persons per acre; Number of inhabited houses: Foreign 3,913, Chinese, 59,264; Population: Foreign 21,000, Chinese 659,000; Death-rate: Foreign 16.5 per 1,000, Chinese 12.8 per 1,000; Total rainfall: 51.9 inches.

According to the Report, the salient feature of the record of the Public Health during 1918 is that of a series of shocks. The year opened with pneumonic plague again dramatically in the picture as a menace from the North. What is now known as the Shansi epidemic, which killed some 15,000 people, made a tragic sweep from the Suixian district in Mongolia, just to the north of Shansi Province, through Peking and down the Tientsin-Pukow Railway to Fengyang and Nanking, where it opened up dire possibilities among the populous and overcrowded centres in the lower part of the Yangtse valley. Immediately plague was reported in Fengyang special preventive measures were formulated, and when Nanking was infected such steps as were possible were taken to limit passenger traffic by rail and river from the infected areas, and in the Shanghai Settlement itself for the discovery of cases and means of preventing further infection. However, in none of the places south of Shansi did the outbreak show signs of much momentum and, after a small flare up in Nanking, it subsided with the coming of spring.

Another bolt from the blue was the remarkable epidemic of cerebrospinal fever in Hongkong in the early months of the year during a period of unusual cold. This exceptional cold led to the closing up of fresh air openings into living and especially into sleeping rooms, where people huddled for warmth, so that such an infection once introduced had the best chance of spreading. This should be an object lesson to those in other Chinese cities where overcrowding is excessive and practically unrestricted. A careful watch was kept for cases in Shanghai and when no less than five cases were reported within two days a similar epidemic seemed likely. However, nothing more alarm-
The third unusual shock occurred towards the end of May when the great pandemic of influenza suddenly impinged on Shanghai without warning, except that some vague reference to "Spanish Disease" had already appeared in the press. The tremendous sweep of influenza is so distinctive that no other disease but dengue resembles it, and the latter is limited to warm countries. A definite diagnosis was made within a couple of days, which proved to be the right one. Though Shanghai was visited by two epidemic waves, that is in June and October, compared with many other places it escaped lightly, which is remarkable considering the excessive overcrowding. China is, however, generally considered the real home of influenza, so that close acquaintance has conferred some degree of immunity on its people. A former epidemic originating in China was known in Russia as "Chinese Influenza," passing into Europe it was known as "Russian Influenza," from Europe it spread to America and was known as "European Influenza," finally it reached Japan, where it was called "American Influenza"; having circled the globe and reached its original home, China, whose many millions constitute the fountain head of epidemic disease. As communications are increased it becomes ever more necessary for the safety of the whole world to develop modern Public Health administration throughout China.

There are the usual instructive comments on various other diseases which occur in Shanghai. This valuable report may be had for the asking by writing to Dr. Arthur Stanley. There is also an annexed report on the problem of water supply and sewage disposal, by Professor Gilbert J. Fowler, D.Sc., F.I.C., which should be read by all interested in the sanitation of Chinese cities.


Lecturers:—A. Russell Young, L.R.C.P., L.R.C.S.; P. B. Pedersen, M.B., Ch.B. (Ed.).

Assistants and Demonstrators:—Dr. Liu Tung Lun, Dr. Kao Wen Han, Dr. Kuo Ming Yao, Dr. Hung Kuo Chang.

This report consists very largely of an earnest plea for the strengthening of the College. It is urged that the Western training of Chinese doctors and medical evangelists, who will minister to their own people both physically and spiritually, is one of the best ways by which other nations can exert a beneficent influence over the Chinese. The opportunities of the moment are so great, now that peace has been declared, that Dr. Christie has returned home to present to the Mission Boards the needs of the College and obtain the desired support. It is extremely gratifying to know that out of the twenty students that graduated two years ago, nine are engaged in missionary work; the rest are all doing well either in private practice in China or abroad in France. A larger number would be connected with mission hospitals if there were more hospitals in Manchuria to employ them.

Among recent developments has been the formation of a Medical Association in Manchuria. The meetings are held in the College, and the young doctors take pride in having suitable cases to report. All must earnestly hope that the efforts now being made in China and abroad to raise the College to a high state of efficiency will be most successfully carried out, so that there will be at least three or four missionary medical schools in China of the highest standard.

Report of the Mukden Hospital, 1918.—The professional work promises to furnish very interesting statistics when the staff is complete, and full justice can be done to the Pathological Laboratory. On the surgical side there is a constantly growing number of abdominal major operations being performed. On the medical side many interesting facts about diseases in China are being recorded. The religious work in the hospital has been most successful. It is expected that the new year will bring: (1) the return of the foreign staff from the army services; (2) the arrival of foreign nurses to reshape and modernize the entire nursing department of the hospital; (3) the erection of a two-storey building to relieve the pressure on the ward-space, and to provide premises for better administration; (4) the definite planning of extensive improvements in the out-patient block, dividing it more efficiently into separate clinical departments. Looking back over the past year there seems to be a number of facts which promise well for the future.
Report of the Temple Hill Hospital, Chefoo, 1918.

HOSPITAL STAFF:—Oscar F. Hills, M.D., Robert W. Dunlap, M.D.; Chen Hsioh Ling, M.D.; Dr. Djang Shu Giang, Pharmacist. John S. Brock, Office Assistant.

During the year there has been a very gratifying increase in the number of in-patients, which is by far the largest since the institution was opened. There has been a concurrent increase in the amount and importance of the general surgical work, and in special operations for diseases of the nose, ear, and throat. Careful microscopical examination has been made of sputum, faeces, etc., of all patients. It is noted with some surprise that over 50% of the farmers of the district have hookworm infection. An increase of the staff is necessary but owing to war conditions it has been impossible to take advantage of the generous grant for this object made by the China Medical Board of the Rockefeller Foundation. The report closes with an earnest appeal for additional physicians and nurses, for "medical missions hold the golden key which will open the door to life and peace."

Report of Douthwaite Memorial Hospital, China Inland Mission, Chefoo.

PHYSICIAN IN CHARGE:—Dr. Alfred Hogg.

The greater part of the medical work connected with this hospital is the practice, weighted with unusual responsibilities, among the three hundred foreign school children, about fifty members of the staffs of the schools, various missionaries, and some of the visitors to Chefoo. A certain amount of medical work is also done among the Chinese. It is regrettable to record that it was necessary to close the hospital for some time owing to the illness of the physician in charge. The usual statistics are given.

Report of Men's Hospital, Suifu, Szechwan, 1918.

PHYSICIAN IN CHARGE:—C. E. Tompkins, M.D.

This report is one of several recently received, which reveals the great amount of work which mission hospitals are doing in the care of sick and wounded Chinese soldiers. For two and a half years nearly all the patients in the Suifu Hospital for Men have been soldiers, officers, or wounded civilians. Most of the wounded by the time they reached
the hospital were badly infected. It is noted that the recuperation of sick and wounded Chinese is really wonderful. Unfortunately, at the beginning of May, Dr. Tompkins became ill with typhoid fever when there were 140 wounded patients in the hospital. The hospital nurses, mostly untrained, were forced to shoulder the very heavy burden, but they worked faithfully and well. It is doubtful whether the hospital will be opened again until Dr. Tompkins returns from furlough.

The experience of this hospital furnishes an eloquent plea for the stronger support of mission hospitals by the home churches. The whole burden of the work should not rest, as is too often the case, on the shoulders of one physician. A hospital containing 140 beds should have a strong staff of physicians and trained nurses, adequate equipment, and ample financial support. It is hoped this whole question will be thoroughly discussed at our next Conference.

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Report of Medical Mission Work in Kwantung, Kirin, 1918.

The work of the Women's Hospital under the charge of Dr. Margaret E. McNeill has gone on much as usual. As in so many other places there was a severe epidemic of influenza in the autumn.

During the year the head assistant, who has been employed in the hospital sixteen years, resigned in order to go to the Chinese Government Hospital, as her family wished her to earn more money. Medical missionaries elsewhere can sympathize with Dr. McNeill in her loss, for experiences of this kind are probably very common.

The Men's Hospital, which has been without a physician since Dr. Gordon went home because of his ill health, was opened in December 1917 with a Chinese doctor in charge. It is still under mission supervision, though it is supported by the Chinese, who contributed £1,000. Dr. Wu gave great assistance and did much to initiate the scheme and make it successful. The physical needs of the patients are carefully attended to and every endeavor is made to instruct them in Christianity during their stay in the hospital.

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Annual Report of Peking Union Medical College Hospital, Peking, 1917-18.

Hospital Staff:—F. E. Dilley, Surgeon-in-charge, Superintendent; John H. Korns, Physician-in-charge (on furlough); H. J. Smyly, Physician, Roentgenologist; W. G. Lennox, Physician; E. M.

Nurses:—Miss E. J. Haward, Superintendent; Miss A. Christiansen, Miss S. H. Connelly, Miss J. Carr, Miss H. L. Pai.

Under the direction of the China Medical Board and by means of its resources, the hospital has recently undergone reorganization; this has been extended to the workings of every department, and has brought about greatly improved conditions. The foreign staff was smaller than in previous years, but the Chinese physicians have done splendid work, and other young medical men are being attracted to the hospital for the sake of the experience which can be gained there.

It is the desire of the hospital authorities to have thorough, conscientious work done in all departments so that well-trained men will be sent out in the years to come and that high hospital traditions will be established, which it may be said do not exist at the present time.

A special demand on the services of the hospital occurred during the year. The report of a rapidly spreading fatal epidemic, west of Suiyuan District, first came to Mr. Roger S. Greene, of the China Medical Board, and he immediately started an investigation. The epidemic was soon found to be one of pneumonic plague. The Chinese Government appointed a commission and established a plague prevention service. An appeal to the Peking Hospital was made for aid, and the institution responded promptly and rendered every possible assistance until the spread of the plague was stopped. Supplies and men were furnished, and as many as twenty persons, including doctors, nurses, a pharmacist, and some senior students, were engaged at one time.

Religious work and social service now form a regular department of the work of the institution, being directed and financed by the China Medical Board. This year is the first in which a foreigner has devoted all his time to this department. Mr. D. C. Baker was appointed director at the beginning of the year, and under his faithful leadership the work has received careful attention. The evangelists have been instructed and counseled, many new methods have been introduced, and a large amount of personal work has been done. The patients waiting in the out-patient department are addressed daily for half an hour, and then any who wish to do so may go to the smaller room for a personal conference. Those coming to the smaller clinics by appoint-
ment are almost all instructed personally. Many of the patients are visited in their homes after they leave the hospital, their social conditions are studied, and they have been assisted in various ways. There is a great opportunity for further development of social service.

Various medical and surgical items of interest culled from the records of the different departments appear under "Mission Hospital Notes." The whole Report is well compiled and is most instructive.


The work of the Peking Union Medical College for the year 1917-1918 may be divided into three parts; first, that concerned with the instruction of the classes enrolled before the reorganization of the institution by the China Medical Board; second, the Premedical School; and third, the construction of the college and hospital buildings of the new school as well as the planning of its organization. The present report deals only with the first of these departments.

With the completion of this year's work the instruction of students through the medium of the Chinese language has ceased for the present in Peking, but there are still three classes of students finishing their courses in the Medical Department of the Shantung Christian University, Tsinan, which began to study medicine in the Peking College.

Seventeen students were graduated during the year; house officers that had served a year or more were given certificates.

Report on Work for Eradication and Control of Uncinariasis in Siam.

By M. E. Barnes, M.D., Representative of the International Health Board, Rockefeller Foundation.

In this report is given a summary of the principal points of interest in the work from its beginning to the present time. The initial cam-
paign, which was undertaken to demonstrate the methods, the value, and the practicability of anti-hookworm measures in Siam, has been apparently brought to a successful conclusion.

Both dispensary and intensive types of work have been carried on. In the intensive type an area is chosen and each house is visited. A census is made of the population, and an attempt is made to persuade each person to be examined and all infected individuals to be treated. In dispensary work the treatment is made available to all who apply for it. A number of men have been kept constantly employed in outside villages administering treatment to those requesting it. There is a table showing the comparative work accomplished by the two methods.

The total number of persons examined is 31,298, of whom 24,018 were found to be infected with hookworms. Treatment was administered to 18,122 for the removal of hookworms, and to 2,691 for the removal of other intestinal parasites, making a total of 20,813 first treatments administered for all causes.

Members of every race in the country, with the exception of Japanese, were found infected. The question whether the infection was imported by some race other than the Siamese cannot be answered upon the existing meager data. At present, it is impossible to know whether the alien races brought their infection with them or developed it after their arrival. If an infection rate of almost 30% can arise among Europeans in spite of their carefulness as to personal hygiene, a higher rate may easily be acquired by people whose habits of life subject them to greater danger of infection.

The comparatively lower infection rate among the southern Siamese may be due to the fact that most of them are of the official classes and are less exposed than the northern Siamese.

As to the relation between age and infection, the analysis of all the examinations on the basis of age shows that the infection is acquired rather early in life, over 28% being infected before they reach the age of six years. Between the ages of six and eighteen years the percentage increases until it is above 75%. Investigations carried on in other countries have shown clearly that infection during childhood and adolescence is very inimical to physical and mental development. As malarial disease is also very common even a mild infection with another anaemia-producing disease is of consequence, and should not be ignored.

Information concerning the sanitary conditions of Siam is also contained in this report.
Medical Report of Chinese Customs Service.


L. K. Larsen, M.D. (Copenh.), Customs Medical Officer.

METEOROLOGICAL REPORT.—The following meteorological readings for the year 1917 were compiled by Mr. W. S. Jackson, Tide-surveyor.

ANTUNG METEOROLOGICAL READINGS, 1917.

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<th>Month</th>
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<th>Rainfall</th>
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<td></td>
<td>Hst.</td>
<td>Lst.</td>
<td>Max.</td>
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<tr>
<td>January</td>
<td>30.566</td>
<td>29.920</td>
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<tr>
<td>February</td>
<td>30.406</td>
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<td>March</td>
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<td>April</td>
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<td>29.668</td>
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<td>May</td>
<td>30.088</td>
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<tr>
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<tr>
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<td>94°F.</td>
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<tr>
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<td>75°F.</td>
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<tr>
<td>November</td>
<td>30.581</td>
<td>30.020</td>
<td>57°F.</td>
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<tr>
<td>December</td>
<td>30.396</td>
<td>29.400</td>
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The highest maximum temperature was 96°F., in June, and the lowest minimum temperature was —14°F., in January. The weather was exceptionally dry. The total rainfall was only 33.81 inches.

MEDICAL REPORT.—In the period covered by this report, July 1917-July 1918, the health of the small foreign community has been very good. There was only one case of dysentery, which quickly recovered by emetin injections. The climate, however, seems to be trying to the nerves of some of the foreigners, just the same as in most parts of Northern China.

To give a medical report concerning the health of the Chinese in Antung is a very difficult task, as but few sanitary data are available. The report must consist therefore mainly of impressions received by me at the Danish Mission Hospital, which works exclusively amongst the Chinese. The Japanese are all living in the Japanese Settlement, where there is a well-equipped and in every respect quite modern hospital built by the South Manchuria Railway Co.

The Chinese authorities have a sanitary police force, and some improvement in the sanitary state of the town has been made but much is still left to be done. The water supply is from wells in the streets and is
not sufficient in dry periods. On the other hand, during the rainy season and with certain winds, the lower parts of the town may be flooded by the Yalu River.

**Epidemic Diseases.** We have had a severe epidemic of small-pox causing several deaths. It appears that some of the poorer classes of the Chinese, although they know about vaccination, do not believe fully in it, but rather believe in the power of *Tou-shen-niang-niang* [痘 神 娘 娘], the goddess of small-pox. The need of re-vaccination after seven years is not known amongst them. The authorities have erected a kind of lazaret for patients suffering from small-pox, but as there is no talk of obligatory isolation of the patients, nor of disinfection of the infected houses, it is all in vain.

An epidemic disease we have not met with for the last eight years is cholera; before that time the town was visited by that disease, as a rule, every second year.

Cases of dysentery and malarial fever are very numerous, but they are not of the severe type met with in the middle and southern parts of China. Dysentery is of the amœbic type, as is indicated by its successful treatment with ipecacuanha or emetin. Typhoid fever is also rampant among the Chinese. Tuberculous diseases of the glands, bones, and joints are very common, as are also cases of phthisis, for which nothing is done nor can be done at present. Patients suffering from venereal diseases are so numerous that it seems as if at least half the population is infected. This is hardly to be wondered at when we see the many brothels and know a little about the life of the people in a place like this, where there are proportionally very few homes.

Of interesting cases I shall just mention one, a case of abscess of the liver, the first we have ever diagnosed here. Immediately preceding the suppurative hepatitis the patient had suffered from dysentery. The abscess was opened by an incision through the epigastric region, and two litres of pus were evacuated. No amœbæ were found in the pus. The patient’s blood contained numerous microorganisms similar to those described by Dr. E. C. Peake, of Tientsin, *China Med. Journ.*, 1918, pp. 6, 110. I have found the same parasite in other cases of enlarged liver combined with anaemia. Whether this microorganism is pathogenic or not, is not known yet. What has surprised me is that the same microorganism can be found in patients in whom one did not expect to find it. It appears that the microorganism multiplies in blood-films left for examination for two or three days. Possibly, these microorganisms are not the cause of the liver trouble,
but find a suitable medium for development in the deteriorated blood of these patients.

It will be most interesting to follow the result of Dr. Peake's further investigations. The climatic conditions of Tientsin and this place are very much the same, so that we may expect to find cases of the same disease here.

Medical Notes from Reports.

CHINESE DIABETICS AND THE ALLEN TREATMENT.

The "Allen" starvation treatment was tried with all the eleven hospital cases. Four refused to submit to diet. Two others died. One showed no acidosis and died of pulmonary infection. The other, also without acidosis, died without apparent cause. Autopsy showed intussusception and congestion of kidneys. The three improved cases had a tolerance of 30, 50, and 200 grams carbohydrate respectively.


PARATYPHOID FEVER IN SHANGHAI.

There were 62 cases of paratyphoid fever notified and four fatal cases. Cases of Paratyphoid B predominate over those of A in the proportion of 3 to 1. It has been the practice when issuing typhoid vaccines from the Laboratory to combine the organisms of Paratyphoid fevers A and B. The reaction is scarcely greater for the combined vaccines while the protection is secured against all three infections, to the great content of those who are wise enough to appreciate the value of preventive medicine.—Shanghai Mun. Coun. Health Report, 1918.

ARSAMINOL IN RELAPSING FEVER.

Arsaminol was used in a series of cases. Doses from 0.5 g. downwards were used, and 0.2 g. was found to be sufficient to effect cure; 0.1 g. given in one case caused defervescence in 40 hours by lysis, and was evidently too small a dose. The injection causes the temperature to fall to normal usually in 12 hours, the fall being sometimes preceded by a precritical rise. Two cases developed bronchopneumonia after the treatment, one of which died; and one developed suppurative parotitis and died. In July, 1918, a case not treated with "606" also died from suppurative parotitis, and one of our cases of typhus died from the same cause; so the fatal result cannot be attributed to "606." Nevertheless, the occurrence of these
serious sequelae after resolution of the relapsing fever indicates that the convalescence should be treated with considerable care.—Report of Peking Union Med. Coll. Hosp., 1917-1918.

ROUTINE TREATMENT OF TRACHOMA IN PEKING.

Whenever the follicles and the granules were abundant, expression by Knapp's roller and Prince's expression forceps was used before other treatments were administered. This was usually done under local anaesthesia. The subsequent treatment consisted of rubbing the lids with powdered boracic acid on each visit. The powder was picked up on a small pledget of cotton which was wound tightly over the end of a toothpick. This was dipped into a solution of 1-500 bichloride before rolling it over the boracic acid powder. At home the patient was instructed to use a 25% solution of glycerite of tannin morning and evening.

Scarification was found unnecessary, as all follicles ruptured quite readily under the pressure of the forceps. Scarification indiscriminately used, especially by an untrained hand, does more harm than good to the patient. It produces scars which sometimes confuse the diagnosis as to whether the patient has had trachoma or not. Such cicatrices often produce malposition of the lids.

It is interesting to note that the Tsing-hua students who were debarred from going to America to study on account of having had trachoma have all been passed recently and are now in America studying. All of them had been treated by the method above outlined for from one-half to one year in our clinics.—Report of Peking Union Med. Coll. Hosp., 1917-18.

CEREBROSPINAL FEVER IN HONGKONG.

In his report to the Hongkong Government, Dr. Peter K. Olitsky of the Rockefeller Institute records that the infection in Hongkong was caused in 95 per cent of cases by type 1 of Gordon's classification of meningococci. By agglutination tests all strains can be referred to four main types. The same type was found in Manila cases. It is probable that this type would be also found in Shanghai cases, so that it would be advisable to use a curative serum in which this type was prominent. Most commercial sera are described as polyvalent. The commercial sera tested, however, gave poor results. Large quantities of serum may be used, e.g., 200 mils intravenously and 40 mils intraspinally. The earlier serum is given the better the results. Exceptionally dry and cold meteorological conditions prevailed during the epidemic in Hongkong, leading to unusual overcrowding and lack of ventilation.
There is a probability that preventive vaccination may become useful. As regards contacts a search should be made for the "dangerous" carrier, that is, one harbouring numerous meningococci of the type found in actual cases locally. During the prevalence of an epidemic it is advisable to prohibit the departure by rail or ship of any actual contact with a case, especially those contacts shown by bacteriological examination to be dangerous carriers.—Shanghai Mun. Coun. Health Report, 1918.

**COMMON DISEASES OF EAR, NOSE, AND THROAT IN PEKING.**

The most common diseases of the ear met with among the Chinese in Peking were chronic catarrhal otitis media, chronic purulent otitis media, impacted cerumen, and furunculosis of the external auditory canal. In the mouth and pharynx, acute pharyngitis, hypertrophy of the faucial tonsils, and acute tonsillitis were most frequently treated. In the nose and nasopharynx, hypertrophic rhinitis and atrophic rhinitis were the most common affections seen at the dispensary.—Report of Peking Union Med. Coll. Hosp., 1917-18.

**COMMON DISEASES OF THE EYE IN PEKING.**

The four affections of the eye most frequently met with in Peking were as follows: trachoma, 227 cases (18.3%); corneal ulcers, 133 cases (10.2%); phlyctenular ophthalmia, 128 cases (10.5%); acute conjunctivitis, 85 cases (6.6%).—Report of Peking Union Med. Coll. Hosp., 1917-1918.

**COMMON SURGICAL DISEASES IN PEKING.**

The ten most common surgical diseases in Peking seen in order of frequency, were as follows: tuberculosis, 134 cases (19.3%); cellulitis, 65 cases (9.4%); tumors (benign 19, malignant 30), 49 cases (7%); fistula in ano, 46 cases (6.6%); abscess, 44 cases (6.3%); hemmorhoids, 39 cases (5.6%); fractures, 33 cases (4.7%); carbuncles, 33 cases (4.7%); hernias, 27 cases (3.9%); gunshot wounds, 30 cases (2.8%).—Report of Peking Union Med. Coll. Hosp., 1917-1918.

**CASES OF STRANGULATED HERNIA.**

There were five cases of strangulated hernia treated this year. Four recovered. One case was of peculiar interest, because the strangulation of the hernial sac contents was secondary to a volvulus of the small intestine which had become twisted around the pedicle of the hernia just inside the internal ring. The hernial sac contents looked quite hopeful, i.e., the intestine and caecum in the sac were blue but
regained a red color by application of hot towels and relieving the constriction; but inside the abdomen there was discovered later almost two feet of gangrenous intestine with a large hole, and the abdominal cavity was full of black fecal contents. By free drainage, saline drop method through a tube into the cæcum, etc., the patient showed signs of recovery and progressed finely for one week and then suddenly died. His death was preceded, apparently, by a severe colic in the abdomen, and before the nurses were aware of what he was doing the patient frantically tore his bandages free, pulled out his intestines from the wound and died almost in the act of delivering his whole abdominal content into the bed.—Report of Peking Union Med. Coll. Hosp., 1917-1918.

BERI-BERI IN SHANGHAI

The cases of beri-beri in the Shanghai Municipal Goal have been kept under close observation with a view to the discovery of the real cause of the disease. No definite conclusions have been able to be drawn from the vermin-proofing of the Shanghai Gaol. During the past year the vitamine theory of the cause has been accepted as a working hypothesis, so as to give the patients every possible benefit of the doubt, the use of unpolished rice being general throughout the Gaol. That the year has shown a great reduction on the incidence of 1917 cannot be taken to establish the truth of the theory, as a similar sequence of incidences has been noted when no such change of diet was made. An entirely open mind is being kept; and, were a series of years now to follow with a material reduction in the number of cases, it would tell in favour of the vitamine theory. During the ten years 1899 to 1908 the number of cases in the Gaol was 207, while during the ten years 1909 to 1918 the number was 259, the increase being somewhat less than the increase in the number of prisoners. During the years 1902 to 1908 inclusive the number of cases was twelve only. It was in 1902 that a special diet of crushed barley (unpolished) and beans replacing a part of the rice ration was introduced. This diet with ample vegetables, including a special supply of onions, has been continued regularly ever since; but during this period the incidence has varied very markedly. This diet is held to be rich in vitamines. What effect the further addition of vitamine from the unpolished rice will have time will show.—Shanghai Mun. Coun. Health Report, 1918.

TUBERCULOSIS AMONG THE CHINESE.

We took in one out of five of those presenting themselves. We should have taken five times as many, because in hospital treatment
is their only hope. We took in five times as many as we should have, for only one-fifth of the patients treated were benefited by their stay. The mind of the admitting physician is torn between these two considerations, and torn about evenly, as the figures show. A tuberculosis hospital and an anti-tuberculosis propaganda are badly needed in Peking.—Report of Peking Union Med. Coll. Hosp., 1917-18.

**Dispensary Cases.**

One suspects that the reader of our hospital reports sees us in the dispensary surrounded by only the most flagrant examples of disease. A glance at the statistics will show what a mass of indefinite and trivial ailments pass through our hands. These are the most prominent groups: no diagnosis and symptomatic diagnoses, 504; skin diseases (mostly scabies and tinea), 293; "dyspepsia," 280; constipation, 260; left before being seen, 119; no disease, 79; total, 1,534. These make up 43% of the total number of cases.—Report of Peking Union Med. Coll. Hosp., 1917-18.

**Medical and Surgical Progress.**

**Internal Medicine.**

EDWARD H. HUMM, M.D., Changsha, Hunan.

**The Etiology of Arthritis.**

Discussing the rôle played by the teeth and tonsils in the causation of arthritis, R. Hammond (American Journal Medical Science, 1918, clv, 541) points out that a middle ground will probably prove to be the right one, as between the extremists who believe that focal infection will account for every case of arthritis and the other extremists who derive their cases of arthritis otherwise. There is undoubted improvement in many cases following the removal of an abscessed tooth or a diseased tonsil. The probability of effecting a cure or improvement is greater in acute cases than in chronic. Whether the joint condition is relieved or not, care of the teeth and tonsils results in a marked improvement in the general health of the patients.

**The Etiology of Influenza.**

In view of the numerous newspaper comments appearing in almost every daily newspaper, and tending to bring grave anxiety into the minds of lay readers who observe either that young nursing mothers seem to be particularly liable to infection and death, or who read that in all probability the recent serious mortality from influenza pneumonia in America was in reality due to pneumonic plague; it is desirable to sift out the evidence and to get the reports of trained observers. C. A. Darling (American Journal of Public Health, 1918, viii, 751) gives a full report on the Epidemiology and Bacteriology of Influenza. He reminds us that although Pfeiffer's discovery of the B. influenzae in 1892 was for a considerable time received and confirmed,
still, in the past five years considerable evidence has accumulated to indicate that this is not necessarily the offending germ. Of 2,245 cases reported by five observers, only 7 per cent gave positive findings for the influenza bacillus. Other organisms commonly found were Streptococcus viridans, S. albus, and S. hemolyticus, Pneumococcus and Micrococcus catarrhalis. Mathers believes that in an epidemic the hemolytic streptococci are more significant in a throat than influenza bacilli. Further, the influenza bacillus is found in the throats and sputum of patients with a variety of other illnesses. In the present epidemic there has been much variation in the results received. Among over 100 throat and sputum cultures from cases clinically influenza at the U. S. Naval Hospital in Chelsea, Mass., the influenza bacillus was found only occasionally, a gram-positive diplococcus being the predominant organism. From lung punctures and autopsies, however, nineteen of twenty-three cases gave positive findings for the influenza bacillus, the other four cases showing the hemolytic streptococcus.

The lack of uniformity in results may be due either to difficulty in finding and isolating the B. influenza, or to the similarity of symptoms produced by several organisms including the influenza bacillus. The classification of Leichtenstern, accepted by Osler, seems sufficient for the present situation. He divides influenza into three types: (1) epidemic influenza, caused by the Pfeiffer bacillus; (2) endemic-epidemic influenza vera, also caused by the Pfeiffer bacillus; (3) endemic influenza nostras, caused by various organisms alone or in combination. To these three there should certainly be added the group of cases where Streptococcus hemolyticus has been found so active, especially in leading to the sequent pneumonia.

Possibly light may be thrown on the difficulty of finding the influenza bacillus in many clinical cases, as a recent report by J. H. Brown and M. L. Orcutt (Jour. Exper. Med. 1918, xxviii, 659) on a method of differentiating the organism comes to be tested clinically. They observed that in blood agar plates, the most luxuriant growth of the influenza bacillus occurred only in the neighborhood of the streaks of hemolytic streptococci, staphylococci, and micrococci, and not in the neighborhood of the non-hemolytic strains. A plate illustrating their article shows the small refractive colonies of B. influenzae very numerous within zones of hemolysis produced by deep colonies of streptococci. Reports are still awaited from different parts of China, although all informal statements received to date seem to imply that this epidemic will probably yield very few bacteriological studies as the serious groups of cases seem, for the most part, to have occurred in country districts, away from the reach of laboratory investigation.

Mitral Stenosis and Pulmonary Tuberculosis.—In the Archiv. Español. de Tisiologica, January, 1919, Montenegro relates that in his 20,000 cases of pulmonary tuberculosis he encountered only one case in which active pulmonary tuberculous lesions were accompanied by mitral stenosis. This is a proportion of only 0.005 per cent. and justifies the general assumption that mitral stenosis is an obstacle to the development of pulmonary tuberculosis. Even this one case in his experience tends to prove this, because pulmonary lesions kept mild even during the woman's two pregnancies.

The following simple treatment, which appears to be new, has been found almost always successful in preventing the vomiting that frequently follows administration of a general anaesthetic. It was tried first on several hundred patients at the First Australian General Hospital during 1915, and since in both military and civil practice. Whether signs of impending vomiting, e.g., swallowing movements, are just appearing, or vomiting has already occurred, the treatment is the same.

The nostrils are firmly squeezed with the fingers, so as to occlude the airway through the nose. The vomiting movements then immediately cease. There also results a deeper narcosis, as evidenced by a less active reflex, and often slight cyanosis. If the latter is marked, the lower jaw must be pushed down to give an airway by the mouth. In a few cases it is necessary to free the nostrils momentarily till a breath is taken, to prevent severe cyanosis or deep narcosis.

As a result of the pressure on the nostrils, the vomiting movements cease. The pressure can then be released. In some cases, especially when ether has been given, a small quantity of salivary secretion and mucus is regurgitated from the region of the pharynx, but actual vomiting rarely occurs. At times the procedure has to be repeated later if vomiting again tends to occur.

The method probably acts by rapidly super-adding a carbon dioxide narcosis to the anaesthetic narcosis, but the action is so rapid that there may be a direct reflex action of an inhibitory character.

Neither stimulation nor pressure applied about any portion of the face prevents the vomiting. The former hypothesis, therefore, is the more likely. No ill effects have occurred, and in almost all cases vomiting, especially that occurring before the patient has left the operating table, can be prevented.

Calomel in Hæmorrhoids and Pruritus Ani.—F. W. Möller and others (Ugeskrift for Laeger, Sept. 12, 1918, p. 1462).—Many years ago the writer found in "Excerpta Medica" an account, abstracted from a German medical journal, of the striking effects of calomel applied in powder form to hæmorrhoids. They and the adjacent skin are carefully cleaned and dried, and the calomel is then thickly dusted on them. The pain of the hæmorrhoids quickly ceases, and after the application has been repeated several times, the hæmorrhoids dwindle and are converted into pale, indolent flaps of skin. These claims on behalf of calomel have been amply verified by the writer during many years. Many other correspondents have recently added their testimony to its value. One of these, Ove Hamburger, has found the action of calomel powder on pruritus ani to be so striking as to deserve the rare praise of a specific remedy. Dusted on the anus and its neighbourhood after defæcation, it forms a white lacquer, traces of which are still visible 24 hours later. It is not necessary for the calomel to be incorporated in an ointment in order to make it adhere to the skin. Indeed, calomel ointment appears to be comparatively inert and to be much less effective than calomel powder. One physician reports the
case of a colleague whose pruritus ani had persisted for years, in spite of varied treatment, including the x-rays. Calomel in ointment form also proved inert, but when dusted on as a powder, the disease vanished.

**Treatment of Tropical Ulcers.**—In *Bull. Soc. Méd. Chirurg. Indochine*, 1918, June, Vol IX, Félix Saporte describes his treatment of 122 cases of extensive phagedenic ulcer of the tropics with Vincent’s powder, consisting of ten parts of fresh hypochlorite of lime to 90 parts of dry boric acid powder. The ulcer is bathed with a hot solution of potassium permanganate 1/4000, for two hours, and then dressed with plain boiled water, and this treatment is repeated on the second day, and all fragments of gangrenous and sloughing material removed with scissors or curette, sometimes with the actual cautery, and the wound thickly dusted with the powder. On the third day the wound is again washed for an hour with permanganate, dried and dusted with the powder. These measures are continued until the ulcer is healed, or if cicatrisation seems slow a further method is applied, to be described. The patient is kept in bed, and abundant food and the administration of quinine and arsenic are advised. When healing seems delayed with these measures the wound is bathed daily with physiological salt solution, and dusted with zinc oxide or dressed with one per cent picric acid lotion. Cure usually takes place in from eight to eleven weeks.

A paper by Halpin in *U. S. Nav. Med. Bull.*, 1918, January, Vol. XII, pp. 80-84, is founded on a consideration of 35 cases selected as having persisted for six months or longer, and as having ulcerations reaching or exceeding two inches in diameter. An odd result of the observation is that 85 per cent of the cases showed ulceration of the left leg, a selection explained by the author by the habits of the natives who are said to squat or stand mostly on the left leg. Wassermann tests were carried out in every case and in only one was the test positive. The most satisfactory treatment, after trial with (1) mercurial local applications and intramuscular injections, and by (2) autogenous vaccines respectively, was found to be by a method of normal-saline injection, introduced daily under the floor of the ulcer which was also covered by dressings of gauze saturated with normal saline. Under this treatment healing took place in two to five weeks.

In *Bull. Soc. Path. Exot.*, 1918, July, Vol II, Bouffard holds that the extraordinarily rapid destruction of tissue which takes place in this condition seems to be due to the symbiosis of the fusiform bacillus with spirochetes, and he found after much experimentation with local antiseptics; with free excision of the advancing edge of the ulcer; and with intravenous injection of salvarsan and neosalvarsan, that the most effective way of dealing with it was to apply a three per cent solution of novarsenobenzol soaked on lint and insinuated into the hollows of the ulcer which was then covered with another layer of lint. This application was repeated after twenty-four hours, and the two treatments usually sufficed to eliminate the symbiosis, as evidenced by microscopic examination, after which simple dressings with one per cent picric acid sufficed to produce healing.
The Deficiency Theory of Beri-beri.—In the Quarterly Journal of Medicine (Clarendon Press, Oxford) Dr. F. M. R. Walshe has a valuable article in which he writes:—A consideration of the deficiency theory of the origin of beri-beri in the light of recent clinical and experimental work makes it clear that the present hypothesis, which postulates a single negative factor, namely, the absence of a specific “accessory food factor” or “vitamine,” is inadequate. It conflicts with the results obtained in starvation experiments on fowls. Starved fowls live sufficiently long to develop the disease (polyneuritis gallinarum) under such conditions, yet they die without developing it, although in this essential respect, namely, the deprivation of “vitamines,” starvation is the equivalent of an avitaminic diet.

The use of “certain special diet” (Holst) is found to be an essential condition of the production of the disease both in man and poultry. It is apparent from all recent experimental work, both in man and poultry, that there are two factors in the production of beri-beri: (1) the absence of an “accessory food factor” or “vitamine”; (2) the use of certain foods which are the direct and immediate cause of the disease.

There is a considerable weight of evidence to prove that carbohydrates constitute this second direct and immediate factor. It seems probable that in the absence of their specific “vitamine” they undergo an aberrant hydrolysis with the production of toxic by- or end-products thus producing beri-beri. Viewed in this light the disease is an intoxication. The facts regarded as excluding a toxic origin of beri-beri do not exclude an intoxication in this sense.

From another point of view, it may be questioned whether the clinical and pathological characters of the disease are compatible with the theory that it is a slowly progressive diffuse degeneration of the nervous system. The striking symptoms of beri-beri and the widespread visceral and nervous changes seen post mortem cannot be adequately accounted for by such an hypothesis.

A consideration of the physical and chemical properties of “vitamines”—as far as they are known—suggests the probability of their belonging to the class of bodies known as enzymes, and thus are concerned, we may suppose, in the hydrolysis of carbohydrates.

Certain observations of Holst and Fröhlich, showing that a diet of decorticated rice or barley may produce either polyneuritis or scurvy according to whether fowls or guinea-pigs are employed, throw some doubt on the separate identity and specificity of “anti-neuritic” and “anti-scorbutic vitamines.”

Finally, it seems certain that until the physical chemistry of the “vitamines” and the metabolism in beri-beri—both totally unexplored fields—have been more fully investigated, the pathogenesis of beri-beri will remain in part obscure. All we can say is that the theory which regards the absence of “vitamines,” acting by producing a slowly progressive diffuse nervous system degeneration, as the sole and direct cause of beri-beri, is both inadequate to explain all the facts and is incompatible with certain of them.

The genesis of the disease may be best expressed by saying that the use of certain food-stuffs, prob-
ably carbohydrates, in the absence of their "accessory food factors" or "vitamines," directly causes beri-beri.

### The Treatment of Leprosy

In a paper entitled, "Some Notes on the Treatment of Leprosy," *Journ. Trop. Med. and Hyg.*, 1919, March, p. 37, Connal states the results of four methods of treatment which have been given an extended trial at the Yaba Leper Asylum, Lagos, Nigeria:

1. **Chaulmoogra oil.** This has been in constant use.
2. **Nastin.** Dr. Beale-Browne and Dr. Macpherson applied this preparation over a period of four years.
3. **Heiser's combination of chaulmoogra oil, with camphorated oil and resorcin,** was given to certain cases from May, 1916, until June, 1917.
4. **Gynocardate of soda.** The latter half of the year 1917 was devoted to a trial of this drug.

He concludes that it is difficult to reach a true estimate of the value of any one drug in the treatment of leprosy. A perusal of the Asylum case books leaves the impression that none of the four named methods of treatment is specific. Relapses have occurred in treated and untreated cases. Definite improvement has been noted in the entire absence of drug administration. The negro leper is prone to alternating optimism and pessimism. He eagerly welcomes a new therapeutic measure and tends to exaggerate any beneficial results, but despondency sets in sooner or later, when he may refuse further dosage.

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### Obstetrics and Gynecology

#### Some Causes of Still-Birth

In the *N. Y. State Journal of Medicine*, October, 1918, is an interesting paper by J. Clifton Edgar on this subject of which the following is a condensation. Of 14,468 births at the Manhattan Maternity Hospital, New York City, U.S.A., from April, 1905, to October 1, 1916, there were 519 still-births, or 3.6 per cent. The total number of indoor or hospital confinements was 4,708, with 281 still-births (5.9 per cent); of outdoor or home confinements 9,760, with 238 still-births, or 2.5 per cent.

On inquiring into the immediate causes of these 519 still-births at the Manhattan Maternity Hospital, with the possibility in view of lessening this source of infant mortality, it was thought advisable to take the last 500 cases for convenience of treatment of the subject, which leaves the number of indoor or hospital still-births, 272; outdoor or home still-births, 228.

The chief categories of the causes of the 500 still-births are as follows:

<table>
<thead>
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<th>Category</th>
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<tbody>
<tr>
<td>Unknown</td>
<td>... 149</td>
</tr>
<tr>
<td>Obstructed labor — maternal and fetal dystocia</td>
<td>78</td>
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<tr>
<td>Protracted labor</td>
<td>120</td>
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<tr>
<td>Precipitate labor</td>
<td>10</td>
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#### Cord Conditions:

<table>
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<th>Condition</th>
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</thead>
<tbody>
<tr>
<td>Prolapse</td>
<td>46</td>
</tr>
<tr>
<td>Cord tight about neck</td>
<td>8</td>
</tr>
<tr>
<td>Compression of cord</td>
<td>65</td>
</tr>
<tr>
<td>Rupture</td>
<td>4</td>
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<tr>
<td>Knots</td>
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#### Placental Conditions:

<table>
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</thead>
<tbody>
<tr>
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<tr>
<td>Separation</td>
<td>16</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>47</td>
</tr>
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#### Maternal Diseases:

<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Eclampsia</td>
<td>24</td>
</tr>
<tr>
<td>Toxemia</td>
<td>44</td>
</tr>
<tr>
<td>Miscellaneous</td>
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</table>
In reference to the causes classed as "Unknown," it is not to be inferred that there was no suspicion of the causes of still-birth. Of these 149 cases, 90 are simply recorded as "macerations," while 19 others were prematures, which were also macerated, and 19 simply prematures (109 macerations in all and three prematures in all). There remain but 21 other cases, in which the child (in five cases a second twin) was still-born, although the mother was normal and labor easy.

The conclusions drawn from this series of observations have reference to several possibilities—a better system of records, a greater proportion of autopsies and biological tests, diffusion of knowledge among actual and prospective mothers, and especially oral instruction of women who have once been confined, so that better supervision may be exercised during the next pregnancy. In a word, better general obstetric care, with especial regard to closer prenatal observation of pregnant women.

In regard to the number of cases in which the child might have been born alive under favorable auspices, many of the protracted labors could be included, especially when neglect or delay figured in the case. The precipitate labors may be added. Some of the dystocic cases, especially those due to faulty presentations and positions might have had a good chance for survival. Toxemia and eclampsia could have been averted in a godly proportion of the cases. All of the syphilitic cases, and these must have been far more numerous than the figures show, might have been averted by early treatment of the mother. It is by no means unlikely that at least 100 babies might have been saved, and even this seemingly high number may be too small a computation. All recognize the fact that syphilis, eclampsia, and toxemia are largely amenable to prevention before labor sets in, if the women could only be rounded up and placed under prophylactic measures in season. It would require too much space to consider all the possibilities which might be made practicable.

**ARTIFICIAL ABORTION IN ANCIENT TIMES.**—This subject has recently been considered *in extenso* in a Paris graduation thesis. It seems that up to a certain period of antiquity artificial abortion was not interdicted. The code of Hammurabi and the Mosaic Law did not condemn it. In the later Judaic law the fetus was not regarded as having an independent existence but merely as part of the mother. In Egyptian lore one seeks in vain for prohibition of abortion. But in the Vedas, Avesta, and the Laws of Manu, abortion is condemned whether in or out of wedlock. The crime was against the Deity, but not against society.

In Greece, from early times, abortion was common, and the thinkers of the time justified it. Birth control was deemed an inherent right. Infanticide was legal in Sparta. In Athens, with its culture, there was a critical pose. If a father wanted children and the mother defeated this desire by committing abortion on herself a question was indeed raised, but no prohibition and no penalties are in evidence. The act of abortion was done by the midwife of the period, who was the obstetrician and gynecologist *ex officio* of the day. Medicines by the mouth and pessaries
were the usual resources for artificial abortion. The grave prognosis of abortion was known to Hippocrates.

Under the Caesars the Roman satirists deplored the frequency of artificial abortion, and Juvenal observed that wealthy women no longer bore children. The Romans of the day held to the old belief that the foetus had no rights—was only part of its mother. The leading motives for abortion were to conceal illicit relations and to preserve female beauty, for "women aged quickly in Rome." In their difficulty the Roman women turned to all kinds of "wise women" besides the midwives, fortune-tellers, sorceresses, perfumers, and what not. The enfranchised Greek ex-slave was especially in demand. There is evidence that septic abortion with a fatal termination was common. The first evidence of penalty was the exile of the guilty mother for a time, in the view that her status was that of an alien and not a citizen. Abortionists were punished only when the mother died. The doom of abortion came with the ascendancy of the Christian Church, which urged the doctrine of the rights of the unborn child as a separate creature.

Public Health Education in China.

PUBLIC HEALTH ASSOCIATION, KAIFENG.—Public health measures in the cities of inland China, though very much needed, are seldom in evidence. The city of Kaifeng is fortunate, and possibly unique, in having a Public Health Association which is certainly a live organization.

Although in these early days of ignorance it has been able to do very little practical work, it has done much in the way of health propaganda.

The moving spirit of the Association has been its president, Mr. C. F. Hsu, the Commissioner for Foreign Affairs in Honan, who by his zeal and ability and real up-to-date views, as well as his attractive personality which has drawn kindred spirits to voluntary service under his leadership, has been the means of developing and maintaining great enthusiasm in the cause of public health in this province. The annual meeting of the Association was held a short time ago in the Kiangsu Guild Hall, with a gathering of some five hundred leading gentry and officials.

The Governor was not present in person, but sent a representative, who read a eulogistic address on his behalf. The Police Band was in attendance, and also the Public Health Association Boys' Band.

The President's address very clearly summed up the work of the Association during the year, and the hopes and prospects for its future work. This work has been of various types.

In these early days, to give information and create interest, health literature is of course very important, so considerable literature in sheet and pamphlet form has been prepared and distributed during the year. The first number of an occasional paper, called the "Public Health Miscellany," is now in the press, 1,600 copies of which are being printed for free distribution, and it is hoped to issue this from time to time, possibly each quarter.

GOOD WORK BY LECTURES.

For the same purpose of propagandism the Association has paid much attention to lectures on
health topics, both in the government schools and in public places. A permanent lecturer has been engaged who gives all his time to this work, mainly in street and temple lecturing. He has a large tent with chairs and table and flags, and, being a very good speaker, he usually has large and attentive audiences. To help him in this work by drawing crowds, the Association has now a file and drum band, composed of sixteen boys from the Anglican Mission Orphanage, who in their attractive uniforms and by their general smartness give promise of making this lecturing a very live thing. During the meeting these boys appeared on the stage, and by their playing and marching drew enthusiastic applause from the audience.

Besides the President’s address and the speech of the Governor’s representative, the Association’s lecturer gave a brief address on “Ventilation,” his remarks leading up with striking effect to a demonstration with a model, showing the absolute need of ventilation to provide pure oxygen.

This model was furnished by Mr. Whitewright, of the Tsinanfu Institute. It was a little house with two glass windows and a glass door having three candles attached to the base board inside. The candles burnt brightly when door and windows were open; when partially closed they burnt dimly, and went out when the door and windows were closed tightly. One could almost hear a pin drop as the lecturer proceeded, and at the finish a spontaneous round of applause burst forth.

**Hygiene Diagrams.**

Besides this demonstrating model a very fine set of twenty-nine hygiene diagrams was obtained from the Tsinan Institute, admirable in every way, a set of which ought to be found in every town and city in China. Their specially adapted frame and stand make them ideal for lecturing purposes.

After two moving picture films on Red Cross topics, a play called “Huan Hai Chao” was staged by an amateur company, most of whom were members of the Association. The acting was excellent, and the theme—the dark ways of officialdom in China—was one that particularly caught the fancy of the somewhat official audience.

The following night a students’ meeting was held in the same place, following a similar programme, except that the play was omitted, and instead two more addresses were given, one by Dr. G. W. Guinness, of the China Inland Mission, and the other by Mr. Deji King, M.I.M.E. The latter is a Chinese gentleman who has recently come to Kaifeng to be an instructor in the Honan School of Mining. He has lived many years in England, and took his engineering course at Owen’s College, Manchester.

The next night the Association held its annual meeting in the Anglican Church for ladies, when some 600 wives of officials and members listened most attentively to addresses by Mr. Chung, the Association lecturer, by his wife, and by Mrs. Ho, the wife of one of the Y.M.C.A. secretaries. American Red Cross moving picture films—“Humany’s Appeal”—were shown, and were greatly appreciated. It was a most successful meeting, and ought to bear fruit in better sanitary and hygienic methods in the homes of these people.—*N.-C. Daily News.*

The handy volumes comprising the "Students' Aid Series" are primarily designed to assist medical students in grouping and committing to memory the subjects upon which they are to be examined. But there is no encouragement to mere "cramming." For instance, "Aids to Surgery," covers over four hundred pages of close print and presupposes a full and practical study of the subject. In this edition, the fourth, the ordinary surgical matter has been brought up to date and an endeavor has been made to incorporate all the latest advances in military surgery. The volume is certainly one of the most valuable of the series.


As the second edition of this book came out less than a year ago, when a very thorough revision was made, the changes in this edition are few. The sections on seven-day fever, six-day fever, three-day fever, sandfly fever, etc., have been rearranged and that on trench fever has been expanded. Perhaps a few alterations should be made in the next edition. General paresis and other parasyphilitic conditions are said to be almost unknown in China, but this is not the experience of some physicians in charge of Chinese asylums for the insane. On page 87 it is stated that "most authorities assign to infantile kala-azar a distinct species, L. infantum"; on page 92, it is said, "within the past year the view has been generally accepted that Indian kala-azar and infantile kala-azar are one and the same disease, the points of difference between L. donovani and L. infantum having been disproved." The former statement should now be omitted. But there is really little to say except in the way of praise. This work and the author's Practical Bacteriology, Blood work and Animal Parasitology, are indispensable to the practitioner in the East, as their thoroughly reliable information and the frequency with which new editions are issued serve to keep him abreast with all advances in our knowledge of the diseases of semi-tropical and tropical countries.


The present volume of Transactions contains papers read before the College during the year 1917. Several of these are of great value and should be given a wider publicity. A paper of unusual interest is that of Macallum on "The Ancient Factors in the Relations between the Blood Plasma and the Kidneys," in which he states that in the marine invertebrates the circulatory fluid is but a more or less modified form of sea water; that in the ascent of life the earliest function of the renal organ was the regulation of the inorganic composition of the blood plasma so as to preserve a definite ratio between it and that of the surrounding sea water; and that in a different environment the further development of the kidney, which enabled it to eliminate waste products, was the principal factor which has led to the differentiation of the vertebrate and the invertebrate, not only in the struggle for existence, but also in the capacity to evolve higher forms of life. As the result of five years' investigation of the inorganic composition of normal human plasma, comparing it with the blood plasma in cases of Bright's disease, more especially in cases of puerperal eclampsia, he is inclined to believe that the very first change from the normal to the definitely established primary condition in some of the forms of Bright's disease is a loss of power by the kidneys to maintain the Paleo-oceanic ratios. The whole article is well worth reading. A paper by Colonel Goodwin on "Venerial Diseases in Great Britain," is followed by an instructive discussion of the very difficult problems connected with the social evil.
In presenting to the college the retractor used in the operations upon the late
President Cleveland, in June, 1893, for sarcoma of the upper jaw, Dr. W. W. Keen,
one of the operating surgeons, refers to the financial and political as well as the
surgical conditions which had to be considered at the time and which necessitated
the greatest secrecy to avoid a political and monetary crisis. To no small extent
political history would be much more accurate and interesting if we knew the
medical history of the principal actors on the world's stage.

**Elements of Surgical Diagnosis.** By Sir Alfred Pearce Gould, K. C. V. O.,
M.S., London, F. R. C. S., Eng., and Eric Pearce Gould, M.D., M. Ch.,
Melbourne, 1919.

The first edition of this most valuable work was issued thirty-five years ago,
and during this long period it has well filled its original purpose of helping
medical students and practitioners to lay hold of the principles of surgical
diagnosis which apply in all cases and under all circumstances, and then to apply
these principles to the diseases and injuries of the various parts of the body. In
this edition the volume has been brought up to date, new matter on such subjects
as gas-gangrene and causalgia has been added and the number of radiographic
plates, a most useful feature, has been increased. The great reputation of the
writers is a sufficient guarantee of the reliability of the work as a surgical guide,
and the steady demand for it during so many years proves that the matter is
presented in a manner which meets with wide approval. A few men are born
surgeons, to whom knowledge and skill seem to come easily; others acquire the
science and art of surgery more slowly and with greater toil; but all have to take
infinite pains to win high and uniform success, and the ability to diagnose accurately
contributes very largely to this success. The student or practitioner who has the
contents of this volume in his mind and at the ends of his fingers ought to be a
good surgeon, whether born so or not.

**Beverages and their Adulteration.** Origin, Composition, Manufacture,
Natural, Artificial, Fermented, Distilled, Alkaloidal, and Fruit Juices. By
Harvey W. Wiley, M.D. With 42 Illustrations. Price, gold $3.50. Publishers:

Perhaps it is a little surprising that a volume on beverages, no small number
of which are alcoholic, should be published in the United States at the present
time as many of the States have gone "dry," and an effort is being made to
reconstitute so that the manufacture and sale of alcoholic beverages shall be
altogether prohibited. But the author contends that his work is necessary and
timely, as it will enable all to understand the subject more thoroughly even
without the least practical experience. In the hope that water will come into
more general use as a beverage, it is given the place of honor in the volume.
What a boon it would be in China if we could easily obtain this natural beverage,
pure and sparkling! Instead, we have to boil and filter it or mix it with chlorine
or other chemicals to make it potable. Whoever discovers a drink that is cheap,
cheerful, non-intoxicating, and without deleterious effects on a single organ or
tissue of the body, will be one of the greatest benefactors to the human race.

Besides alcoholic beverages, tea, coffee, cocoa, and other temperance drinks,
in fact, almost every drink that man has ever concocted, are given full considera-
tion and much curious information is given from varied sources. In an article
published by Thomas Garway in 1660 it is asserted that tea, among other
medicinal virtues, "prevents and cures agues, surfeits, and fevers, by infusing a
fit quantity of the leaf, thereby provoking a most gentle vomit and breathing of
the pores, and hath been given with wonderful success. It strengtheneth the
inward parts, and prevents consumption; and powerfully assuageth the pains of
the bowels, or gripping of the guts, and looseness." On the other hand, it is
curious to read that in England in the seventeenth century, there was much
opposition to coffee, and Oliver Cromwell attempted to prohibit its use. But
Charles went further, and in a Royal Proclamation forbade the sale or drinking
in coffee-houses of "any coffee, chocolate, sherbnett, or tea as they will answer the
contrary at their utmost peril," on the ground that coffee-houses were "seminaries
of sedition." The chapter on alcoholic beverages which are sold as proprietary
and patent medicines is of particular value to the physician. A long list of these deceitful, injurious preparations is given. Perhaps the volume should not be recommended to anyone with a pernicious thirst as it would probably be too provocative; but all others will find it instructive and of some help in dealing with the evils of alcoholism.


In this work of sixty or seventy pages, the description of the nerves of the human body is given with such clearness and brevity that the student is able to master the principal facts without the danger of being overwhelmed by the multitudinous details which necessarily appear in the large text-books on anatomy. The accompanying plates are admirably designed and printed, those of the fifth and seventh cranial nerves, of the cervical plexus, brachial plexus, and of the sympathetic system being particularly good. The old terminology is adhered to; where the terms differ materially from the B. N. A., the latter are placed within brackets. The work will be most helpful to the medical student in making a difficult subject clearer and easier to remember.


By "Aachen Methods" is meant the inunction of a 33½ per cent mercurial ointment by the bare hands of a skilled rubber, under proper medical supervision, and in addition the use of sulphur water internally and externally as administered at Aachen, adjuncts being used if so indicated. The author holds that in early syphilis, in order to procure the best results, salvarsan or a reliable substitute should be used in conjunction with mercury intensively administered. In the later stages, when generalization of the poison has supervened and the spirochaetes are firmly entrenched in the deeper non-vascular parts, e.g., the nervous system and periosteum, mercury becomes the most important factor in effecting a cure. It is not necessary to go to Germany for the treatment. Full instruction is given concerning Aachen methods and clinical histories are given showing their efficacy. The book is commended to those in charge of many cases of syphilis and para-syphilitic disease.


As a guide to surgical nursing and the preparation for surgical operations this book will be found most useful. The verbal descriptions of the various surgical procedures are very brief, but as the accompanying illustrations, consisting of a series of photographs are so numerous and excellent and depict so accurately every step, long descriptions are perhaps unnecessary. The duties of the different nurses in the operating room are clearly stated from the beginning to the final dressing of the case. The formulae given are clear and compact. The volume will also be of value in the instruction of Chinese nurses.


A most instructive report with good illustrations which should be read by all interested in parasitology.
The China Medical Journal.


This is not a medical publication, but it is reviewed here as medical missionaries living in China are naturally interested in all matters that relate to the Chinese, past and present, and will find that some of the papers will throw an instructive side-light on medical subjects.

After a few introductory remarks by the editor and Professor Giles, the Review opens with an appreciation by the editor of the life and work of the French sinologue, Edouard Chavannes. Major Yetts contributes translations of some of the Taoist hero-tales which are commonly chosen by Chinese artists for pictorial purposes. Dr. Morse gives a graphic account of the short-lived republic which the Formosans attempted to establish when the island was ceded by the Chinese to the Japanese at the close of the war between China and Japan in 1895. Father Dore has an article in French on the great Buddhist pilgrimage to Langshan and the Five Mountains of Tong-tcheou (通総). The paper by W. Arthur Comnaby on the Chinese Drama and Ancient Choral Dances is scholarly, very interesting, and one of the best in the Review.

Of the other articles, Werner’s on Head-flattening, and Chatley’s on Chinese Psychology, are of most interest to medical men. After calling attention to the fact that the early Chinese rulers are represented by native artists as having “tapering” heads, and that the still earlier mythical rulers, emperors, and apotheosized beings, are depicted with heads having two points, bumps, or “horns,” Werner concludes that the Chinese flattened their heads in order to identify themselves with an ancestral northern race of long-headed cavaliers, and to differentiate themselves from the square-headed market-gardeners of the south, who were in their origin not really Chinese at all. He states that as a result of this custom the heads of the Chinese in the families who practise it tend to taper naturally. He is a firm believer in the transmission of acquired characters and is prepared to defend his position against all comers. We hope he will turn his attention to the other extremity and prove that girl babies in China are now born with abnormally small feet in consequence of the foot-binding of their feminine ancestors. By the way, kao-liang (高粱) is not millet, but Sorghum vulgare. In the other article, Dr. Chatley takes the word “psychology” in its broadest sense as being the study of the soul, and begins his paper with Chinese speculations concerning the “fixation of the soul.” Some of his statements are not above criticism. “The Christian theory that the soul can be reformed into the type of a superman, i.e., a Christ,” is not a very acceptable way of stating Christian doctrine or belief. Considering the number of the different forms of insanity it is open to misunderstanding to say that “it is now generally held that there are three very definite abnormal mental conditions: (a) the hypnoid state; (b) hypnosis; (c) ecstasy.” Probably the writer means that these conditions are three abnormal states of a normal mind. As to the retraction of the dendrites of nerve cells as a physical explanation of mental and physical phenomena, this retraction is far from having been proved; some physiologists and psychologists wholly reject the explanation and it is only accepted by others as a working hypothesis. Dr. Chatley’s own conception of the human soul seems to be that it is “a state of very complex stress in the ether, with foci in the brain and the great neural plexi, and a continuous circulation of energy to and from these foci.” It would be instructive to see Dr. Chatley’s translation into scientific terms of the cry of the troubled agnostic, “O God, if there be a God, save my soul, if I have a soul!” Notwithstanding these criticisms, the article is very good and we shall be glad to see the next one on the same subject.

There is also much other valuable and interesting material, such as notes on footbinding, etc., but we must conclude by saying that those who wish to obtain a more than superficial knowledge of the Chinese among whom they live and should try to understand, ought certainly to subscribe to this Review.
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.

An American Army Doctor in France on Foreign Missions.

The following letter was sent by an army doctor in France to an old friend and college classmate in America who is very much interested in foreign missions, and is inserted here as it strengthened the decision of the Executive Committee to act immediately on behalf of the C. M. M. A., and issue the general appeal for medical missionaries which appears on another page.

November 12th, 1918.

My Dear: I'll call your attention to the date above. Naturally we are all still thrilled with the news of yesterday, of the armistice being signed; that the hostilities have ceased. I need not attempt to tell you with what joy it has been received; the whole world shares it and I have no doubt that New York is just as jubilant as the cities and towns over here. Outside the window of the little office from which I am writing, some two hundred of our boys, about to be evacuated from the hospital, are whistling in a way I have not heard since we arrived here some two months ago. "When shall we get home?" is the question on everybody's lips this morning. We shall get weary of the asking and waiting before the realization can come, but nothing can keep the question down. However, that was not what led me to begin this letter, but some ideas that have been in my mind for months and have been waiting for something like this occasion to bring them out. They will not be new to you, but I wish to add whatever force I can to them.

With the end of the war and the actual signing of the peace compacts, which is now surely not far off, all the millions of men in our armies will, sooner or later, return to the homeland, to face the problems of their future employment or activities. Among them will be some thousands of medical men. Most of these men will return with their old positions and practices calling for them, but still foot-loose. Many of them, and especially the younger ones, will come back to begin life entirely anew, free as no like body of medical men in our experience have ever been to choose the field of their activities. All of them will return with wider views of life and of the possibilities of their work than have heretofore been common among medical men.

There can be no doubt that the world will be open as a field for the efforts of these men. You know how many places have been waiting for the end of the war to release the medical men they are in need of. The question of deepest interest to us is how many of these men can be enlisted in the missionary service, how many the mission societies are prepared to seek and employ.

I know well that the problem of the extent and character of the medical work that could properly be made part of the missionary field has been the subject of much study and consideration on your part. It seems to me that this calls for definite decisions of the utmost importance to the future of missions at this time. There is no doubt that if the Church is ready to go forward, there is an opportunity the like of which will never within our lifetime come again. Never again will there be so many men, peculiarly fitted by their experience to listen to the call to world-wide service and also qualified by their experience to meet the call with unusual ability. The question the Church must face is how far it is prepared to go in enlisting medical men for work in foreign fields and also what scope it will seek to give to the men it secures. The number of men who can be used in the mission field will depend in largest measure upon the resources of the Church, but the latter will be determined by the answer to the second question, namely, how wide shall be the scope of the medical missionary's work. The power of the work already done is well known and also, in a general way, the means that the Church can command or expects to command for the development of the work along the established lines. Is the Church prepared to go further or not?

The opportunities that are opening in the way of medical education in the East we know, and I have no doubt that the leaders of the mission societies have studied the problem of their participation in this work and already defined their attitude toward it. There can be no doubt that the right use of the opportunities in that field will have tremendous influence upon the history
of medicine in the East and also upon
the whole mission movement.

What I want to call your attention
particularly to is the fact that I think
that one of the results of the war will be
to present a problem of perhaps equal
importance in another field of medical
effort.

One of the really startling results
(to me) of experiences in the medical
work of an army is the comparative
unimportance of what is done for the
individual in the way of treatment,
either medical or surgical, when weighed
against the tremendous influence of the
measures that affect the army as a
whole. Changes in treatment save a
life here and there, or perhaps a few
hundreds of lives, and it may be that
these few lives are of great value, but
the big things are the measures of
preventive medicine, sanitation, and
hygiene, which touch the whole mass of
millions of men and, when they are
properly employed, save their tens of
thousands. Let me cite the anti-typhoid
vaccination as an example of what I
mean. Typhoid killed its thousands in
1898 and well nigh paralyzed the army
by its ravages. In 1918 it has played
almost no part in either the morbidity or
mortality of the army. The big question
before the army to-day is not any new
means of medicine or surgery, but
what shall be done to stop the epidemics
of influenza and pneumonia. The reply
will probably be a new form of vaccina-
tion. In fact Dr.—(I should have said
Major) is now engaged in a great effort
along that line.

The greatest things to be done in the
Orient lie along these lines, the preven-
tion of disease among the teeming mil-
ions. The possibilities of service in this
field are almost unlimited. The opportu-
nities are open to qualified men.

Half way between the mouth of the
River Somme and Abbeyville is the village
of Noyelles. On a hill about a mile out
from the town was built a hospital which
accompanies the British legation, Peking,
and the headquarters of the China Public
Health Committee, who went to France
some months ago as medical officer
to a Chinese Labor Battalion.

Dear Friends:—The largest hospital
in the world, exclusively for Chinese,
is not in China but in France. It serves
our 140,000 Chinese laborers.

The hospital buildings are not made
in the Orient along these lines, the preven-
tion of disease among the teeming mil-
ions. The possibilities of service in this
field are almost unlimited. The opportu-
nities are open to qualified men. Who
will be the men to lay hold of them and realize the possibilities of the
situation? I know that to some the
idea of sending a trained man to equip
such service and send them out as
missionaries will be revolutionary. To
you it cannot be new, for I recall a
letter from one of the men in Persia
pointing out the vast possibilities inherent
in this preventive work and asking that
men qualified in bacteriology should be
sent out to try to realize them.

That this is the work of the Church as
much as the preaching of the Gospel
I firmly believe, and I surmise that the
developments of these war years have
opened many eyes to the power and the
appeal of the work done for the lame,
the halt, and the blind. Has there been
any word spoken since the beginning of
the war that will match in power the
practical demonstration of the fruits of
Christianity?

The things I had in mind are here, in
poor form I fear, for I have not yet
learned to use the typewriter for myself
easily enough to escape its constraint,
but you will grasp all that I have tried
to say. I see great things in the future
if the tremendous interest aroused by
the war in relief work and the boundless
generosity of the people, when a cause
really reaches their hearts, if those can
only be laid hold of and used for the
work of ministry in other lands.

I need not say in closing that I would
not be thought to belittle the preaching
of the Word alone. I wish only to see it
given the Power that comes from its
practical application, just as nearly as
possible in the way in which Christ
Himself couples the two.

Yours ever,

Base Hospital, France.

With the Chinese Coolies in France.

The following is part of a letter which
has been received from Dr. W. W.
Peter, the Secretary of the China Public
Health Committee, who went to France
some months ago as medical officer
to a Chinese Labor Battalion.

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is not in China but in France. It serves
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Who will be the men to lay hold of them and realize the possibilities of the
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That this is the work of the Church as
much as the preaching of the Gospel
I firmly believe, and I surmise that the
developments of these war years have
opened many eyes to the power and the
appeal of the work done for the lame,
the halt, and the blind. Has there been
any word spoken since the beginning of

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The China Medical Journal.
ment of the sick. There are medical and surgical buildings or wards, and special wards for tuberculosis, influenza, trachoma, venereal disease, other infectious diseases and emergency cases.

For insane patients, of which there are about sixty, there is a detached area enclosed by double rows of high barbed wire entanglements, with guards at the entrance. The saddest place of the whole hospital to visit is the isolated camp for lepers who number about sixteen.

There is a little Chinese graveyard, very well kept, where 350 laborers are buried. Over each grave is a white cross giving the name, military number, company, and date of death. The Chinese have started a fund to erect a memorial arch in Peking to commemorate the lives of those who lie buried in France. One coolie gave a third of a month's pay.

Right in the heart of this hospital camp is the Y. M. C. A. which is rendering much needed service to the Chinese. There are 90 centers in the B. E. F. in which the Y. M. C. A. has established its work. There are 85 Chinese and foreign secretaries in this Lille region there are 16 canteens and only a staff of five men. But the army officers have detailed sergeant orderlies to assist them to run the canteens. The work for Chinese is just opening up in the French and American Armies.

There was one company of Chinese with which the foreign officers had constant trouble. Fines and court martials failed to maintain discipline. The men were in bad spirits and uninterested in their work. During off-hours they gambled and quarreled. Then a Y. M. C. A. canteen hut was set up by a Chinese secretaries. Ten days later the commanding officer came to the Y. M. C. A. Headquarters to express his thanks. "I don't know what that Chinese secretary lectured about or what he has done to my company of Chinese," he said, "but I have not had a single case of trouble of any kind since the third day after his arrival." The British army officers welcome this work and co-operate wherever possible. We are assured that the Chinese will be kept in France for at least another year on their three or five year contracts. Most of the Chinese arrived late in 1918.

Messrs. Cole, Hersey, and I are making this inspection trip by automobile. We sent the regular driver back so as to make room for our blankets and bags. I am driver pro tem of an old Sunbeam car. Our route is Paris, Dieppe, Le Havre, and back to Paris, in thirteen days. The road took us into the devastated area at Bailleul. We passed village after village totally in ruins. Not a house inhabited.

The Chinese are seeing a sad side of our western civilization. I sometimes wonder what tales will they carry back with them to China. Coolies they are, it is true, but theirs is a simple philosophy of life interspersed with an abundance of common sense. When they get back to China, what tales will they tell in their homes and to their friends gathered in the tea-houses? Coolies though they be, not one but will have a larger hearing than many foreigners have ever secured. It would not surprise me to hear of officials in the districts from which these men come calling in these plain men to hear from their own lips the ungarish tales of life as they have had to live it over here? Then they will hear what these men are doing and seeing and thinking now. France is now a great school for Chinese. The greatest hospital for Chinese in the world numbers 1,500 patients. The greatest school for Chinese in the world is also here in France. There are 140,000 pupils. The Y. M. C. A. men are the latest and perhaps among the most important additions to the faculty of this school. Our graduates will scatter to all parts of China. Their experience in France, no doubt, will be the biggest thing in their lives and one in which all the Chinese with whom they come into contact will be interested. We must therefore reckon on a new body of men 140,000 strong going back to China as interpreters of our western civilization. What will they say?

Cordially yours,

W. W. Peter.

Lille, France

January 11th, 1919.

Medical Missionaries Who Went to the Front.

To the Editor, C. M. J.,

Dear Sir:—Now that the war is over, would it not be well to place on record in the CHINA MEDICAL JOURNAL the names of medical missionaries to China and of the brothers and sons of medical missionaries who, in one capacity or another served with the Allied armies. Some of those who went to the Front have made the greatest sacrifice of all; others have been wounded; not a few have received special honors and distinction; all have done well. Of course many of those who
remained at their work in the field would gladly have volunteered had it been possible for them to leave, and all have tried to do their "bit." There is no attempt to make invinous distinctions. Nevertheless, I think a record of those who actually did serve will be of special and permanent interest.

Yours sincerely,

SEXAGENARIAN.

* * *

Probably nearly all will agree that the suggestion is very appropriate. It is hoped that a complete list of the names with two or three lines giving the essential particulars of service will be sent to the editor so that the record desired can be made.—ED.

The Distribution of Equipment and Stores of Military Hospitals.

To the Editor, C. M. J.,

DEAR SIR:—There is a matter that I have been wanting to write you about for some time. It is the question of getting hospital material second-hand from Europe, such as beds that have been used in the hospitals there during the war. Have you ever thought of such a possibility? It has occurred to me that there must be thousands of beds and other hospital equipment that have been used in the hospitals that will not be needed now, and I wondered whether the Executive Committee of the C. M. M. A. could take up this matter and make inquiries through some London firm or in some other way, and see if some definite information can be obtained. There must be plenty of hospital material of all kinds that may be obtained gratuitously or at a greatly reduced price. During these times when everything is so expensive and our finances are being drained any help such as this would come in very handily.

Sincerely yours,

W. L. BERST.

December 1918, Hengchow, Hunan.

* * *

This letter came before the Executive Committee of the Association at its last meeting. After careful consideration it was decided to advise every missionary desiring to obtain war supplies of this kind to make application for them through his own mission board, as it would be difficult for the Executive Committee to act on behalf of all mission hospitals in China, and then to distribute the supplies, if any were received, in a manner that would be perfectly satisfactory to everyone concerned. Several months ago the medical missionaries in India decided to make application for the medical stores available for distribution in that country, with what success the editor does not know.—ED.

The Unfertilized Egg of Ascaris lumbricoides: a Disclaimer to Priority in Describing.

To the Editor, C. M. J.,

DEAR SIR:—It was my privilege to publish a paper in 1906 that represented interm ittent study during the years 1903 to 1905 of the egg that is known now to be the unfertilized egg of *Ascaris lumbricoides*. In the paper referred to, I reported six cases of Europeans whose stools had shown only the elongated, thin-shelled, globular-yolked eggs, which eggs disappeared immediately after the expulsion of female worms, usually a single female. In none of the cases was a male worm expelled after treatment with santonin, although this treatment invariably brought away the females.

Since the publication of this article, I have been given the credit in some quarters of first describing and calling attention to the source of this atypical egg, and it is the purpose of this letter to disclaim priority in a discovery which I made independently, but considerably later than the Japanese investigators Miuri and Nishiuchi.

Although it has been about fifteen years since the unfertilized egg was described, the most complete book on Tropical Medicine published in the English language, *Castellani and Chalmers, Manual of Tropical Medicine*, second Ed. p. 1297 has a splendid drawing of the unfertilized egg which it designates "Ascaris?" The reason for the belated recognition of this egg, which to the uninitiated is extremely puzzling because it is so unlike the fertilized egg of the same worm in its appearance and measurements, is that the descriptions have, with a single exception, so far as I know, appeared in publications that have a comparatively small circulation amongst English-speaking physicians.

In 1917, I visited the Library of the Surgeon General in Washington, D. C., and looked up the literature on the subject. If my memory has not played me false, the following is a complete list of references to the egg under discussion, so far as this Library had obtained them at that time.

Miuri (K) and Nishiuchi (N) *Uber befruchtete und unbefruchtete Ascaris-
Correspondence.

The following, from our view of the case, would be the answers to the three questions on page 526. No. 1. This is not a case of dementia praecox. No. 2. This is not a case of intoxication psychosis, but a case of manic-depressive insanity with alcoholic (and possibly opium) symptoms superimposed. No. 3. Treatment cannot change the symptoms of intoxication psychosis to dementia praecox, but treatment which removed the symptoms of intoxication would leave the symptoms of dementia praecox continuing, in a case of dementia praecox masked by toxic symptoms.

Yours truly,

J. L. H.

Carlson, February 27, 1919.

On Dementia Praecox.

To the Editor, C. M. J.,

Dear Sir:—Allow me to question the diagnosis in a "Case of Dementia Praecox," published in the China Medical Journal, November, 1918. The writer of the article is a keen observer and groups the symptoms well, but I cannot but think he has put the wrong label on it. It is usually easier to diagnose a case if you can see the patient himself. However, I think the history and symptoms described might rather be interpreted as belonging to manic-depressive insanity, manic phase, showing some delusions caused by constant use of alcohol and perhaps opium. Some of the delusions sound more like "talk" of an elated manic-depressive, than real delusions.

On page 525 certain disturbances of volition and action are noted, such as that the patient would close his eyes tightly, fold his arms on his chest, and stiffen out his whole body so as to look like a corpse; while such symptoms are more commonly seen in dementia praecox, they also occur in manic-depressive insanity. The same can be said of the rhythmical nodding of the head. Furthermore, dementia praecox is a form of insanity from which the patient rarely, if ever, recovers; whereas, the improvement in the present case (ability to teach school) when his age (48) is considered, could hardly be looked upon as a remission of dementia praecox.
and the result. One may say the symptoms are those of dementia praecox, another awaits the issue; if the patient degenerates and incurability is established he accepts this term and, if he recovers, applies the alternative appellation. This reasoning is unscientific and illogical. The internist does not reach a conclusion as to the diagnosis of pneumonia or typhoid fever by the outcome: if the patient dies he has had pneumonia; if he lives, he has not. This phrase, however, and any phrase unfortunately, which seems to ravel some of the intricacies of mental action, has its vogue. It has had wide acceptance, and has come to be applied, according to the whim of the observer, to any attack of mental disease which is not something else."

If J.L.H, and his associates, with their great experience of insanity in China would occasionally write articles for the Journal descriptive of the different forms of insanity among the Chinese we should all be very interested and grateful. To take one point only: the ways of thinking of even the normal Chinese cannot be quite the same as that of the European or American, and therefore the abnormal mentality of the different races should also differ.—P.

Diagnosis of Gastric and Duodenal Ulcers.

To the Editor, C. M. J.,

Dear Sir,—As your editorial remarks in the January number of the C. M. J., on gastric ulcer and cancer among the Chinese is keeping the subject before the readers of the Journal, I venture to write to you about a labor-saving device for studying cases suspected of having gastric or duodenal ulcer.

The diagnosis is not, as a rule, difficult. X-rays, tests for occult blood in the stools, etc., while helpful are rarely essential. Even before any physical examination has been made, a diagnosis can often be reached while questioning the patient. The one thing that can never be dispensed with is a careful inquiry into the whole history of the case from its beginning.

Case-taking, tedious at the best, becomes more so when there are several cases in the wards awaiting a decision as to whether operation will be required or not. We therefore keep on hand type-written copies of a questionnaire, the use of which saves time and insures that nothing will be overlooked. The following is a rough draft of the form.

**Diagnostic Form: Gastric and Duodenal Ulcer.**

**Age:** Sex: Occupation:

**History:** Alcohol? Opium? Previous illnesses?

**Origin** Time? Mode?

**Present Illness:**

**Present Symptoms:**

- Appetite?
- Flatulence?
- Vomiting?
- Haematemesis?
- Pain?
- Situation?
- Severity?
- Duration?
- Relation to food?
- Affected by exercise?
- Affected by season of year?
- Radiates?
- Bowels: Constipation? Borborygms? Melena?

**Physical Examination:**

- Faeces? Pulse? Temperature?


If one fills in the above form bearing in mind the significance of the various symptoms as described in my article which appeared a few months ago (CHINA MEDICAL JOURNAL, 1918, pp. 413-420), it is not too much to say that most of the cases will, as it were, diagnose themselves.

Yours truly,

C. C. Elliott.

February 19, 1919.

Paoting, Sze.,

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A Dream and its Fulfilment.

To the Editor, C. M. J.,

Dear Sir:—I was much interested in reading the letter in the March number of the Ch. Med. Journ., concerning a dream and its fulfilment, as I have met with two somewhat similar occurrences in the three years I have been here.

The first was nearly two years ago, and the person concerned was a woman in a village near here, which village has a very bad reputation for immorality, etc. The woman is a member of our Church, and always has a pretty hard struggle, having to work for her husband, who is an opium smoker, and for all the other people who live in the same house, the whole lot of whom are worthless. This woman had a pretty bad bout of malaria, at the height of which she had a vision, in which
Correspondence.

she says she distinctly saw an angel, who told her that she was going to get better. From that moment she began to get better, though she had not yet had any treatment. When I saw her, it was already a couple of days after improvement began. She told me the circumstances of the vision to my ministerial colleague, who came with me to see her, and I remember distinctly his remarking to me as we came home together that he was not at all prepared to deny the occurrence of such visions, just as he believed they occurred in the early Church, the effect being to encourage the struggling people.

The second occurrence was last autumn, though I was not told of it till the New Year time. The person concerned was an elderly man, who till his conversion, two or three years ago, was a strong opponent of Christianity, but who, since coming to believe in Christ, has been extremely enthusiastic, and has been the means of bringing many others to worship, including practically every member of his own household. Last autumn this man had an attack of what I think to have been the Spanish influenza, which was then prevalent all over this district. He had a pretty hard time, and tried all sorts of medicines, but could not take any of them, nor could he be taken food. His sons prayed for him every night, and one night, at the height of his illness, one of his sons had a dream, which was as follows: — He saw a spirit of some sort, who spoke to him, and told him that he was to buy a duck, which was a year old and had never laid an egg, and which had particular markings on its neck and leg by which he would be able to recognise it. The intestines of this animal were to be given to his father to eat, whereupon he would get better.

Next morning, the son told this dream to the rest of the family and they decided to try and find such a duck. Strangely, during the same morning, a man came round selling ducks, amongst them being one identical with the one described; so they bought it, used its intestines to make soup, which the father took, and from that moment his recovery began.

The family have made great use of this dream and its fulfilment in talking to others, and when I happened to be in the village at New Year time everyone was talking about it.

Of course it may be said that in the natural course of events both these people would have recovered from their illness in the ordinary manner at that time. Doubtless this is quite true, but it certainly does seem to me that in both cases there was a definite encouragement given to them from God, so that they should go the more earnestly forward.

Yours truly,

W. CHALMERS DALE.

Swatow, April 10, 1919.

“Tonics and Sedatives.”

To the Editor, C. M. J.,

DEAR SIR:—May I offer two criticisms to you in regard to the JOURNAL.

In the first place I have felt for some time that the index is inadequate. Many of the articles in the JOURNAL include references to a number of conditions, diseases, and localities to which no reference is made in the title. Such references are practically lost to research workers who refer to back numbers of the JOURNAL through the indices. I need only refer to the excellent system of cross-references employed in indexing the volumes of the Journal of the American Medical Association to illustrate my meaning. I should suggest that the additional work required to make the indices more complete should be done by a medical student or some reliable clerk and the additional cost be paid for by the Association, provided the funds of the JOURNAL are insufficient.

The second point that I wish to bring up is the checking of names of drugs and preparations mentioned in the JOURNAL, e.g., in Vol. 33 p. 83 under the heading of Internal Medicine the term, liq. cresol saponis, is used. I presume that this is copied directly from the British Medical Journal, but carelessnes in one journal does not justify similar neglect in our paper. In the United States Dispensatory (19th ed), I find that Liquor Cresolis Compositus and Liquor Cresoh Saponatus are referred to, but there is no reference to Liquor Cresol Saponis.

Perhaps the author refers to some patent preparation. In any event, I think that too great care cannot be taken in using the proper terminations for remedies and diseases.

Sincerely yours,

W. W. CADBURY.

March 15, 1919.

Canton Christian College, Canton.
The China Medical Journal.

paper on "Iso-agglutination Tests of Chinese Bloods for Transfusion Compatibility," Vol. xxxii, 1918, is indexed under each word here italicized. In hospital reports and certain special articles, where lengthy reference is made to particular diseases, these diseases also are indexed. For instance, Andrew H. Wood's article on "Diseases of Spinal Cord among the Chinese," in the same volume, refers to four important diseases and these are all indexed. Our correspondent's own article in this number will probably require from twenty to thirty entries. To go much further would be attempting to furnish a concordance, not a simple index. 2. *Aliquando bonus dormifat Homer us.*—Ed.

NEWS AND COMMENT.

BIRTH.

ECKFELT.—On March 5, 1919, to Dr. and Mrs. O. Eckfelt, of Siangyang, Hupeh, a son (Lawrence Clayton).

TUCKER.—At Shanghai, on April 5, 1919, to Dr. and Mrs. A. W. Tucker, American Church Mission, a son (Joseph Blount).

TAYLOR.—At Anking, on April 12, 1919, to Dr. and Mrs. Harry B. Taylor, A. C. M., a daughter (Helen Wickham).

DEATHS.

EDWARDS.—On May 2, 1919, at Taiyuen-fu, Shansi, Dr. George K. Edwards, after a very short illness with typhus fever.

HOUGHTON.—At Peking, early Tuesday morning, April 15th, 1919, Edwin Wells Houghton, eldest son of Dr. and Mrs. H. S. Houghton, aged twelve years.

YOUNG.—At Lianfu, Shensi, February 19, 1919, George Bell, aged two years and seven months, the younger son of Dr. and Mrs. Andrew Young (English Baptist Mission).

ARRIVALS: March, 1919.—Dr. and Mrs. E. A. Merian, Dr. and Mrs. F. Howard Taylor, Dr. and Mrs. F. H. Judd, all of China Inland Mission; Dr. and Mrs. W. H. Venable, of U. S., Presbyterian Mission.

DEPARTURES: March, 1919.—Dr. and Mrs. G. G. Davitt, A.R.F.M.S., for U.S.; Dr. and Mrs. Oliver, of Hang-chow, for Australia; Dr. F. H. Dietrich, for U.S., Dr. and Mrs. E. Kyle Simpson and children; and Dr. and Mrs. W. C. Grosvenor and daughter, of Wesleyan Missionary Society.

MEDICAL SERVICE IN KULING.—Dr. Howard G. Barrie, who has been working for the past two years with the Royal Army Medical Corps in Egypt, is expected to return to China this month and will resume his work at the Kuling Hospital.

DR. BRYSON, OF SHANGHAI.—Major A. C. Bryson, M.C., R.A.M.C., who returned recently from the Front, after three and a half years' service in France, is one of the four sons of the Rev. T. Bryson, of Tientsin, all of whom saw active service with the British Expeditionary Force. Dr. Bryson received his Military Cross from H.M. King George at an open-air investiture held at Buckingham Palace in July, 1918. He has now joined the firm of Drs. Jackson, Jackson and Neild, of Shanghai.

NEW HOSPITAL IN KWETEHS, HONAN.—The Canadian Church Mission in Kweteh, Honan, is expecting to erect soon a large and very handsome hospital building in the north suburb. The end of the war will probably see a great increase in the equipment and general efficiency of missionary work.

SCHOLARSHIP FUND OF EDINBURGH MEDICAL MISSIONARY SOCIETY.—The Annual Statement for 1917-18 of the accounts of the Scholarship Fund of the Edinburgh Medical Missionary Society has just been published and from it we learn that there have been eight scholarship holders, three men and five women, studying this year. The total sums paid as scholarships amount to Rs. 1,860. There are funds available for more students, especially for men; and any medical missionaries who know of young men, possessing the needed spiritual and
The Hague Opium Convention.—The countries which have already ratified the Convention are Great Britain, the United States, Belgium, Brazil, China, Denmark, Ecuador, Guatemala, Honduras, Italy, the Netherlands, Nicaragua, Norway, Portugal, Siam, Sweden, and Venezuela. Besides providing very fully for the control of manufacture, distribution, and so on, the contracting Powers expressed at the Conferences their willingness to "bind themselves to prohibit, by special Conventions or otherwise, the exportation of morphine, cocaine, and their respective salts from their countries and colonies to the countries, colonies, or leased territories of the other contracting Powers." Heroin, codeine, and "any new derivative of morphine, cocaine, or their respective salts, or any other alkaloid of opium which may appear on scientific inquiry to be liable to similar abuse and productive of like ill-effects" were included in the regulations. The chief opposition to signature of the Convention proceeded from Turkey, while in the later stages Germany and Austria-Hungary betrayed strong indisposition to ratification.

Enforcement of Opium Convention.—In the House of Commons on April 16, 1919, replying to Mr. Jameson, Mr. Harmsworth stated that the British Delegation at the Paris Peace Conference had submitted a proposal that all the Powers represented at the Peace Conference should combine to take steps to enforce the Opium Convention of 1912 and that the terms of peace should provide for imposing on enemy States the obligation of speedily ratifying that Convention and enacting the necessary legislation.

The British delegates further suggested that the League of Nations should be entrusted with the duty of supervising and carrying out the terms of the Convention and the traffic in opium and other noxious drugs.—Reuter.

Anti-Opium Association in Harbin.—An important event took place in Harbin on March 29, 1919, when a branch of the International Anti-Opium Association was formed. The leading consuls, Russian and Chinese officials, and other important personages are giving the project their support. The Japanese Consul-General took the chair, and foremost among the advocates of the Branch, curiously enough, are the military, hitherto the worst offenders in the opium traffic. At the meeting, by official resolution, it was advocated that "united action should be taken by Chinese and foreign officials and civilians throughout China, firmly to support in every way possible the Government's policy to suppress this nefarious traffic in opium, morphine and allied drugs, and in view of the recognized evils of uncontrolled traffic in narcotics the meeting appealed to Ministers of "all countries which have not yet ratified the Hague Opium Convention of 1912 to urge upon their respective Governments immediate ratification of that Convention, and joint action with China and all other Powers to assist in carrying out its provisions.'

Health of Hongkong.—Records of the early history of Hongkong reveal terrible stories of bad health conditions, and although sanitary matters have ranked high in the legislation of the Colony, conditions are still far from satisfactory. In 1918 there were 13,714 deaths recorded, as against 10,433 in 1917 and 10,558 in 1916. This large increase is attributed in large measure to influenza and cerebro-spinal fever, responsible for 405 and 963 deaths respectively. There was, we notice, a marked decrease in small-pox fatalities, but this is counter-balanced by somewhat serious increases in enteric fever, diphtheria and dysentery. There was also a big rise in deaths from plague, and a plague, and a big increase in deaths from injuries was due to the lamentable disaster on the Race-course, which claimed over 500 victims. Deaths from tuberculosis were slightly in advance, and a big increase is evident under the heading of beri-beri. Excluding plague, the largest proportionate rise was in pneumonia, a number of deaths from which disease will doubtless be added to the influenza account.—N.-C. Daily News.

Chinese Marriages Abroad.—A proclamation has been issued by the Prefect of Shanghai, publishing an order issued by the Ministry of Interior on the question of mixed marriages between Chinese emigrants and foreign women. In future, all Chinese recruits for foreign countries must, before enrolment and embarkation, be required to state whether they are
married men or not, and whether they are betrothed or not, which statement should be verified as far as possible and put on record at the Ministry of Interior, the Ministry of Foreign Intercourse, the Chinese Legation, the Consulate in the country to which they are to be sent, and the Labour Emigration Bureau, for the purpose of reference when necessary. Those emigrants already at their foreign destinations shall be required to produce certificates to prove that they are unmarried when they want to marry foreign wives. They can write to their parents or family elders asking them to give a bond in writing to prove that they have no wives in their native land, which bond shall be submitted to the district official, who will forward it to the Ministry for re-transmission to the Chinese Legation or Consulate, as the case may be.

The above order has been sent to the provincial chiefs for circulation throughout China.

C. M. M. A. Conference, 1919.—At a recent meeting of the Peking Branch, C. M. M. A., Dr. Korns presented a tentative report on the programme of the Conference. The local committee of management is working hard and trusts that the preparations now being made will make it well worth while for all members of the association, and their friends to attend.

FIRE IN MISSION HOSPITAL.—A serious fire occurred in the Mission Hospital, Taikuhsien, Shansi, on the night of May 3, 1919, when the women's wards, with all the furniture and contents were totally destroyed. Though seven patients were in the building at the time, all were removed without loss of life or injury. The hospital kitchen was located in the basement of this building and was probably the source of the fire, which began about two hours after midnight. The loss will be between five and six thousand dollars.

Mr. Geo. E. Vincent, president of the Rockefeller Foundation, New York, Mr. Roger S. Greene, Resident Director in China of the China Medical Board, and Dr. Franklin C. McLean, Dean of the Peking Union Medical College, are coming to China in June.

Dr. Arthur Woo has been appointed to the staff of the Peking Union Medical College, in the Department of Obstetrics and Gynecology, his service to begin July 1st, 1919. Dr. Woo received his training in London, where he has held numerous hospital appointments for over ten years.

At a meeting of the Peking Branch of the C. M. M. A., on May 7th, 1919, the following officers were elected:

President: Dr. John H. Korns
Vice-President: Dr. J. G. Cormack
Secretary: Dr. Way Sung New
Treasurer: Dr. Margaret E. Phillips.

Dr. William G. Lennox left on April 1st, 1919, for the States; he expects to return to Peking next September. Dr. J. H. Wylie, of Paotingfu is taking his place in the Medical Department of the Union Medical College Hospital, Peking, until Dr. Lennox returns.

Miss Cora J. Wong, formerly of the Manila General Hospital, and later connected with Yale Mission at Changsha, has joined the nursing staff of the Union Medical College Hospital.

OLD AGE SOON REACHED IN THE TROPICS.—It is a well-known medical fact that after the age of fifty the mental and physical powers of the large majority of Europeans who have spent a number of years in these tropics decline markedly and rapidly, says the Straits Times. In Malaya, men over the age of fifty have, as a rule, after twenty-five years' local work, spent their best powers of energy and initiative: and after this age often do not display any greater capacity than that of a conservative adherence to their past methods. To burden the ship of State with dead weight of this kind must be uneconomical: and it could probably be with advantage jettisoned.

SHANGHAI MUSEUM.

Frogs, snakes, lizards, tortoises, and newst, are wanted for the Museum. If you are willing to help, please keep a big wide-mouthed closely covered bottle containing 75% alcohol (or strong samshu) for dropping such specimens into. Towards the end of the year place the specimens in a tobacco or grocer's tin just wrapped in a piece of cloth moist with strong alcohol and send by Parcel Post. A few notes as to where found, etc., will increase the value of the gift. Out of pocket expenses will be gratefully paid on receipt of particulars.

Arthur Stanley, Curator.