CASE OF ABDOMINAL STREPTOTRICHOSIS.

George Jewel Evans, M.R.C.S. Eng., L.R.C.P. Lond.

The following clinical and bacteriological notes may be of some practical interest to medical men in practice in the East, for the reason that the rarity of the case may turn out to be more apparent than real. Were the systematic examination of pus more commonly carried out, it is possible that such cases as the one now placed on record would be anything but rare, considering the vastness of the agricultural population of China and the many opportunities of infection with Hyphomycetæ or ‘Moulds’. Tong Ming-fong, aged 54, occupation farmer, was admitted to the C. M. S. Hospital, Ningpo, on May 23, 1910 for a swelling in left iliac fossa.

History: He was quite well until about 4 months ago when he developed hardness and a swelling in the right iliac fossa, this seemed to spread gradually to the left side where the swelling is most prominent; he has never suffered from dysenteric symptoms nor had much fever, but he has been very constipated lately; he has no pain on micturition or passing motions; there is some discomfort during the middle of micturition.

Present condition: In the left iliac fossa there is a large fluctuant mass not moveable; this is continuous with an indurated mass extending into the right iliac region, and the upper margin of this is very sharply marked on palpation; it is dull on percussion and there is tenderness at the fluctuant area. Urine is normal; per rectum nothing found in the pelvis; faeces contain no ova, but there are large quantities of pollen granules; patient is not particularly ill, nor is he very wasted.
DIPLOMAS OF UNION MEDICAL COLLEGE, PEKING.

[See Page 251]
Temp. 100.2° Fahr. Blood count; red cells 3,556,000, white cells 10,667, haemoglobin 65 per cent. normal

Differential count
- Polymorphonuclears ... ... ... 84.6%
- Large mononuclears ... ... ... 5.3
- Small mononuclears ... ... ... 1.6
- Transitionals ... ... ... 5.3
- Eosinophiles ... ... ... 1.0
- Basophiles ... ... ... 0.6
No. of leucocytes counted ... ... ... 300

A diagnosis of Actinomycosis with abscess formation was made provisionally, even though neither of us had met this disease previously in or out of China.

Operation (under chloroform) after preparation of the skin with Tinct. Iodi consisted in a 2 inch incision over the fluctuant area; some 3 ounces of yellowish pus in which were very numerous yellow granules of various sizes, chiefly about one-sixteenth of an inch in diameter; the later coming pus contained far more than that which was near the surface.

The wound was drained and filled up rapidly using daily dressings of sterile gauze; doses of Potassium Iodide gradually increasing up to sixty grains per diem were also given. During the three weeks he was under observation the wound healed up completely, and his temperature was always below 100° Fahr. usually about 99° in the evening.

17 days after operation the blood was again examined and the cells counted.

Red cells ... ... ... ... ... 4,285,000
White cells ... ... ... ... ... 8,067
Haemoglobin ... ... ... ... ... 80%
Polymorphonuclears ... ... ... ... ... 88
Large mononuclears ... ... ... ... ... 4
Small mononuclears ... ... ... ... ... 3.5
Transitionals ... ... ... ... ... 4
Eosinophiles ... ... ... ... ... 5
No. of leucocytes counted ... ... ... 200

Of the subsequent history of the case we can say little, except that the patient did not take iodides, and on sending up to his home in the Ningpo Hills to enquire after him it was reported that he had died some six months after leaving the Hospital, and probably from some complication of the original disease.

Microscopical examination of the pus at time of operation shewed dense masses of felted mycelium, but no clubs were visible in Potash solution: simple staining, and the Gram-eosin method in particular demonstrated branching mycelium, and in a few places thickenings resembling clubs. No other organisms were noticed, nor did they
grow on agar or glycerine-agar, which produced a very limited growth of the streptothrix only. Cultures were made on Potato and Glycerine-Potato but were contaminated; a most profuse growth developed on hard boiled eggs, the inoculation being made through minute punctures in the otherwise unbroken shells, which were then sealed with paraffin wax; at the end of 13 days the shells were removed and spreading from the punctured spot on the surface of the egg was a thin pellicle of growth with a slight tendency to corrugation, and a greyish yellow appearance; this was probably also a contamination as no mycelial growth was present; hard boiled eggs were inoculated in the same way and taken to England by Dr. Preston Maxwell by the Siberian route; unfortunately they went peculiarly bad on the journey and were thrown away.

The stained specimens were submitted to Dr. McLeod of the London School of Tropical Medicine, and in his opinion they demonstrated that the case was one of infection by a very fine Sporothrix.

A quantity of the yellow granules were sent to the Shanghai Municipal Health Laboratory and the report was as follows:

Guineapig injected with material from case of Streptothrix abdominal abscess
on May 27, 1910, weighed 670 grammes
on June 20, 1910, weighed 690 grammes
on July 7, 1910, weighed 720 grammes.

A small abscess was found at the site of the subcutaneous injection which contained "thin bacilli."

So far as observations have been recorded this is an extremely rare condition, and it is perhaps profitable to consider where in the long list of pathogenic agents its causative organism may be placed.

First of all it is important to note that it is a true "mould."

And indeed the moulds are the most deadly of all the causes of human disease; and to convince oneself of the truth of this statement, a short list of such diseases is appended in order to focus the attention; in this list the more or less superficial infections, caused also by hyphomycetes, are omitted; such as the various Ringworms, Favus, Pityriasis versicolor, Aspergillosis, and certain Mycoses:

(a.) Streptothrix of Tuberculosis.
(b.) Streptothrix lepoides.
(c.) Streptothrix Madurae.
(d.) Streptothrix of Actinomycosis.
(e.) Streptothrix freeri.
(f.) Unclassified varieties such as the present case, described as 'Sporotrichosis.'

With regard to Tubercle, the appearance of old cultures both to the naked eye and through the microscope, the fact that under certain
circumstances tubercle bacilli in the tissues produce a radiating structure closely similar to that of Actinomycosis, that club-like structures are to be met with and that some of the filaments may shew the appearance of branching; apart from the clinical aspect, all these form evidence that the bacillus of Tuberculosis would be more accurately included among the Streptothricce.

With regard to Streptothrix leproides Deycke Pasha is said to have cultivated it, and Nastin, used in treatment of Leprosy is said to be a product which has the property under certain conditions of dissolving the resistant fatty envelope of Bacillus leprae, so that it may be successfully attacked by the leucocytes; it is said that lepers react to Nastin as tubercular patients do to tuberculin. The comparative difficulty or even impossibility at present of cultivating some of these organisms is also a point of similarity; now that Bacillus leprae is also said to have been cultivated, it will be particularly interesting to note its characteristics.

The differential diagnosis between the diseases caused by Streptothrix Madurae and Streptothrix of Actinomycosis is clearly indicated in an article by Acland in Clifford Allbutt's System of Medicine; briefly the description is as follows:—the former is said to be confined to man, has not been successfully inoculated into lower animals, occurs in the Tropics, runs a slow course, does not become generalized, does not attack the viscera, and presents granules of various colours; whereas Actinomycosis is a disease which can be transferred from animals to man, and can be inoculated into animals; it occurs in temperate climates, often runs a rapid course, affects internal organs and mucous membrane and has yellow granules in discharges: Dr. J. M. H. MacLeod states that Potass. Iodide is of undoubted use in treating cases of Actinomycosis, but it has little or no effect in "Madura foot."

It is most interesting to read of a single Physician at Los Angeles (Norman Bridge in Medical Press 1908) reporting eight cases of Actinomycosis of the Lungs, simulating tuberculosis in three of these; he noted that the sputum tended to become fetid, and usually no granules were visible, the true nature of the case being revealed by staining only. It may have fallen to the lot of many besides myself to have apparently well-marked cases of pulmonary tubercle under observation, in whose expectoration no tubercle bacilli could be demonstrated; granted that some were insufficiently examined, there still remains the suspicion that others may have been due to streptothrix infections other than tubercle.
Streptothrix ireeri is the name given on the strength of a single case in the Phillipines described by Musgrave and Clegg in the Philippine Journal of Science Vol. 2 B.

Finally as to the case now reported, it seems probable that it cannot be placed under any of the preceding heads, and as E. Brumpt in a paper on "Les Mycetomes" in Archiv. de Parasit, is said to have described 8 varieties of Mycetoma, it will be necessary to await further reports of similar infections before deciding whether there are any Streptotrichoses peculiar to China.

AN EASY AND USUALLY SUCCESSFUL METHOD OF SKIN TRANSPLANTATION.

C. Heman Barlow, M.D.

In writing this article no claim is made for originality, either of method or of modus operandi. It may be new enough to be of value to some, and to those who are familiar with it, its rationale may be of interest.

It may be wise to review the older methods of skin-grafting or implantation in order to compare them with the method advocated, herein, that we may observe wherein the new method holds forth inducements and presents advantages over the old, and wherein it fails to attain to the results possible with the older methods.

In all of the older methods it is a rule that the granulating surfaces to be grafted upon must be healthy and that aseptic care must be exercised in making the graft in order to ensure success.

Entire flap grafting is no longer done and of the methods now in vogue the oldest is that advocated by Reverdin. It has many variations and modifications but in all, the essentials are the same. The granulating surfaces are curetted and small punctures made, into which are thrust fresh surface downward, small pieces of integument. If successful these pieces of integument form coalescing islands of new skin which ultimately cover the denuded area. The little tufts of integument include the rete Malphigii. The method consumes both time and care in removing the transplants and in properly placing them and the subsequent dressings need to be carefully done and attended to.

Tiersch's Method requires the shaving down or the curettage of the whole surface to be covered to form a suitable base or foundation to receive the grafts. The grafts include the epidermal layer of the integument. There is required a sacrifice, either from some other
person or from another part of the same person, in order to supply the transplants. Great care in making and applying the grafts as well as some little skill in the proper application of dressings to the parts repaired, is required.

There is also displayed no little liability of failure to grow. Krause's method presents still greater difficulties than any of the preceding methods and is more liable to fail as the grafts include the whole skin structure, and the operation must be aseptically performed. Great care must be exercised in the removal and formation of the strips and in the placing of the dressings. Its advantages are that it supplies a thoroughly functionating skin surface, as soon as success is attained.

Lusk's method, easier than any of the preceeding, utilizes the epithelium from blistered surfaces making the grafts more easily taken off and more readily applied. Dressings are simpler and require less care.

This gives a hasty review of these methods, with which you are all familiar, accentuating only the points to be compared with the newer method.

The new method is based upon the principle of cell proliferation and the fact that only a meagre state of nourishment is required by all epithelial structures. These cells are less complex and nearer the embryonic type than the cells of any other tissues in the adult. They may be separated from their habitat and kept alive for days in normal salt solution or may be grown upon culture media in a manner similar to that used in the culture of bacteria. These cells removed to new sources of nourishment and stimulated to growth by the removal of the natural limitations to proliferation, reproduce rapidly till, in the normal, they fill a defect and again come under the law of growth limitation; or, in the pathological, go on multiplying without restraint, to form the various epithelioma. The proliferation of these detached cells, is the same as that carried on in their natural habitat; reproduction by karyokinesis or mitosis. The changes take place within the nucleus and are divided into four phases, the prophase, the metaphase, the anaphase, and the telophase. The time consumed by the cell in passing through these successive phases varies from less than an hour, in some, to as many as seven or eight hours, in others. This accounts for the rapidity with which grafts "take."

The cells involved in this reproduction, and from whence arise all the new cells of the epidermal structure, lie next to the corium in the stratum germinativum of the rete. Above this layer, in order from within outward, are the stratum granulosum, the stratum lucidum, and
the *stratum corneum*. In order to get proliferating cells for the purpose of transplantation, the superficial layers must be removed, either *en masse* as in the older methods of grafting, carrying with them the layer of germinating cells, or some part of that layer, or else these layers having been removed, individual cells, or groups of cells, from the *stratum germinativum* are obtained and carried to their new place of growth, as in the new method of cell transplantation.

The method is simplicity itself. An ordinary stiff fibre brush, such is used for cleaning vegetables, or a stiff hand brush is all of the instrumentation needed. First scrub the area above the denuded surface till it is thoroughly reddened and denuded of the superficial layers of non-proliferating cells. Next scrub the denuded surface if there be granulations or infection present until it is clean and bleeding. If it be fresh it need not be scrubbed. Then without waiting for the bleeding to entirely cease, scrub from the prepared sound surface down over the denuded area with a strong, even, stroke stopping the brush with a slight tamping motion. This carries the fresh cells down upon the denuded area and implants them. No care need be taken with the subsequent dressings more than is ordinarily taken and, even on old ulcers and other unfavorable areas, the results, in the majority of cases, are most gratifying.

In a few days, tiny isolated spots of new skin appear which extend and unite, forming new skin with almost the rapidity of transplantations made after Reverdin’s method.

Some pain is caused by the harsh brushing of the denuded area but this can be combatted by the same means used in curetting or shaving the granulations in preparing for the older methods of grafting. As a rule my patients do not object too seriously to bearing the attendant pain.

The new method is not so applicable to work in obscure locations nor where the area denuded takes in the whole of the skin, over a large area, down to the subcutaneous tissues. It is better adapted to ulcerating and septic surfaces than the older methods, because the serous discharges, the flow of blood, or the disturbing action of pus, do not have such large surfaces to work against as in the older methods, and some of the isolated cells are sure of getting a foothold. It is possible to use the method on large denuded surfaces unless they are so great in extent as to make the time of repair an important factor and at best, on large areas the older methods give results sooner and better than the new.
PECULIAR PHAGEDENIC ULCERATION OF THE TOES.

Apparently Due to Vincent's Fusospirillar Symbiosis.

Report of Three Cases.

By O. T. LOGAN, M.D., Changteh.

For many years we have seen cases presenting clinical features that have seemed to set them apart from the ordinary run. These are characteristic ulcers of the feet that invariably give the history of itching between the toes which leads to ulceration and finally necrosis of all the tissues of the toes, sparing the great toe in whole or in part. I have exhibited photographs of these cases in public and private, in China and in the United States and have never had any help in the diagnosis. Unfortunately I thought the condition was one for the pathological, rather than the clinical microscopical laboratory and when one of the best pathological laboratories in the States failed to give me any light, I felt well-nigh discouraged. It is only fair to say that the section submitted to that laboratory (it was from case 92.07) may not have been typical, although it seemed to be in all essential points.

When the last case appeared in the clinic it occurred to me to take a light scraping in order to search for *Spirocheta pallida*. I was fairly well satisfied that the disease was not syphilitic but wanted to be sure. I also wanted to rule out vegetable organisms of the blastomycetes class and accordingly first examined the smears with 50 per cent. KHO in glycerine. Other smears were stained with Leishman's stain and methylene blue. Of these methods, Leishman's alone gave any information. With this stain I was surprised to find every field crowded with fusiform bacilli, all large as bacilli go, and delicate spirochetae. There were a few cocci in the field but the first impression was that the fusiform bacilli and the spirochetae had formed a trust to the exclusion of all other organisms.

Immediately I remembered an article that had appeared in *The China Medical Journal* in November 1909, by Dr. Assmy, of Chungking. Turning to his drawings, I found that in all important details they delineated what our microscope showed. He says, in part:
Case No. 111, 1911.
It may be of some interest to the members of the Association to hear that the so-called Ulcus tropicum is also found in the sub-tropics. My attention was called to the object in question by a paper by Dr. Lenz Bagamoya in the Muenchner Medicinische Wochenschrift, 1908, No. 39, in which ulcers on the leg were described as destroying skin, subcutaneous tissue, fascia, muscles, tendons, vessels, and even bone. Dr. Lenz mentioned that spirochetes and fusiform bacilli of the same kind as in Angina vincenti are found in smears of the above ulcers. After having examined here in Chungking quite a number of ulcers of different descriptions, I found the spirochetes and the fusiform bacilli in ulcers of a rather well defined nature. Round, with smooth steep margins, the edges a little infiltrated, the ground covered with dirty looking, badly smelling sloughs; under the sloughs reddish grey granulations, which bleed on the slightest touch. The surrounding skin inflamed and slightly edematous.

In No. 5, 1909, of the Archiv fuer Schiff-und Tropen-Hygiene, Keysselitz and Mayer have described spirochetes and bacilli of about the same kind from tropical ulcers in German East Africa. They tend the opinion that the spirochetes belong to at least two different species, but that the blue staining and the dark red or violet staining bacilli are of the same species. Lesions infected with spirochetes and bacilli fusiformes become ulcers, which spread by the destroying influence of the spirochetes which attack the tissues; the bacilli are the producers of the gangrene and the putrefaction. Sections from ulcers stained after the method of Levaditi, show that in the exudate and in the superficial layers of the ground and the edges of the ulcers, fusiform bacilli and spirochetes live together. Farther off from the surface the bacilli disappear gradually, and near the still healthy tissue, spirochetes only are found.

Keysselitz and Mayer also express the opinion that Ulcus tropicus and Phagedaenismus tropicus form an etiological entity.

I think we have seen at least a dozen cases of this characteristic infection of the foot in the twelve years we have been here but unfortunately have photographs of only three and full notes of one case. However, the history of one is the history of all in the essentials.

**Case No. 111/11. History.** Five years ago while going barefoot, the space between fourth and fifth toes began to itch and when scratched the skin was broken and ulceration began. This ulceration spread across the foot until all the toes were involved except the great toe. Pain has been severe from starting of ulceration but particularly bad during the last year. Weeping has been copious from the beginning. Patient denies ever having had venereal disease.

**Condition on Admission.** Male patient, coolie 28 years old, slightly anemic with anxious, pained expression. All the small toes are ulcerated on palmar and interphalangeal surfaces. The ulceration also extends on the sole of the foot to a point approximating the distal necks of the metatarsals. The surface of the ulceration is covered with a greyish pultaceous slough that is easily wiped off and under which is found a red surface—the ulcer proper—that is studded with small yellow masses of millet seed size. These are easily scraped off and when this is even carefully done the surface beneath bleeds
freely. Edges of ulcer sloping and not elevated. The toes are swollen and the whole foot edematous. The ulcer is sensitive to a remarkable degree; even wiping off the secretion with a cotton swab causes intense pain. The weeping is very profuse and is serosanguineous.

**MICROSCOPIC EXAMINATION.**

Smears made from light scrapings of ulcer treated with,

1. 50 per cent KHO in glycerin and examined for vegetable organisms, negative.
2. Stained with aqueous solution of methylene blue, nothing characteristic found.
3. Stained with Leishman's stain as for malaria, the whole specimen was found teeming with the following:

(a.) Fusiform bacilli staining lilac with deeper staining nuclei.
(b.) Thinner bacilli with delicate envelope and colorless protoplasm and deeply staining nuclei.
(c.) Spirochetae, pale staining, delicate and usually undulating, but a few corkscrew forms observed.
(d.) Ordinary bacilli, cocci and diplococci. Very few of these are present in the smear.

The field is literally filled with the thicker bacilli and spirochetae and the delicate bacilli would be considered numerous were it not for the preponderance of the others.

It has not been our custom to examine smears from ulcers and abscesses. Not having the necessary laboratory facilities and being busy like most medical missionaries with the so-called more practical work, has been our excuse. Since it is so easy to find these organisms, we shall try to study smears in cases that seem out of the ordinary in future and I am of the opinion that we shall find this organism frequently.

Hektoen in Keene's Surgery, vol. I, p. 155, says, speaking of wound infections: "The fusiform bacillus and spirilla of Vincent, found especially in the mouth and present in large numbers in a variety of necrotic and inflammatory lesions (Vincent's fusospirillar symbiosis), the most important being ulcero-membranous processes in the throat and mouth, and noma, but found also in hospital gangrene, fetid abscesses and appendicitis."

As to treatment; in our series, cases 13, 1906 and 92, 1907 were amputated (Chopart's method) and secured servicable feet. Case 13 had two months' treatment with antisyphilitic treatment and various antiseptics with no improvement, before we decided to amputate. In future cases, I shall recommend excision or thorough scraping under
Typhoid Fever.

anesthesia followed by medical or actual cauterization, on lines recommended by Manson, unless it is evident that the function of the parts cannot be restored by such treatment.

IN CONCLUSION.

I wish to call attention to the extreme simplicity of diagnosis by smears stained by the ordinary Leishman method and invite others to join in the search for this destructive set of organisms.

The outstanding peculiarity of the ulcers in our cases is the chronicity as regards time and the acuteness in regard to pain, if one might use this definition. Manson and Jackson's descriptions of tropical phagedena indicate that the course of the ulceration is rapid, being a matter of days or weeks, while ours cover years. Neither of these authors describe the specific organism in their books. It is possible that the infection by Vincent's organisms supervened upon an ulceration of a different nature, although the history of the cases would seem to indicate that the same cause has operated from the beginning.

The fact that the great toe and the dorsal surface of the foot have been spared would seem to indicate that the organisms are powerless in the presence of good blood supply. I venture the opinion that the virulence of these organisms is attenuated in this sub-tropical region as compared to the tropics and account for the comparative mild course and chronicity on this hypothesis.

TYPHOID FEVER.

By E. H. Hume, M.D., Changsha.

In a paper read at Kuling in August, 1907,* reference was made to typhoid "carriers" as playing an important part in the spread of the disease. What was known then as to etiology did not seem to suggest any method of treatment by which the bacilli thus harbored within the intestinal canal of an individual might be expelled. The question was asked at the meeting when this paper was read as to what might be done to prevent the infectiousness of a "typhoid carrier," and the only answer then given was that Dehler had removed the gall-bladder in certain cases on the supposition that this organ might be the one affording the best refuge to the bacilli. He had succeeded in

curing some cases. Since then, however, it has been shown that cholecystectomy is not an infallible cure. The problem of preventing the spread of typhoid is so important that it seems worth while to give rather fully the recent observations in the literature.

1. *Typhoid Bacilli carriers*: Simonds (*Amer. Jour. Med. Sci.* 1910, cxl, 247) in a full study, shows the menace that "carriers" may be to public health. He points out that during the last five years a great many such individuals have been discovered, especially in Germany. They may be divided into two groups, persons harboring the bacilli for less than three months after their attack of fever; and those harboring the germs for more than three months, the "chronic carriers". He mentions a number of epidemics due to bacilli carriers, showing that these are "characteristically sporadic in occurrence, limited in distribution to the immediate vicinity of the carrier himself, or to an area supplied by certain food products handled by him, and that they follow the carrier when he moves from one community to another." He quotes the famous case of Kayser, who reported a certain bakery in Strassburg where practically every new employee sooner or later became ill with typhoid-like symptoms, there being two fatal cases. The owner, a woman, had had typhoid ten years previously, and her stools contained typhoid bacilli. Another woman in the same city, engaged in the milk business, was the cause of seventeen traceable cases of typhoid fever, and was found to be a carrier. He also refers to Gregg's remarkable case of a female bacilli carrier, seventy-four years old, who had had typhoid fever fifty-one years previously, and when she did away with the services of a cook, those for whom she prepared food soon began to develop typhoid, seven boarders suffering with attacks in two years.

In all, the fifty-one bacilli carriers reported, were the cause of 275 cases of typhoid fever in others. In 1906, in Strassburg, there were 2,080 persons ill with typhoid fever; 978 cases (47.7 per cent) were traced to their source, and of these, 746 were so-called "contact infections". Forty-nine of these cases were caused by bacilli-carriers; thus, 2.4 per cent of all cases, or 5 per cent of those the sources of which were discovered, were due to bacilli carriers. Kayser found that in Strassburg, three per cent of all typhoid patients were discharging bacilli one year after the attack. It is to be noted that a person need never have had a clinically evident case of typhoid fever in order to become a carrier. Cases of this type are reported from France and from India.
Regarding sex, the German Royal Commissioners found, in a large number of cases that 82 per cent of bacilli carriers were women. It is a fact of great significance that the ratio between the sexes among bacilli carriers is very nearly the same as that found in cholelithiasis.

As to season, there seems to be a seasonal variation in the effectiveness of carriers. One carrier reported by Friedel caused four epidemics, in May, October, May and September, respectively. Possibly during the warmer months bacteria multiply more readily in food products, so that those ingesting them get larger doses of bacilli than in the cold months.

The occupation and social condition of the carrier has much to do with the likelihood of his spreading typhoid. Of thirty-two carriers whose occupation was mentioned, thirteen were dairy workers, nine cooks, seven housewives and three laundresses. It thus appears that those carriers are to be most feared whose occupation brings them into close relationship with food, and its preparation. This observation has already led to the creation of a law in the state of Indiana, by which any employee of a dairy or restaurant, or other food-producing or food-distributing establishment, if discovered to be a carrier, may be compelled to seek other employment. The danger of his spreading infection will thus be greatly reduced, although not entirely eliminated.

But human beings are not the only carriers. The difficulty of fighting typhoid has been shown to be greater than formerly realized since Courmont and Rochoux (Progrès Med., 1910, 389, rev. in Amer. Jour. Med. Sci. 1910, cxl, 899) have shown that dogs may be a great source of danger. They found that dogs fed with fecal matter from a typhoid patient could be converted into true bacilli carriers. Their stools contained bacilli which they readily disseminated. Further, Metchnikoff and Besredka (rev. Amer. Jour. Med. Sci. 1910, cxl, 312) have been able to point out still another animal, the chimpanzee, as a potential carrier. Not only were they able to make the animal show bacilli in his stools but they reproduced in him a febrile disease similar to human typhoid fever. Seven days after the beginning of feeding infected material to the monkey, the temperature rose to 40.5 C., but four days later it fell to 38. B. typhosus was recovered in pure culture from stools and from the blood. The autopsy findings were comparable to those in human typhoid fever.

It is not a new thing to show that the lower animals can become ill with a febrile condition resulting fatally, and during which, typhoid or paratyphoid organisms, similar to those fed them can be recovered from the stools, urine and blood. In describing a paratyphoid bacillus
of a somewhat unusual type in 1902 I pointed out that rabbits could be infected with the organism, and that they rapidly succumbed, showing intestinal lesions, and necrosis of the mesenteric glands, quite comparable to the findings in human typhoid.

The bearing of all these reports on the spread of typhoid is very important. The absolute disinfection of all typhoid stools, urine, linen, etc., should be insisted upon with new rigor.

And as human beings are not the only carriers of typhoid fever, so typhoid fever is not the only disease carried. Costa reports an important series of observations regarding "bearers" of the meningococcus. He studied the associates of six cases under his observation. Cultures were made from the naso-pharyngeal mucus, and colonies showing the cultural and morphological characteristics of meningococcus were then tested with anti-meningococcus serum. In the first case, one bearer, the servant of the person infected, was found. In the second, two bearers were found in eighteen persons examined. Five bearers were found in twenty-six cultures from the associates of the third case. One bearer was found in twenty-four cultures in the case of the fourth. There were eight bearers found in the fifth case and seven in the sixth case. Reports like these show the tremendous part probably played in the case of many diseases by unconscious carriers of infection.

2. The Diagnosis of Typhoid Fever: A recent publication of interest by Bass and Watkins shows that the busy practitioner has available a method of diagnosis which is both rapid and accurate. The required outfit is:

1. surgical or other puncture needle
2. ordinary medicine dropper
3. ordinary microscopic slide

The necessary material is one drop of a suspension of typhoid bacilli, and the entire cost of a single test is about one cent Mexican. The time required is two minutes. No special bacteriological or other laboratory experience is needed, and the results are as reliable and accurate as can be made by expert bacteriologists after an hour with the microscope and other laboratory facilities. The required suspension of bacilli is readily obtained from any laboratory and can be kept as a stock solution. It is a suspension of 10,000 dead typhoid bacilli per c. c. in 1.7 per cent sodium chloride solution to which is added one per cent of formalin.

The principle of the reaction is explained in full by the writers. The effect of dilution of the serum on agglutination. The agglu-
tination of typhoid bacilli depends on agglutinin present in the serum which sensitizes the bacilli and makes them have an affinity for each other. This affinity makes them clump together when once brought into contact. Agglutinin exists in a quantity quickly exhaustible, as is shown by the fact that if we add to a given quantity of serum containing agglutinin, an excess of bacilli, and after a few minutes remove the same by centrifugalization, the serum, on appropriate test, will be found free from agglutinin. If to a like quantity of serum, the same volume of sodium chloride solution be added, the power of agglutination is found reduced only in proportion to the dilution thus brought about, and the entire volume is capable of agglutinating the same amount of bacilli as the original serum. Therefore, the effect of diluting the serum is relatively to reduce the agglutinin per given volume, but without altering the total quantity of agglutinin.

The dilution of serum has another important influence over agglutination, namely that the more concentrated the serum the more rapidly are the bacilli sensitized.

It follows from these two demonstrated principles that a concentrated solution of serum will be the most efficient for making agglutination tests.

Method of Performing the Test: Dilute the blood drop by dissolving it in about four times its volume of water. Mix one or two drops of the diluted blood on a slide with an equal quantity of the suspension of bacilli. Tilt the slide back and forth from side to side and from end to end.

If the reaction is positive, a grayish and mealy sediment appears within one minute, usually in less. This consists of bacilli and is easily seen with the unaided eye. It first appears in the fluid around the edges and tends to collect there. If agitation is continued, the clumps increase in size for two or three minutes. It is of no use to continue more than two minutes for if no clumping has then appeared, none will occur. In negative cases no agglutination occurs and the mixture remains clear and unchanged. For practical purposes, it is most easy to take what one may judge to be 1/4 drop of blood mixing it with one drop of water, and to the mixture adding one drop of the typhoid emulsion.

In 165 cases of typhoid fever where the reaction was tried, positive results were obtained in 140, a percentage of 92.7. The reaction was negative in 17 cases, and suggestive in 8.

In non-typhoid cases, only 7 gave a positive reaction in 145 cases tried, a percentage of 0.7.
This test has been tried with satisfactory results in many other places and ought to be of definite advantage to every medical man in China, especially to those who live away from the advantages of a laboratory. Satisfactory emulsions of typhoid bacilli can be procured on application to the Municipal Laboratory, Department of Health, Shanghai.

LIGATURE OF LEFT COMMON CAROTID.

By Cecil J. Davenport, F.R.C.S., Shanghai.

The patient, a man aged 33, coming from near Shaoshing was admitted on 22nd February into the Shantung Road Hospital, Shanghai, suffering from an aneurism of the left common carotid about its bifurcation.

He gave a history of having suffered from chronic cough, and says he spat blood fifteen years ago. He attributed the present swelling in his neck to his bad cough and denied having had any injury to the part.

The swelling began last year in the fifth moon. Its growth has been gradual, with pain, and latterly loss of voice.

A week ago he attended at a local Chinese hospital where a doctor, practicing in foreign methods, needled it. Nothing but blood came away!

Condition. A weak anaemic man. Pulse regular, 80, small. Heart and lungs nil: gummatous ulceration over left trochanter and buttock.

In left neck, situated with its centre on a level with the thyroid cartilage, is a firm elastic pulsating tumor about the size of half a large orange.

On its summit the point of the recent puncture is clear, and around the point dark discolouration and superficial fluctuation exists.

Treatment. The patient was put on a limited supply of fluid and given mercury and \textit{pot. iod.} internally.

Under this treatment the pulsation at times seemed to cease, but I am incline to think it was merely due to the position the neck was placed in. On 4th March, as his cough was more distressing, the superficial discolouration and fluctuation increased, and the tumor larger and the tissues more tense, operation was performed.

Under chloroform, with the kind help of Dr. Ethel Tribe and Dr. Billinghurst, the common carotid was ligatured, by means of a single silk ligature, below the omohyoid.
The skin incision extended some way on to the wall of the tumour and all the tissues were found to be stretched very tensely.

No serious venous bleeding was encountered. The sternomastoid was pulled well out, its sternal attachment being loosened by a small cross incision. The sternohyoid was distinguished, and pulled well down, the sheath of the carotid being opened well on its inner side behind where this muscle lay.

After clearing the vessel sufficiently, first on the inner side, then on the outer side, the needle was introduced without difficulty, the artery felt pulsating as it lay in the bend of the needle, and the ligature threaded, drawn through, and tied. A small drain was left in the lower part of the wound. This was removed on the second day and the wound healed "per primam".

On the fifth day, as the tissues at the spot punctured threatened to break down, the tumour was opened without an anaesthetic by a two inch incision. Abundance of clot was turned out and washed out. From this time onward clot was thus daily removed and the cavity packed with gauze. By the fifteenth day the cavity had diminished from the size of a golf ball, to that of a large marble, its walls being fibrous, and covered with granulation tissue.

On April 2nd, the patient went home, the left side of the neck having returned to its normal size and condition.

No cerebral symptoms were observed after the sudden stoppage of circulation. No thickening remained because all clot was removed. No paralysis of the vocal chord was present. The patients' hollow cough still continued but his general condition had much improved.

ABDOMINAL ABSCESS FOR TEN YEARS, FOLLOWING ABORTION.

By ALLEN C. HUTCHISON, M.D., Kashig.

A woman thirty-eight years old walked into the Kashing dispensary apparently in great agony complaining of abdominal pain. On questioning found that she had more or less constant vaginal discharge. Examination on table revealed a distinct mass in lower right quadrant of abdomen, exquisitely tender to touch and with rigidity more or less marked over whole abdomen but most marked over lower right quadrant. I then made a vaginal examination and to my great surprise felt a hard body projecting from mouth of cervix to the extent of quarter of an inch only. I pulled it out with my fingers and found it
was a Chinese chopstick, exactly eight inches long with sharpened flat end. Its withdrawal was followed by the discharge of bloody pus of the foulest odour.

The patient was absolutely ignorant of the presence of a foreign body in her uterus. We then learned that she had ten years ago called in a Chinese midwife to perform an abortion having had three children in rapid succession and desiring a rest from her labours. The abortion performed in the fifth month, had been successful, but had been attended by a long severe illness with fever, etc., in which she had almost died. She had suffered from severe attacks of abdominal pain sometimes with, sometimes without fever, at intervals for the past ten years and had had an almost constant bloody foul discharge from her vagina all this time, this also varying in severity. During attacks she was confined to her bed and helpless between attacks. She was able to attend to her work. For the past three months her distress had been growing greater and almost constant pain was present. Had consulted Chinese doctors legion but of course without relief. No children since. Patient stoutly maintained that she had passed three large round worms from her vagina, not her rectum.

Temp. on admission 99.4 rose to 103.6 following night. Husband sent for and patient consented to laparotomy. Incision was made outer border right rectus, beginning just above line umbilicus to anterior superior spine of ilium. On opening peritoneum a gush of very fluid blackish pus, apparently colon bacillus variety, but without question the foulest I have ever encountered anywhere. I followed the walls of abscess cavity down into brim of pelvis where I felt what seemed to be soft velvety granulations a sensation I have never felt in other abscesses. Uterus and appendages I could not make out in this velvety tissue. I introduced a large rubber tube six inches down to bottom of abscess cavity in pelvis, another at upper angle of wound and closed wound up to exit of tubes. Foul discharge for few weeks with gradual healing of wound. Under daily vaginal douches uterine discharge soon ceased. Developed malarial fever which yielded promptly to quinine. Patient left hospital well for the first time in ten years.

I believe this case as a matter of record is unprecedented, at least I do not know of any recorded of this exact nature and of this length of time, but aside from this there are some interesting points. First this fact that after the perforation of the uterus (for I feel sure this must have occurred) and the development of local peritonitis with an abscess, the result of a virulent infection evidently, yet during ten years had never opened or pointed on the skin of the abdomen and
Abdominal Abscess for Ten Years, Following Abortion.

Finally discharged, nor had it perforated into the general peritoneal cavity by rupture posteriorly. Also strange that in ten years nature did not establish an effectual barrier to the absorption from this cavity but allowed the woman to suffer from the toxins developed therein for ten years. That she did not die is equally strange. The first two points make me feel that the chopstick must have communicated with the abscess cavity as a drain, though poor and inefficient, yet nevertheless a drain whenever the tension became too great in the cavity: thus accounting perhaps for the intervals of freedom from severe pain.

Another point is the statement that the patient makes, that she passed round worms from vagina: this could not be proved, but it is significant to know that this migration of the round worm has been recorded authentically in our China Journal by different observers, and it is not hard for me to imagine that there was a passing from this woman’s intestine into abscess and thence down along the chopstick and out of vagina. That the worms crawled from rectum into vagina is quite possible of course. After santonin here, she passed several worms from bowel.

My colleague, Dr. Venable, last year removed a chopstick about a foot long from a patient’s vagina. This one had been in thirteen months. It was pushed through the posterior fornix up into posterior part of pelvis. Whether it had set up a pelvic peritonitis or not, we don’t know but it had not entered the uterus and the woman recovered from her metrorrhagia soon after its removal. She had also aborted after its introduction.

These cases are more interesting than they are instructive, except perhaps they emphasize the importance of insisting on vaginal examination wherever one has any reason to suspect vaginal complication, even in our daily clinics in conservative China.
CASE OF TETANUS TREATED WITH CARBOLIC ACID. RECOVERY.


Cases of tetanus are by no means uncommon in the Far East and antitoxin is expensive, not easily accessible and does not keep very well, so that any other method of treating this disease which shows any signs of being successful deserves a thorough trial and results should be reported. This must be my excuse for mentioning the following case.

The treatment employed was brought to my notice by a note of a case reported in the British Medical Journal for December 11th, 1909, by Dr. Margaret Phillips of Ping-yin to whom I owe the recovery of this patient.

A man aged twenty-four came to the hospital and stated that ten days before he had a pain in his back, this improved, but began in the neck. Four days before coming up the pain in the neck became very severe and he could not open his mouth. He was treated with needling the day before he came, but could not remember any injury previous to the illness.

When seen he was suffering from trismus and his neck was rigid and slightly extended. The whole body was stiff but he could walk a little. He was sweating. The teeth could be separated about a quarter of an inch and a small sore was seen on his tongue, which he said had been bitten the day before.

He was put to bed and given chloral hydrate and potassium bromide and an aperient and also hypodermic injections of carbolic acid four per cent. At first these were only given in doses of fifteen minims but after a few days as they did not trouble him and he was not improving they were increased to twenty minims and were given him four times in the day, the last dose being as late as possible and combined with a tabloid of hyoscine, morphine and artopine, as the staff was not adequate to give him constant night attendance. A friend was allowed to stay with him and sometimes a visit was paid during the night, especially at first, but it was not found to be really needful.

For the first few days he got rather more rigid and began twitching, but after the dose of carbolic was increased the twitching got less and he remained otherwise in the same condition. His temperature was irregular, rising at times as high as 103.6 and when it was raised he was much more restless. This appeared to be associated with
Case of Tetanus Treated with Carbolic Acid.

constipation and was generally relieved by an enema. In the course of the third week of treatment he became less rigid and much quieter and hopes were entertained of his recovery. A little later a crop of pustules followed by small superficial abscesses appeared and the bromide and chloral were stopped after he had had them for nearly a month. After this improvement was steady though slow. At first he was fed entirely on milk and eggs but was able to be fed carefully with Korean food after he had been in hospital for a month, and about the same time the evening dose of morphine was gradually reduced. The carbolic was stopped at the end of seven weeks' treatment and he left the hospital shortly afterwards walking fairly easily with his legs and abdomen still a little stiff but able to open his mouth quite freely. He has since returned to show himself in quite good health.

It is not likely that those who have plenty of antitoxin ready to hand at home will feel justified in not using it for the treatment of tetanus, but to those of us who cannot readily obtain it there is an opportunity of giving this treatment a thorough trial, and if all cases are reported in the Journal we ought soon to be able to give those at home a pretty strong statement as to the value or otherwise of a very simple method of combating the disease.
REPORT ON THE HEALTH OF TENGYUEH FOR THE 
HALF-YEAR ENDED 31ST MARCH, 1910.

By Dr. N. Chand.

I. General Health.

The general health of the natives as well as of the foreigners was good during the period. The following table gives the classification of the diseases treated:—

<table>
<thead>
<tr>
<th>Diseases</th>
<th>Number of patients</th>
<th>Out.</th>
<th>In-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malarial fevers</td>
<td>...</td>
<td>...</td>
<td>70</td>
</tr>
<tr>
<td>Diseases of the digestive system</td>
<td>...</td>
<td>...</td>
<td>42</td>
</tr>
<tr>
<td>Diseases of the skin</td>
<td>...</td>
<td>...</td>
<td>32</td>
</tr>
<tr>
<td>Diseases of the eye</td>
<td>...</td>
<td>...</td>
<td>40</td>
</tr>
<tr>
<td>Diseases of the respiratory system</td>
<td>...</td>
<td>...</td>
<td>18</td>
</tr>
<tr>
<td>Diseases of the nerve system</td>
<td>...</td>
<td>...</td>
<td>9</td>
</tr>
<tr>
<td>Diseases of the generative system</td>
<td>...</td>
<td>...</td>
<td>5</td>
</tr>
<tr>
<td>Diseases of the connective tissue</td>
<td>...</td>
<td>...</td>
<td>22</td>
</tr>
<tr>
<td>Diseases of the ear</td>
<td>...</td>
<td>...</td>
<td>6</td>
</tr>
<tr>
<td>Ulcers</td>
<td>...</td>
<td>...</td>
<td>17</td>
</tr>
<tr>
<td>Local injuries</td>
<td>...</td>
<td>...</td>
<td>14</td>
</tr>
<tr>
<td>Debility and Anemia</td>
<td>...</td>
<td>...</td>
<td>12</td>
</tr>
<tr>
<td>Dysentery</td>
<td>...</td>
<td>...</td>
<td>12</td>
</tr>
<tr>
<td>Syphilis</td>
<td>...</td>
<td>...</td>
<td>15</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>...</td>
<td>...</td>
<td>6</td>
</tr>
<tr>
<td>Worms</td>
<td>...</td>
<td>...</td>
<td>14</td>
</tr>
<tr>
<td>Goitre</td>
<td>...</td>
<td>...</td>
<td>4</td>
</tr>
<tr>
<td>Midwifery cases</td>
<td>...</td>
<td>...</td>
<td>6</td>
</tr>
<tr>
<td>Diphtheria</td>
<td>...</td>
<td>...</td>
<td>3</td>
</tr>
<tr>
<td>Hydrophobia</td>
<td>...</td>
<td>...</td>
<td>1</td>
</tr>
<tr>
<td>All other cases</td>
<td>...</td>
<td>...</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>...</td>
<td>...</td>
<td>366</td>
</tr>
</tbody>
</table>

There was no death among the in-door patients. Of the out-patients, as far as I know, there were the following 9 deaths: malarial fever, 3; diphtheria, 3; midwifery case, 1; disease of the liver, 1; hydrophobia, 1.

All these cases, ending in death, were too late to get the foreign treatment. For example, the hydrophobia case was attended by me in the evening, while he was under spasms, involving the muscles of deglutition and respiration, having been bitten by a mad dog 116 days before; he died on the same night.
II. Diseases prevalent.

The most prevalent diseases treated during the period under report were malarial fevers, diseases of the digestive and respiratory systems, diseases of the skin, eye, and connective tissue, and ulcers.

A virulent form of malaria appears to exist in the low-lying valleys especially in the Shan States, between Bhamo and Tengyueh and in the Salween Valley. The Yunnanese are especially subject to this form of disease, as they accustomed to living at an altitude of from 6,000 to 4,000 feet, and below that level they cannot keep their health. The Salween has many legends to account for its bad reputation. The natives believe that a poisonous mist rises from the river, but the prevalent disease is probably a form of acute malaria.

The following is a list of surgical operations performed during the period under review:

<table>
<thead>
<tr>
<th>Operation</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evacuation of abscess</td>
<td>13</td>
</tr>
<tr>
<td>Extraction of teeth</td>
<td>4</td>
</tr>
<tr>
<td>Opening of gum-boil</td>
<td>2</td>
</tr>
<tr>
<td>Hare-lip</td>
<td>1</td>
</tr>
<tr>
<td>Excision of gonorrhoeal wart</td>
<td>1</td>
</tr>
<tr>
<td>Reduction of temporo-maxillary joint</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

All these operations were successful.

III. Vaccination.

I am glad to mention that these people have now gained faith in vaccination. 54 children were successfully vaccinated and 9 cases were re-vaccinated by me during the last two months, and I hope to vaccinate about the same number of cases with a few days. The people here get their children vaccinated only during the period from 12th moon to the end of 2nd moon. During the other 9 months no vaccination is performed. There are some native vaccinators who use the foreign vaccine paste, and vaccinate a good number of children in the city and in the adjacent villages. Finally, I hope soon, these people will lose faith in their old methods of inoculation.

The period reported on was the dry or cold weather; it was healthy and temperate, with bright climate. It was cold in December and January. In February and March, strong winds blew every afternoon, causing the weather to be too dry, which predisposed to nervous and respiratory affections.
The China Medical Journal.

METEOROLOGICAL TABLE: — (Latitude 25.2° N. Longitude 98.30° E.)

<table>
<thead>
<tr>
<th>Month</th>
<th>Average Temperature</th>
<th>Rainfall</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>Minimum</td>
</tr>
<tr>
<td>October, 1909</td>
<td>86° F.</td>
<td>58° F.</td>
</tr>
<tr>
<td>November</td>
<td>78</td>
<td>47</td>
</tr>
<tr>
<td>December</td>
<td>70</td>
<td>38</td>
</tr>
<tr>
<td>January, 1910</td>
<td>73</td>
<td>33</td>
</tr>
<tr>
<td>February</td>
<td>76</td>
<td>37</td>
</tr>
<tr>
<td>March</td>
<td>77</td>
<td>42</td>
</tr>
</tbody>
</table>

During the period under report, the coldest day was the 29th January, 1910, with the minimum temperature 28°. The heaviest rainfall was 1.68 inches on 19th November, 1909. The prevailing wind was west-south-west.

I am indebted to Mr. A. Oliver, Acting Assistant Examiner, for the above information.

Six midwifery cases, shown in the list, were all obstetric ones, and had head presentation, with the exception of one with hand presentation. All these cases were delivered by forceps quite successfully, save one, who died just after the operation was finished. She was nearly dead when I was called to attend on her, but the relatives insisted on my delivering the child, as the people here do not like a woman under labour to die without having been delivered.

IV. Epidemics.

No case of any epidemic, contagious or infectious disease was seen or heard of, with the exception of 3 diphtheria cases, which were all children from 3 months to 3 years old, and were living in different quarters. They all died, as I was called to attend on them when my services could be of no help.

No case of leprosy or anthrax has been seen during the period under report.

During the months of October and November, a severe plague attacked horses, mules, and cows in the city, which was, I think, anthrax; but I am not sure.
REPORT ON THE HEALTH OF WENCHOW FOR THE 
HALF-YEAR ENDED 30TH SEPTEMBER, 1910.

By Dr. E. Wilmot Smerdon.

For the half-year ending 30th September the general health of the port has been very good. The foreign community, small at any time, was further reduced at the beginning of this period by some leaving for home on furlough, and during the hotter part of July to September the great majority went away to bungalows or other resorts. To this is largely due the prevailing absence of any serious illness; but the lack in no way gives an indication of the extremely irksome and depressing climatic condition, which, combined with the want of any social excitement, causes a feeling of malaise and continuous headaches and petty ailments almost to be the normal state of many.

Bowel trouble of a peculiarly chronic and recurrent type is the most frequent cause for any prolonged care. Starting with a tendency to constipation it leads on to a low colitis, with traces of blood and mucus, and only slight fever, but with tenesmus and much abdominal tenderness. Resembling occult chronic dysentery, there are, however, no amoebae found on microscopic examination.

The Chinese have been markedly exempt from an epidemic of any magnitude, Plague and cholera being unknown, and dysentery has not been so rife. This is attributable in a large degree to the unusually heavy and continuous rainfall last quarter.

In the Methodist Hospital of 120 beds the diseases most frequently met with are on the medical side, pulmonary tuberculosis (very common), conjunctival complaints, and chronic dysentery (occasionally sprue). Corresponding with these, and in some measure due to them or similar causes, we have surgically to deal with necrosis of long bones (especially femur) and cervical glands, entropion (very common), and fistula in ano.

Santonin is a routine course, varied by thymol. Quinine is the one drug that all prize, even the up-country yokel of most conservative tastes taking it as a panacea, for malarial infection is the rule. Venereal diseases are only too common and the number of primary infections by the pharynx in innocent individuals is quite pitiful. Fifty per cent of our practice comprises ulcers of the legs and face. Thiersch-grafting
for the huge ulcers on the legs of rice cultivators gives a very fair result after return to work.

Appended is a meteorological table, kindly prepared and furnished to me by Capt. A. Walker, the Harbour Master, to whom I am indebted for the trouble taken.

**METEOROLOGICAL SUMMARY.**

Port of Wenchow, April to September, 1910, inclusive.

<table>
<thead>
<tr>
<th>MONTH</th>
<th>Average Max. Temp.</th>
<th>Average Min. Temp.</th>
<th>Rainfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>April</td>
<td>64.4° F.</td>
<td>54° F.</td>
<td>4.02 ins. on 16 days.</td>
</tr>
<tr>
<td>May</td>
<td>75.9</td>
<td>63.5</td>
<td>7.95 ins. on 18 days.</td>
</tr>
<tr>
<td>June</td>
<td>87.4</td>
<td>74.2</td>
<td>6.43 ins. on 11 days.</td>
</tr>
<tr>
<td>July</td>
<td>92.6</td>
<td>78.1</td>
<td>12.07 ins. on 13 days.</td>
</tr>
<tr>
<td>August</td>
<td>89.7</td>
<td>77.2</td>
<td>14.58 ins. on 17 days.</td>
</tr>
<tr>
<td>September</td>
<td>84.23</td>
<td>72.73</td>
<td>7.61 ins. on 9 days.</td>
</tr>
</tbody>
</table>

Giving an average mean temperature of 75° with rain every other day.
The China Medical Journal.

Vol. XXV. JULY, 1911. No. 4.

The yearly subscription to the China Medical Missionary Association is 24 Mex., payable in January of each year. This includes the Journal and postage on the same, whether local or foreign.

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

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

Editorials.

The China Medical Missionary Association suffers another loss, which we trust is but temporary, in the retirement from the field of Doctors George A. Stuart of the Methodist Mission Board, and C. Heman Barlow of the Baptist Mission Hospital in Shaoshing, both members of our Executive Committee.

Dr. Stuart is one of the veterans of the Association. Coming to China in 1886, he was in Nanking for a few months and then in Wuhu from 1887 to 1896 where he built the Wuhu General Hospital. In 1896 he removed to Nanking to take charge of the medical teaching in Nanking University and in 1897 was elected president of that institution.

During 1897-1899 Dr. Stuart was Editor of the Journal and for some years has been a member of the Nomenclature Committee and has done a good deal of translation work both for the Association and his own Mission. He was president of the Medical Missionary Association from 1907 to 1910.

Dr. Barlow has been in China since 1906, being first stationed at Huchow in this Province and later moved to Shaoshing to temporarily relieve Dr. Goddard.

Those of us whose privilege it is to know and appreciate them wish them God speed on their journey to the home land, restoration to health and strength and, in due time, a return to the friends and work that need them so much.
Dr. Cochran writing from Kuling where he is convalescing desires to correct the statement that he and Mr. Morris had Famine Fever. It was Typhus, though both diseases prevailed in the afflicted regions. He also asks "Is there any way we could get further information about asthma as referred to on page 211 of the Journal?" also "Would it be possible for you to get and publish an article from one of the men who have had experience in work with pneumonic plague on the details of the personal precautions they used for themselves and nursing staff, and also on the organization of the sanitary staff for enforcing quarantine, etc.? It is possible that next winter may see a recrudescence of the plague and it would be of greatest use to us to get the benefit of their experience."

We are still living in hope of something on that line before the end of the year. A letter from Dr. Aspland, referred to editorially in the March number, was cut out, with great regret, at the last minute, on his personal request.

We trust that these brief appeals will be sufficient to indicate to the North China brethren wherein their duty to the Association lies.

DR. DUGALD CHRISTIE, C. M. G.

It is a cause of rejoicing to the whole missionary body and especially to his medical colleagues in China that among the names of those whom the King delights to honor at the time of his coronation is that of the devoted, modest hero of Moukden, Dr. Dugald Christie of the United Free Church of Scotland Mission, and President of the Medical Missionary Association of China from 1905 to 1907, upon whom His Majesty has conferred the title of C. M. G. Reuter's telegram refers to him as the "head of medical missionaries in China." While this latter title cannot now be applied to him, we gratefully acknowledge him as primus inter pares and extend to him from the Medical Missionary Association our loyal and sincere congratulations.

WHERE IS THE COMMITTEE?

It is the duty of the Editor to answer questions as well as to ask them; to try to relieve the distress of brethren on the skirmish line seeking for information; and also to be resilient
enough to stand all sorts of abuse for sins of omission and com-
mission of which he guarantees to furnish his share.

A recent appeal for tracts on preventive medicine from a
fellow doctor in the far interior revealed the astonishing inform-
ation that he had appealed to the Committee on Tracts and Posters
as well as to the Central China Tract Society (for the latter
body we are in no way responsible as an organization) and had
received—nothing.

More than a year ago there was sent to the Committee on
Tracts and Posters a fine illustrated chart for reproduction, on the
spread and prevention of tuberculosis, modified from an American
poster by a Chinese teacher of Dr. F. J. Tooker. What has become
of it?

The only place to which the Editor could refer the writer
where he was reasonably sure Chinese tracts of public health and
preventive medicine might be obtained is the Shanghai Health
Department.

It really does seem a pity that we as an Association cannot
do more in distributing literature on preventive medicine and
some of the more common and most dangerous communicable
diseases to which Chinese flesh is heir.

I know that as a professional body we are overworked; and
lack of time is a more or less legitimate excuse. But these things
are vitally important and a very real need, and the Committee
can best demonstrate its reasons for existence as an industrial unit
by adding this slight increase in life's burden to their already
strenuous lives, and if not turning out tracts themselves at least
letting us know where such things can be obtained.

There ought to be not only a good supply of such literature
at nominal cost at the disposal of the members of the Association,
but also a number of centers in various parts of the Empire where
it could be easily obtained.

The time is rapidly coming when one or two men will have
to be set apart, as our President is for translation work, to take
charge of the Journal and the executive work of the Association,
and perhaps to conduct a sort of hygienic bureau for the assistance
of its members.
AN OMISSION.

This resolution was inadvertently omitted from the report of the North China Medical Society, of their annual meeting at Peitaiho last summer, which was published in the March number of the JOURNAL.—Editor.

PEITAIHO, CHINA. AUGUST 16TH, 1910.

WHEREAS, China with her 400,000,000 inhabitants has but one hospital for the insane, and that situated in Southern China, and whereas we, the medical men of North China assembled at the annual conference of the Peitaiho Medical Missionary Association, realize the profound and urgent need for such an institution in North China, be it

Resolved:—that this Conference unanimously and earnestly urges that steps be taken to establish a Hospital for the Mentally Diseased in North China, as soon as possible. And be it further

Resolved:—that it is the sense of this conference that such an institution would be most efficient if located in or near Peking, and associated with the Union Medical College, and be it further

Resolved:—that this Association appoint a committee consisting of a representative from each missionary society in Peking, with power to act, this committee to be known as the North China Committee on a Hospital for the Mentally Diseased.

Your committee on resolutions would nominate the following as members of this Committee:

Am. Board Mission, ... ... ... Dr. Young
Church of England Mission, ... ... Dr. Aspland
London Missionary Society, ... ... Dr. Stuckey
Methodist Episcopal Mission, ... ... Dr. Willowey, Chairman.
Presbyterian Mission, ... ... ... Dr. Hall
Women's Medical Work, ... ... ... Dr. Leonard & Dr. Manderson.

Respectfully submitted by your Committee on Resolutions,

J. J. Mullowney.
Dr. Stuckey.
Dr. Young.

EXECUTIVE COMMITTEE.

Held 3rd May. Present: Dr. Stuart in the chair, Drs. Lincoln, Cole, Venable, Barlow, Tucker, and the Secretary.

Previous minutes read and approved. Arising from them the following business was discussed:

(1). Chinese Journal.—Dr. Stuart reported having received promise of help from Canton. He further reported that because of ill health he had to take his furlough at once. After discussion it was resolved "that owing to circumstances the issue of the Chinese Journal be postponed sine die".

(2). Chinese Medical Association.—The sub-committee reported progress.

(3). Statistics.—Dr. Barlow reported that most of the returns were now in, and he hoped shortly to have the schedule ready.
Executive Committee.

(4). *Publication Fund Balance Sheet* from Dr. Cousland presented and passed for publication.

(5). *Price of Books.*—Dr. Neal's letter, in reply to the suggestion from this Committee last February, read and discussed. The matter was left over. The chairman emphasised two points (1) that a fair and fixed ratio between publication cost and selling price should govern all sale prices (2) that as far as possible special concessions should be made to our Christian students.

(6). *Finance.*—It was decided to accept the offer from the Publication Committee that from January 1, 1911, the 3/4 balance of the C. M. J. fund should not be handed over to the Publication Fund. The secretary also reported that most overdue subscriptions and dues to the C. M. J. were now paid up.

New business. (1). *The Wellcome Trust Deeds* were presented, signed by all the trustees except Dr. Neal. A letter from Dr. Neal was read explaining his position and objections in not signing the deeds. As Dr. Cousland stated he was writing Mr. Wellcome, the question was left over.

(2). *Editorships of C. M. J.*—Dr. Jefferys' letter of resignation was read and accepted with regret, a hearty vote of thanks for all his good services being passed. Dr. Consland nominated Dr. J. L. Maxwell to fill the vacancy, and Dr. Lincoln nominated Dr. Cole. As Dr. Cole goes for furlough in the autumn, he was unable to take the post. Dr. Maxwell expressed his willingness to undertake the work for the Association. The matter was discussed at length; and while all felt Dr. Maxwell would make a most suitable editor, yet the postal difficulties and distance to Formosa were thought to be prohibitive. Finally, by request, Dr. Lincoln consented to continue as editor and a resolution to that effect—with best thanks for the help already given—was passed.

Dr. Davenport requested to be allowed to resign associate Editorship and Dr. Ethel Tribe was appointed in his place.

(3). *Triennial Conference 1913.*—A letter from the president appointing the Executive Committee as Program and Arrangement Committee was read. Drs. Beebe, Lincoln and Davenport were appointed a sub-committee to go into the matter.

(4). Dr. Stuart formally intimated his resignation from the Committee, which was accepted with much regret. On nomination of Drs. Cousland and Stuart, Dr. Beebe was asked to take the chairmanship in Dr. Stuart's place. This Dr. Beebe consented to do.

(5). Dr. Tucker asked permission to hand over the book agency to Mr. Edward Evans, conditions of purchase to remain unaltered. This was agreed to, if a note of agreement to that effect was procured.
Of the many living questions which arouse the interest and demand the attention of the foreign resident in China, be he priest or publican, foods and their preparation easily head the list; for whatever be one's business, religious or secular, he is here to live and that requires both thought and care, so a book like the above is most useful for all.

Those of us who have watched with interest the fight for and the adoption of the Food and Drug Act in Congress need no introduction to Dr. Wiley, who has been from the first one of its most loyal and efficient champions.

The late George DuMaurier of Punch, in one of his inimitable sketches entitled "things better left unsaid," puts into the mouth of a lady who is being taken out to dinner by a noted physician the remark, "it is so nice to have some one with you who can tell you just what to eat, drink, and avoid." In this book you have it, and not only for one evening but constantly.

The body of the book has been very thoroughly revised, many paragraphs having been entirely rewritten, though in general the text and sequence of the articles remain as in the previous edition. Two new sections of importance have been added.

The chief addition has been a carefully prepared article devoted to infants' and invalids' foods, describing their preparation and care, accentuating the supreme importance of the natural supply of milk for infants and the proper substitution of fresh cow's milk, modified to resemble, as nearly as possible, the natural sustenance of the infant.

The article has been written in a scientific spirit in order to impress upon those having the care of invalids the great significance of proper feeding.

That this was a timely publication has been proven by the fact that the first edition was sold out within a comparatively short period and that it was necessary, even though it was published recently, to revise thoroughly in order to bring the book up to the present
day. As one of the reviewers said, "It is a comfort to find a book covering the field so completely, so sanely and withal in so interesting a way."

The book is designed for a wide variety of readers, for the scientific man as well as for the benefit of the public, for whom it was really written; for the manufacturer and dealer in foodstuffs as well as for the purchaser and consumer. It contains a great deal of general information about food values and the use of food for bodily nourishment and a great deal of interesting material which will be found especially helpful to the householder.

BOOKS RECEIVED.


From MACMILLAN & CO., London:—

A Manual of Medicine. Edited by W. H. Alchin, M.D. Lond., F.R.C.P., F.R.S.E.; Senior Physician and Lecturer on Clinical Medicine at the Westminster Hospital; Examiner in Medicine to the University of London and for the Medical Department of the Royal Navy. In Five Volumes.

A Manual of Surgery. By C. Stonham, F.R.C.S. F.,ng.; Surgeon to the Westminster Hospital; Lecturer on Surgery and on Clinical Surgery, and Teacher of Operative Surgery; Surgeon to the Poplar Hospital for Accidents; late Member of the Board of Examiners in Anatomy under the Conjoint Scheme for England, etc., etc. In Three Volumes. Vol. i, 7s. 6d. net.

From BLAKISTON'S SON & CO.:—

Care of the Patient. By Alfred T. Hawes, A.M., M.D. A concise well arranged and useful manual for nurses or laymen containing the most modern methods in medical, surgical and obstetrical nursing. Price 5 net.


Ophthalmic Surgery. By Charles H. Beard, M.D., of Chicago, Surgeon to Illinois Charitable Eye and Ear Infirmary etc.

A treatise on surgical operations pertaining to the eye and its appendages, with chapters on para-operative technic and management of instruments. A thoroughly up to date book, clear, concise, practical, splendidly illustrated. Price $5.00 net.
The time of harvest is ever the time of rejoicing and gladness; the labour and toil of the planting and tending is forgotten in the joy of the garnered fruitage. Such was the spirit of the first Graduation Ceremony of the Union Medical College, Peking, on Friday, April 7th. What the missionaries of 1901, gathering up the scattered remains of mission work in Peking saw with the eye of faith, we are privileged to see in actual fact. The ceremony had been long postponed owing to the exigencies of the plague work in which nearly all the graduates were engaged; at the earnest request of the authorities it was decided to arrange matters so that they might continue their valuable work till the end of March.

There being no room in the college large enough to accommodate the expected guests, a spacious pavilion was erected and was made very gay with decorations in which the flags of China, England and America predominated.

His Excellency, Grand Councillor Na Tung, who represented the Throne at the inauguration of the college, was again present to address the graduates and present them with their diplomas. Representatives of the various Boards and other high Chinese officials were present and many others sent good wishes and congratulations. The International Plague Conference then in session in Mukden sent the following message:

The International Plague Conference unites in congratulating the Union Medical College on the graduation of its first class of students to-day. They welcome the graduates to the membership of the medical profession and send them their best wishes for a successful career. Sze.

The missionary body of Peking and Tungchow was fully represented; the Medical College alone has the honour of combining the efforts of all the missionary societies working in Peking.

Thirteen members of the teaching staff of the college were present on the platform and made a brave show in the varied academic costumes of their respective colleges. The sixteen graduates were attired in caps and black Geneva gowns with facings of purple satin. The foreign style of head-gear obscured the fact that all but three had sacrificed their queues to the needs of plague work and the growing sense of dissatisfaction with the appendage. Three of them had gone the whole way and were dressed in foreign style.
Graduation Ceremony of Union Medical College.

The College diplomas were printed in English and Chinese with a border of green and gold dragons and in the centre the Æsculapian sign over the College seal in red,—the effect was quite distinctive and pleasing to the eye. (See Frontispiece.)

The diploma given by the Board of Education was quite plain, stamped with the purple seal of the Board. It reads:

The meeting opened with the doxology, and prayer by Rev. C. Y. Ch'eng. Sir John Jordan, the British Minister, who presided, then addressed the meeting. After referring to the inauguration of the College five years ago, and the difficulties now largely surmounted, he said:

The graduates who receive their diplomas here to-day are entering upon their profession at a time of exceptional interest and under circumstances which will severely test their qualities and give the widest scope for the exercise of their skill. I feel sure that they will fully respond to the call and prove worthy not merely of this institution but also ornaments of one of the noblest professions which it is given to man to follow. The attention of the medical world is concentrated upon North China at the present moment. A scourge of almost unparalleled severity has visited Manchuria and some of the students of this College have sacrificed their lives in endeavoring to combat it. The Chinese Government, whose efforts to meet the appalling calamity have commanded universal admiration, have gratefully acknowledged the services rendered by the doctors and students of the Peking Union Medical College, who have been in the forefront of the struggle which has now happily attained the mastery of the deadly enemy.
And now, graduates, let me wish you all success in life, give your services to the rich and poor alike: respond to the call of suffering humanity at all hours of the day or night: let your motto be that of your own Great Sage Po Shih Chi Chung (博施濟眾) assiduously cultivate your professional skill and make it a valuable asset in the advancement of the great Empire whose illustrious Empress laid the foundations of the Union Medical College.

Following him H. E. Na T'ung delivered an address which was translated by Dr. W. W. Yen of the Wai Wu Pu as follows:—

Your Excellency Sir John Jordan, the President, Professors and Students of the Union Medical College, Ladies and Gentlemen:

It gives me great pleasure to be able to attend this the graduating ceremony of the first class of students of the College. I recall with much vividness the occasion when five years ago I was present at the formal opening of the institution. Five years have elapsed and now you young gentlemen before me will go forth from the College, after passing through your period of careful study and preparation, to practise your profession.

The profession, young gentlemen, which you have chosen is a noble one. In the many measures of reform introduced by our Government, that dealing with public health and sanitation, inasmuch as it relates to the happiness and welfare of the masses, is a very important one. The strength of a nation depends largely on the virility and endurance of the individual citizen, which in turn increase and diminish with the care and attention paid to public health and sanitation. There is abundant proof that neglect of the laws of sanitation and absence of proper medical care have brought about more deaths of officers and men in the fiercest of modern warfare than the destructive power of the terrible weapons of war.

What is true in times of war is no less true in times of peace. We have just had an illustration in the pneumatic plague which raged so fiercely in Manchuria. Thanks to the prompt and I am glad to say effective measures adopted by our Government, the ravages were confined to a comparatively small area and the mortality compared with other similar visitations has been low. But you have no doubt read and heard enough to realize what a terrible thing a plague is.

And this brings me to the point which I wish most earnestly to impress on you young gentlemen, as you leave your College for the world. In fighting against the plague—and the battle was a splendid one—the Government found that it did not have a sufficient number of doctors available to do the work and a call for volunteers was issued. Among others, several professors and students of your College responded and at once left for Harbin, where the plague was seen in its worst form. Leaving self and family out of consideration, they thought only of what good they could do, and as doctors they remembered that their duty and ambition was to fight disease and death.

And this is the spirit I believe should inspire you throughout your lives, the spirit of service and sacrifice. I earnestly hope that the example set before you by your professors and fellow-students will be followed by you, thus reflecting the greatest credit to your institution, to your professors and to yourselves.

At the close of his address His Excellency handed the diplomas to the students who were received with hearty applause by the large audience.

Dr. Thomas Cochrane, the Dean of the College, made a short statement of the work of the College. He gave a short history of the fifty years of medical work done by the Peking Hospital; fifty
years ago it was obscure and unappreciated, now it is well-known and the trusted helper of the Chinese Government. During these fifty years it has given about one and a half million treatments and cured in its wards many thousands of patients. The Union Medical College was commenced five years ago as an outcome of this long medical work and its efficiency was made possible by a union of forces with the happiest results. He said:

We have labored for five years amid great difficulty to train men who should go out—each to duplicate as far as possible the work we are doing here—and thus by fighting disease and death to save life throughout the Empire. We did not adopt the easiest method and teach our students in a foreign language. We have tried to create a medical nomenclature and a medical literature in the wonderful language of this country. We are still translating books and intend to keep our students abreast of the times by publishing a monthly medical magazine.

But we are still far from perfection. When we commenced the work fifty years ago it cost including salaries about 5,000 taels per annum, it now costs between 60,000 and 70,000 taels every year and the expenditure is still rising. Chinese friends and foreign friends have assisted us. The dormitories bear the name of a friend in England who has helped us most liberally from the commencement of the work. Friends in England are now making it possible for us to erect hospital buildings worth 60,000 taels, but if the work is to become more and more efficient we need more money for buildings and more money for annual expenses. We need public health and bacteriological laboratories and hospitals for specialties. The work that remains is immense and we crave earnestly for the help we need.

But for the work done by our hospital and college staff this city might have been devastated by plague. The fact that the first case was found and treated by us was the means of discovering the forms of the disease and stamping it out.

We hope that this dread visitation may be for the salvation of China by drawing attention to the need for public health work and we ask the Government to reward our past service by enabling us to render still greater service. We are not here to serve ourselves but to serve China. To see China healthy and happy in the broadest and fullest sense will be sufficient reward for all our labor.

Too often when members of different nationalities meet, it is to fight and quarrel. Our object is to love one another, to help one another to save life, to bring peace and good-will, happiness and salvation to this Great Empire.

The American Minister, Hon. J. W. Calhoun, followed with an eloquent tribute to the noble and self-sacrificing work done by medical men all over the world in the investigation and combating of disease. This has made it possible for men to live and work in safety in places previously devastated by yellow fever, malaria and other diseases. The doctors of the college and many of its students have done nobly in helping to combat the plague in Manchuria, Tientsin, Peking and elsewhere.

Dr. W. A. P. Martin gave an earnest exhortation to the graduating students to give themselves whole-heartedly to the service of their fellow-men.
The address of Sir John Jordan was translated into Chinese by Rev. S. E. Meech, and that of the American Minister by Prof. Wang of Peking University.

After a vote of thanks by the Dean, Bishop Scott closed the meeting with the benediction.

After the ceremony, the visitors were entertained to tea and were shown over the various parts of the college, laboratories, operating theatre and hospital.

Union Medical College, Peking, Annual Report for 1910-1911.

The presentation of this report brings us to the end of the first stage of the history of our College.

What the missionaries of 1901, gathering up the scattered remains of mission work in Peking, saw with the eye of faith, we are privileged to see in actual fruition. We are graduating our first class of students.

It is a matter of regret to all of us that Dr. Cochrane is not here to-day to present this report and enjoy what is so largely a result of his indomitable courage and persistent faith, but we may rejoice in the recognition of his ability in his appointment as Secretary of the Advisory Council of the London Missionary Society in China, which necessitates his absence to-day.

We are proud of the sixteen men whom we are sending out as our first graduates in medicine. Just as the newly fledged medico at home is a very unfinished product, and requires some years of hospital practice to become really expert, so we are conscious that while these graduates of ours have been furnished with the needful knowledge, they will do well to have further experience in a good hospital under experienced foreign supervision. As an extra inducement to take this further course of training, we are offering a higher diploma, which is to be secured as a result of practical work, and further examination.

We have had one hundred and three students, studying in the College this year. There are men from thirteen of the eighteen provinces of China, and from Manchuria; they come from as far south as Hainan, and as far west as Szechuan, so that we may well claim to be representative of the Empire, and look to see in the coming years graduates of this College scattered over the length and breadth of this land. When you think of us, and the strategic position we occupy, pray that we may use to the full our opportunity in winning the full allegiance of all our students to the King of Kings and Lord of Lords.
The Staff: In the autumn the staff was greatly strengthened by the transfer by the London Missionary Society, of Dr. Cormack from Central China. His long residence in China and linguistic ability are of the greatest value to the College. Dr. Cormack has already taken a foremost place on the Translation Committee of the China Medical Missionary Association, and will enable our College to take a proper share in this very important part of medical education. Dr. Peill was absent all the year on furlough, and part of the time was seriously ill. We are thankful that he is once more with us, in time to see the graduation of the class for which he laboured with such self-sacrifice in the early days when the staff was so small.

Dr. Hopkins returned from furlough in November. Dr. Lowry was on furlough all the year: so that for most of this year we were deprived of the help of the Peking University teachers.

Dr. Cochrane was busy most of the year with the work of the L. M. S. Advisory Council. The college will undoubtedly profit in the future by his larger experience of mission work all over China.

Our secretary, Mr. Wilson, made a flying visit to England, via Siberia, during the summer, and returned in time for the opening of the autumn term.

THE SENIOR CLASS.

This class completed the lectures on medicine, surgery, pathology, obstetrics, and refraction; lectures on gynaecology, diseases of the eye, diseases of the skin, hygiene, medical jurisprudence, surgical anatomy, serum therapy, and mental and nervous diseases were given; also short courses in diseases of the ear, nose, and throat, and diseases of the blood.

Clinical work was done at the old hospital, and at the women's hospital, and instruction in diseases of the eye, and diseases of the ear, nose, and throat was given at the out-patient clinic.

Dr. Wheeler reports:—Lectures on surgical anatomy, and operative surgery and dentistry have been given during the year. We are unfortunately unable to do anything in a practical way in these subjects, as dissection is not allowed. Operations, which were too intricate to be clearly described in Chinese by the lecturer, were illustrated by the use of old articles of clothing, which were made to represent various hollow organs of the body, thereby enabling the would-be surgeons to understand how such organs might be repaired, etc., should the need arise.

Dr. Hall reports:—The subject of medicine was completed in the first term; the second term was given to Tropical Diseases (a few
lectures only, as most of the subjects usually included under this head had already been given rather fully in their previous work in medicine), and revision.

The final examinations,—written, oral, and clinical—showed that, as a rule the students are better fitted to pass examinations on their bookwork, than they are to diagnose and treat disease. This is, of course, an unavoidable result in a school where there is a dearth of clinical material.

We hope that when the new hospital and dispensary buildings are finished, more medical cases will be available for study, and we may expect an improvement in the practical work done.

Dr. Wenham reports:—In the work of the old Chinese Hospital I have had as dressers the men of the senior class,—six at a time—and they have done good work under disadvantageous conditions.

Dr. Young reports:—The two senior classes were given lectures on the principles involved in immunity, and serum therapy, and on the practical application of these principles.

Dr. Stuckey reports:—The two senior classes were given a course of lectures on diseases of the eye, based on the book translated by Dr. Neale. The senior class,—six at a time—were given clinics in the out-patient department by Dr. Gibb, and the ordinary diseases of the eye, and retinoscopy were demonstrated.

THE FOURTH YEAR CLASS.

This class has covered the schedule of lectures prescribed, with the exception of medicine, and pathology, which were started late. They are therefore further on in their studies than the graduating class were a year ago.

Daily instruction in clinical work in the wards of the hospital, has been given.

Dr. Wenham reports:—This class has, during the year, covered the whole of regional surgery, following approximately the order in Rose and Carless's Text Book. They have also, in conjunction with the third year men, had a short course in the practical technique of work in the operating theatre, etc.

Dr. Wheeler reports:—The fourth year men have worked with me in the wards and operating theatre. Some have done very good work, though most are rather apt to fall short in the necessary washings, etc., which alone can render their hands and the patients' skin surgically clean. Ward dressings take place every day at 7 a.m.
operations 1-3 p.m., on four days a week, and bedside clinics 11-12 a.m., on three days a week.

Dr. Young reports:—This class has, on the whole, done better work than the preceding one; this is perhaps due to the fact that there are fewer in the class. There is still some ground to be covered in laboratory and lecture work, but not so much as last year.

THE THIRD YEAR CLASS.

All the subjects in the course of study were completed. The students attended daily various departments of the out-patient work for instruction and practical work in dispensing, minor surgery, and the elements of clinical diagnosis.

Dr. Wheeler reports:—This class has been unfortunate in losing several of its members from various causes, and only ten were present at the final examination. Considering the great disadvantage our students labour under in being unable to get any dissecting, the work has been very satisfactory. They cannot expect, with the use of models and diagrams, to get the thorough grasp of the subject which is possible to students at home. Though at the end of the term they may know, and know well, all that has been taught them, yet they are unable to form an adequate mental picture and they need constant revision of work which, at one time, they knew almost perfectly.

Dr. Young reports:—The class in bacteriology covered Venable's translation of Archinard, and cultivated and studied the more common forms of pathological bacteria.

THE SECOND YEAR CLASS.

The full course of lectures proper to this year were given. Mr. Read prepared a course of lectures in pharmacy and materia medica, which were delivered by Dr. Stuckey. All through the year systematic instruction in practical pharmacy was given at the dispensary by Mr. Read.

Dr. Stuckey reports:—Much more detailed instruction in pharmacy and Materia Medica was possible this year than last. On the whole very good work was done. Weakness in chemistry as taught in preparatory schools makes this course harder, and, of course, the writing and pronouncing of the foreign names of drugs is a difficult task to students who are weak in English. Some were weak in doses, but, on the other hand, some were dose-perfect to a degree that their examiner never was, and never expects to be.
Dr. Cormack reports:—During the few months it has been my privilege to teach in the college, I have noted with great pleasure the keenness of the students for their work. With few exceptions the class in anatomy has done very well indeed. It would be of the greatest advantage if it were possible for students at this stage actually to dissect the human body, but, failing that, I am sure the excellent models provided by the college give them a very fair idea of the structure and arrangement of the human frame, and the answers given in examinations compare very favourably with answers given by students in more favoured Western lands.

Dr. Hall, reporting on his class in physical diagnosis says:—A puzzled, almost a pained expression, may sometimes be seen on the faces of the students as they try to unravel what the foreign professor, with his Anglicized Chinese, and little enough of that, is trying to say. I think I may say (at least, I hope so), that that expression has appeared a little less frequently this year than last; I trust this is not alone due to greater control over their facial expression. I hope next year will give me a little time for language study on other than medical lines, so that this strain on the students may be somewhat relieved, and they may consequently be enabled to give their whole attention to the subject in hand.

THE FIRST YEAR CLASS.

This class has done the first half of the course in anatomy, physiology and histology, as well as a course in biology and practical zoology.

Dr. Hopkins, on his return from furlough, took over the classes in physiology from Dr. Stenhouse. Dr. Hopkins spent his furlough in American Universities, studying laboratory methods, and secured, for the college, the Harvard apparatus for the teaching of practical physiology.

Dr. Hopkins reports:—The class in physiology has covered circulation, digestion, absorption, and excretion. They have done splendid work and shewn that they have a good grasp of the subject.

The teaching of English in the college has this year been placed on a better footing. The classes are now conducted by members of the regular teaching staff, monthly examinations are held, and the marks obtained are reckoned in the final totals for the year. We hope that our students will acquire a sufficient knowledge of English to enable them, with the help of a dictionary, to read an ordinary English medical book or paper. They will thus have opened to them a literature to
supplement the medical books in Chinese, which must necessarily for many years to come be very scanty.

As a result of the Professional Examinations, at which officials of the Imperial Board of Education were present, the following students graduated and will receive the Diploma of the college:

- Ch'u Yung-p'ing
- Hsieh En-tseng
- Hsu Tso-ming
- Wu San-yuan
- Fan Fu-lin
- Wang Hui-ch'uan
- Lin Yi-te
- Wang Ch'ang-ling
- Wang Chiu-te
- Hsueh Shou-yi
- Ho Sheng-ch'ang
- Shi Pi Chi-yang
- Ma Te-ch'ang
- Tien Chi-hsien
- Li Yu-ch'ien
- Wang Kuei-shan

REPORT OF THE INTERNATIONAL EXAMINING BOARD.

The outbreak of plague in North China interfered considerably with the work of the International Examining Board as its members were busily engaged on other official duties. Four examiners attended and from the reports received they are all favourably impressed with the work of the candidates. The general feeling is that the majority of the students showed evidence of having memorized the notes taken in lectures and had no difficulty in giving the various causes, varieties or modes of treatment of this or that disease. In the final examination the results of the written papers and the oral tests showed a standard not lower than that attained by the average European graduate, and the Board thinks that the College authorities have every reason to be congratulated on the class of medical men it has contributed to the profession.

The examiners hope that some means may be found either to familiarise the students more thoroughly with the English language and medical terms, or that a Chinese medical journal may be forthcoming whereby the graduates will be able to keep in touch with the advances recorded in medical literature.

On behalf of the Board,

(Signed) G. DOUGLAS GRAY, M.D., Hon. Secretary.

DISCIPLINE AND HEALTH.

Our college has in common with all other schools in China, been influenced by the rising sense of independence and power of initiative. This spirit is a cause of sincerest rejoicing to all friends of this great nation, but, when uncontrolled by the sense of proportion and of the proper relation of teacher and scholar, requires firm action by those in authority. Breaches of discipline and proper behaviour have been firmly dealt with; sometimes, when necessary, with severity. On the other hand we are bound to treat our students as men, entitled to some measure of freedom, even with the risk that this sometimes becomes license. We believe that the discipline of the college is on the whole very satisfactory.

The health of the students has been good. Two students were invalided with tuberculosis, there was one case of scarlet fever, and two
of typhus fever. One of the latter, Ch'uan Shao-t'ang, of the Senior Class, succumbed. His death was a great loss to the college, as he was one of our best students, a leader in all the activities of the college, and a man of beautiful Christian character.

Football and tennis are played daily under the control of a Sports Committee. The members of the staff join in these games to encourage the students to take regular exercise.

STUDENTS' SOCIETY.

A Students' Society was formed at the close of this year with the following objects:—

1. To unite together the present and past students of the U. M. C.
2. To further in every way possible the interests of the college.
3. To promote the physical, intellectual, and moral interests of the students of the college.
4. To seek to elevate the practice of medicine in China, especially by maintaining medical efficiency and professional etiquette amongst the graduates of the college.

It is proposed to start a students' paper in the coming year.

TRANSLATION DEPARTMENT.

It is perhaps a little soon for us to speak of this branch of our work as a distinct entity, for as yet it is only in its infancy; still, something has been accomplished in the translation of Medical Text Books by members of the staff during the year, and other work is in hand.

First, we must chronicle with great thankfulness that Dr. Cochrane, in spite of his multitudinous duties, has found time, with the assistance of Mr. Hsieh En-tseng, to complete a translation of Heath's Anatomy. It is now being printed and will be a great boon to our students who, up till now, have been using cyclostyled notes.

Dr. Hsieh, has also in hand a translation of Waring's Operative Surgery.

Dr. Ingram has nearly completed his revision of his excellent translation of Hare's Therapeutics.

Dr. Stuckey has prepared a small text book on Medical Jurisprudence and Toxicology, and this we hope will be published under the auspices of the China Medical Missionary Association, in 1911.

Dr. Cormack has edited the second volume of Rose & Carless's Text Book on Surgery, and the third volume is well in hand and will be published in the spring. He has also, with the assistance of some of our senior students, got ready the letterpress of a very fine anatomical atlas which is being issued by the China Medical Missionary Association.
Dr. Hopkins has been engaged on a translation of Landor and Stirling's Text Book of Physiology; he has already compiled the first half.

Lastly, the plans for a medical journal in Chinese, or at least a good college journal, are taking definite shape, and we hope to see this important work launched during the year.

A report of the college in Chinese, illustrated by numerous photographs, was printed. Specially bound copies were sent to the Prince Regent, His Excellency Na Tung, and others.

MUSEUM, LIBRARY, ETC:

The Pathological Museum rose slowly, partly from lack of specimens, and partly from the teachers being too busy to give it proper attention.

The library still stands as one of our needs. Good standard text books in English would be of great use for reference to those of our students who can read English.

The X-Ray apparatus and dynamo have arrived, and will be installed soon.

CHRISTIAN WORK.

This year was marked by the visit of Pastor Ting to the colleges of Peking. His earnest faith, belief in prayer, and powerful use of Scripture resulted in a real spiritual revival amongst the students in North China. Pastor Ting held meetings in the college for ten days in May. Many of the regular lectures were suspended, so that he might have time for two or three addresses each day. At the beginning of the meetings there was considerable indifference and actual opposition, but faith and prayer triumphed and many, especially of the Christian students, were profoundly moved. The result in many was a definite consecration to a life of Christian service. Three non-Christians gave in their names as enquirers. One has since been baptized, another is one of the leading men in the college, and was elected vice-president of the Students' Society.

The death of Ch'uan Shao-t'ang following close after Pastor Ting's meetings deepened the impression made on our students. The testimony of Ch'uan's father at the funeral service, telling of his beautiful life in the home and the showing of his well-worn Bible, and "Daily Light" will remain long in the memory of us all.

The Y. M. C. A. continues its work steadily. There have been twelve Bible-classes with sixty-five members. We are greatly indebted
to Mr. D. W. Edwards, of the Y. M. C. A. of Peking, for his constant help in the preparation of the leaders of the Bible-classes.

Daily prayers are held morning and evening in the college, and though attendance is voluntary, the majority of the students, even the non-Christians, attend.

Seven of the staff have gone every Sunday to different centres for preaching and dispensary work. They have been accompanied by students, so that a large number of students thus engage in evangelistic work. Students take turns in preaching in the street chapel on Sunday afternoon. The lecturers for the popular lectures held in the London Mission chapel on Wednesday evenings were largely supplied from the ranks of the college students.

We close our first quinquennium with deep thankfulness to an ever-providing Providence. The college stands as a monument of faith. Many times a lower standard seemed inevitable, the obtaining of an adequate staff seemed almost impossible. The necessary funds have always been difficult to obtain. But always, in answer to faith which refused to look back from the ideals we have set before us, God has provided. Considerable progress has been made towards the attainment of these ideals, but there remaineth much yet to be done, for there are many weak places to be strengthened, and defects to be made good.

The money is in hand for building, on the new site near the college, the first two blocks of a new hospital. Plans have been drawn and the contract settled; so we shall see a start made in the spring of this year. When completed, this will add over fifty beds to our present hospital accommodation, and our clinical teaching will gain to that extent.

When funds are available, it is proposed to rebuild the out-patient department, providing adequate accommodation for the dispensary, and the surgical, medical, ophthalmic, and aural departments, so that we may make the best possible use of the clinical material at our disposal.

The present staff is able to compass fairly thoroughly the lectures prescribed in the course of study. We intend now to direct our energies and all our ingenuity to make the facts which our students learn in their lectures, practical realities to them, to a degree that has not yet been possible.

In these days when things are changing so rapidly in China, and a nation is being re-formed we believe that our college is playing no unimportant part. The practice of medicine is being slowly raised from its environment of quackery and superstition; the common laws
of health are better understood and more often obeyed. But there is much to do before the doctor's work will have the position of honour and influence that it has in our home lands, and it is easy to be satisfied with smaller attainments. We desire to stand for the very best that we know, and to repay in China, the debt we owe to centuries of Christian thought and ideals in our own lands.

Report of Peking Hospital, 1910.

The statistics for 1910 are as follows:

Out-patients.—First visits, men 13,754
women 5,640
Return visits, men 20,811
women 8,525

In-patients.—Men 713
Women 143

Among the cases treated in the hospital have been the following:

- Removal (suprapubic) of enlarged prostate
- Vesical calculus
- Foreign body in bladder
- Large popliteal aneurism
- Empyema recessitatis
- Macerated foetus (in uterus 15 months)
- Relapsing fever
- Sarcoma of breast
- Meningocele
- Acute catarhal appendicitis
- Pestis major
- Ovarian cyst
- Sarcoma of lower jaw
- Typhus fever
- Lymphadenoma
- Scirrhus of breast
- Loss of speech, resulting from depressed fracture of skull—complete recovery after operation
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- Scirrhus of breast
- Loss of speech, resulting from depressed fracture of skull—complete recovery after operation

The hospitals have been very full this year. Most of the time we have had people waiting for a vacant bed. The special wards were almost always full, and we have had some very interesting people with us.

The head eunuch of the present Empress-Dowager came in for an operation, and there was a special messenger waiting in the operating theatre to take word at once to the Palace as to the result. While he was with us, he was given a copy of the New Testament in the literary style, and several Christian books "so that if ever the Empress-Dowager speaks of Christianity you will understand about the doctrine." He was impressed by the skill and care of the doctor, but most of all by the fact that we did not ask for large sums of money for treatment. "Chinese doctors" said he "care most about getting money." The reply was "the doctors here have this 'heart of love' because of the Gospel which they believe and have come to preach."

One of the Army Staff had his leg amputated for long standing disease. Most of the time he was with us he spent in reading the
New Testament; he was found one day by the doctor in company with another first class patient studying the New Testament, both Chinese and English versions, with the help of a commentary. He was very willing to talk about the Scriptures and about Christian truth. While he was in the wards, his wife was over in the Women's Hospital and underwent a serious operation on the knee. She also was very interested in the Gospel and expressed her intention of attending services after her return home. Two other members of the Army Staff were with us for treatment this year.

Many of the official class thus pass through our wards each year. They are often interested in the Gospel, and freely admit the truth and beauty of Christian doctrine, but when they face the following out of Christ's teaching, the way is too hard; there is still the offence of the cross. Yet the truth is making its way, the seed is growing unseen, and in unexpected times and places we sometimes see the fruitage.

A patient was sent to us from one of the Government Hospitals in Tientsin. He had a large popliteal aneurism, and was sent on as an interesting case, but with little prospect of cure. The artery was tied, and later on the aneurism was opened and cleared out, and then it slowly healed up. The man heard the word gladly, and recognised his cure as due to the grace of God. He registered his name as an inquirer, and on leaving, look a letter of introduction to our city chapel in Tientsin.

Another man has for many years been in service in the family of a high official, who is now dead. While in hospital he was most anxious to learn all he could of Christian truth. He bought a Bible and several books. He registered his name as an enquirer, and, when leaving said: "If only the Emperor and Prince Regent could hear the Gospel! They do not know of this doctrine and so do not know how good it is; if they only heard, they would believe. If only the officials believed, they would not be so set on getting rich by any means." On his return to his employment he told his young master how impressed he had been by the doctor's care, showed the books he had bought, and told him of the Good News he had heard. He was laughed at and told that the foreign doctrine was no good. But he continues to attend services, and, as he has opportunity, bears witness to the truth, some in the household being willing to listen.

During the year we had a number of Lama priests from the great Lama temple, but they are very hard to get at; many of them speak only Mongol, or understand only a very little Mandarin. One of them
was quite prepared to admit the truth of the Christian doctrine. "Jesus is a road to goodness, Buddha is a road to goodness," was his view of the case. He was not at all pleased when told "But Buddha was a man; Jesus was Divine." His reply was "Buddha is Divine."

An old man came in for a serious operation. He was most anxious to pray, but not knowing what to say was taught by the hospital evangelist to pray:—"I pray thee, God, to pity me and save me out of my trouble, for Jesus' sake, Amen." This he learned with some difficulty. When he was getting better, by the change of one word in his prayer, he used to pray "I thank Thee, God, for pitying me and saving me out of my trouble, for Jesus' sake."

The women's hospital has been fairly full most of the year, the total number of patients being greater than that of last year. Their problems are simpler than those of the men, and yet in their narrower lives opposition counts more and presses harder.

One woman was a student in our girls' school twenty years ago. She married into a heathen family, and her Christian life had grown cold. While in the hospital she was much moved by again hearing the old, old story, and began once more to pray and read the Bible.

The wife of a small official came all the way from the province of Shansi and stayed for some time with us. She could read and she studied the Scriptures constantly. She had heard Christian teaching before, but her friends had told her "It does not make any difference whether you believe or not, God never gives you anything." She had lost her first two children, and was very anxious when her baby was born. The baby was very delicate at first, but we were able to save it for her. She was very grateful and happy, and acknowledged the goodness of God to her, and her faith in him. In her time of trouble she said "I cannot trust to my friends, they are too far away; I will trust in God, He is always near." When leaving, she said "God has been very good to me in giving me my baby; when she grows up I will teach her to read the Bible and believe in Jesus."

Another patient had heard the Gospel in the South, but her mother-in-law had hindered her from having anything to do with the "Jesus religion". She was very anxious to listen, learned to pray, and now wants to come to church.

While I was in charge of the women's hospital, my special friends were the children there. One little girl came from a well-to-do home in the city, where in a few months all the male members of the family had died. I was afraid at first that I should have to amputate her foot, but with patience she was entirely healed.
Another wee chap was "the only son of his mother, and she a widow." They were both with us for some time, and were greatly impressed by all they heard.

These are a few extracts from our notebook about patients who have been with us this year. Many of them come from afar, and we see them no more; we can but trust that their feeble faith is not quenched, but may grow, and bring forth fruit.

Sometimes we are privileged to see the fruit. Many years ago a young man was greatly inconvenienced by a large tumor growing from the front of the abdomen. It had grown so large that when walking he had to support it and hold it up with his hands. His father was bitterly opposed to everything foreign, and when the son, hearing of the wonderful cures performed at "the two flag-staffs" (a common name for our hospital), proposed to seek relief there, he was sternly forbidden to have anything to do with the foreigner. At last, however, the boy could endure the discomfort no longer, and, braving his father's wrath, entered our hospital. Dr. Cochrane removed the tumor and ere long he was perfectly well. His attachment to Dr. Cochrane was so great that he took employment in the hospital, and has now for some years been in charge of all the servants in the college, and is the Secretary's right hand man. He is a good earnest Christian and has proved himself faithful in a most difficult position. His father has all along been bitterly opposed to his son's actions, and at home has constantly upbraided him for his un filial conduct. Last autumn he became seriously ill, but for a long time refused to come to us for aid; at last his son prevailed upon him to come into hospital, where he soon recovered. Quite recently he died, but a fortnight before his death, he called all his relations together and told them that he was convinced of the truth of Christianity, and had accepted Christ as his Saviour, and bade them give him Christian burial, without any idolatrous ceremonies.

We once more tender our sincerest thanks to all our friends in the home lands who have helped us. We re-echo the clarion call to the churches as sent out by the great Edinburgh Missionary Conference. These are the days of opportunity in China, open doors meet us on every hand, and we long to enter before they begin to close against us. We dedicate ourselves once more to this great service, and call on all our fellow-labourers at home to aid us. Our needs, spiritual and material, are very great, but the Master whom we serve is sufficient for all our needs.

(Signed) E J. Stuckey, B. Sc., M.B., B.S.
Acting for Thomas Cochrane, M.B., C.M
THE PREVENTION OF PLAGUE IN INDIA.

The report of the Punjab Plague Committee for the year 1910 contains twenty-six definite recommendations and conclusions. Some of the more important of these are as follows: (1.) An active anti-plague policy on the part of the Government is necessary and should be continued. (2.) The destruction of rats by means of poisoning and trapping on the present lines does not yield results commensurate with the expenditure incurred and should be discontinued; the greatest prospect of success in preventing the spread of plague by means of rat destruction consists in attacking the comparatively few localities where plague persists during the quiescent period. (3.) Anti-plague inoculation is essentially a personal prophylactic measure, and in recommending its adoption everything savouring of compulsion or pressure should be carefully avoided. (4.) For dealing with plague epidemics in villages evacuation is a most important anti-plague measure. (5.) The disinfection of infected houses during the course of an epidemic, or after its cessation, is not ordinarily necessary, but disinfection, as applied to the clothing and baggage of persons coming from infected areas, is a valuable means of preventing the spread of plague into uninfected areas and should be carried out wherever possible. (6.) The only measures of a compulsory nature which are permissible are those demanded by public opinion and capable of being put into operation by the people themselves. Other recommendations deal with measures facilitating quarantine and isolation, and the extension of legal powers to the inhabitants of towns, as well as villages, to prevent the access of persons coming from infected areas, is advocated.

THE DESTRUCTION OF RATS.

The Board of Agriculture and Fisheries has just issued a leaflet (No. 244) on the destruction of rats. It is pointed out that the females, both of the black rat and the brown or sewer rat, breed at a very early age. Though they go with young for six weeks, they have several litters in a year, comprising from six to fourteen young. Apart from their capacity of communicating plague to man through the fleas by which they are infested, the damage done to food and houses warrants the destruction of these animals by hunting, trapping, or the use of poisons or rat virus. Of the poisons, barium carbonate is said to be one of the cheapest and most effectual. It causes thirst, and therefore induces the rats to seek water in the open, where they die. It may be employed in the proportion of one part to four parts of meal mixed to a dough with water or it may be spread on fish or moist toasted bread. It is added that rats if they find any of their fellows die after eating any kind of food avoid such food for some time, so that it is generally necessary to vary the form and appearance of the bait.

BERI-BERI.

Beriberi is very prevalent in Siam, no less than 4,607 cases, with a mortality of 282, being reported. Dr. Highet holds the belief that the cause of beri-beri must be looked for in the eating of stale
white rice, and this is borne out by other observers. The prevention is the use of parboiled rice. After the report of Drs. Fraser and Stanton in Java, and Dr. Braddon in the Malay States, who conducted a series of experiments in connection with the dieting of coolies, Dr. Highet commenced the use of parboiled rice in the lunatic asylum, which, he says, was a hotbed of beri-beri, and the results have been so remarkably successful that he has prepared a memorandum in order to lay before the Siamese Government the advisability of recommending that parboiled rice should be used in all Government institutions, and by the inhabitants generally. With regard to the lunatic asylum, he says that no new case of beri-beri has arisen since parboiled rice was first issued.

Dr. Victor G. Heiser, of the United States Public Health and Marine Hospital Service, gives similar experience in an article entitled, Practical Experiences with Beri-beri and Unpolished Rice in the Philippines, in the Journal of the American Medical Association of April 29th, 1911, though he attributes the disease to the lack of phosphorus pentoxide in rice from the excessive polishing by machinery.

TINCTURE OF IODINE IN WOUNDS OF THE HAND.

Reclus (Journ. des Prat., August 27th, 1910), commenting on wounds of the hand as being among the most important accidents affecting workmen, shows how the employment of iodine has revolutionized their treatment. In pre-antiseptic days, all crushed and severely wounded parts were removed at once, in order to give the patient the best chance of avoiding suppuration, lymphangitis, erysipelas, and the like. The dawn of the antiseptic era brought a greater saving of tissue, as the dressings then employed gave a certain amount of security against those complications, and most surgeons acted on that principle. But for some time there has been a growing feeling of dissatisfaction with this extreme conservation of injured tissues, as it has been found that septic germs increase and multiply under the thick ridges of a workman's hand, probably covered with dirt at the time of wounding. Consequently, although hospital gangrene has disappeared, suppuration of the sheath of tendons has become more common, and the hand may emerge from the treatment with the fingers deformed and rigid, incapable of performing their natural functions. This difficulty may be overcome by the systematic employment of tincture of iodine, proposed sixty years ago by Boinet, but not fully accepted till after the Russo-Japanese war. Instead of spending hours in a futile attempt at cleansing in a work-soiled hand, the modern treatment is to paint, with freshly prepared iodine tincture, the wound and all the tissues round it, thoroughly and completely, until the tincture has penetrated into all the inequalities of the part. There is no fear of causing destruction of cells, or even of inducing too much pain in the application, even the most timid and sensitive complaining only of a little smarting or burning, but never objecting to the remedy. The tincture is allowed to evaporate before dressing with aseptic gauze and absorbent wool, and the application is repeated daily for the first three days, afterwards every three or four days, any dead skin being removed as required. It is true that the iodine may interfere with the activity of the young cells engaged in the repair of the wound, and, as a matter of fact, cicatrization seems
sometimes to be a little slow; but, on the other hand, the absolute security from inflammation or subsequent rigidity of the joints is an ample compensation for the delay. The value of the treatment appears to lie in its power of penetration into the depths of the tissues, pus germs being unable to live in the dehydrated skin. It is wise to remove beforehand all comminuted bones and very much mangled soft parts in the case of workmen, where rapid healing is of importance, although among the leisured classes it may be better to wait and see if healing will take place without amputation. In the case of the thumb, however, the parts must be carefully cherished and preserved, as even the smallest stump of phalanx will be of service in the future usefulness of the hand.

Nurses' Department.

The secretary owes an apology to the association and duly offers it. The shortcoming, however, has two sources: one, the failure of material to edit, because other members have been too busy, or have not felt their responsibility in supporting the department. The second reason is her own failure through the pressure of daily duties. A number have asked about the examinations, which are now our basis of uniformity. These papers were ready for the last issue, but an unusual pressure at the time let the day slip by and they were too late.

It may be opportune to have them now that Nurses' Meetings will be held at the various resorts so soon. I hope the following letter will bring responses.

"You perhaps have seen in the (Nursing) Journal that the third volume of Nursing History is under way, and that nurses in the different countries are helping to send material as this volume is going to be sold for the benefit of our International Treasury. Can you help me to get Chinese data. My plan is to give just a brief, but accurate, account of each important nursing enterprise so that people interested in knowing will really be informed. I would like the beginnings whenever possible, and to give credit to those who were the pioneers in it."

Regulations Governing Candidates for the Central China Medical Missionary Association’s Diploma for Nurses.

1. The Course of Study shall include the following subjects:—
   (a.) Elementary Anatomy and Physiology.
   (b.) Surgical Nursing.
   (c.) General Nursing.
   (d.) Nursing in Medical Cases.

For women nurses the course shall also include Obstetric Nursing and the Nursing of Children. The Manual of Nursing compiled by the Association is recommended as a text-book, but other text-books may be used at the option of the teachers.

2. The Course of Training must cover a period of three years, and may be taken in any recognized Hospital or Nurses' Training School.

3. Examinations for this Diploma shall be held twice each year, in April and in October. The examinations shall be both written and practical. The candidate may take this examination after the completion of his or her second year, but the diploma shall not be presented to the successful candidate until the full three years of training have been completed, and the candidate has attained the age of twenty years, English reckoning.
Every candidate, before taking this examination, must present a certificate, duly signed by those in charge of the Hospital or Nurses' Training School, to the effect that:

(a) The applicant has had two full years training as a nurse.
(b) The applicant has regularly attended classes for instruction.
(c) The applicant has given satisfaction in both theoretical and practical work, as well as in general behavior.

Blank certificates may be had on application to the secretary of the Association. These certificates, duly signed, must be presented to the Examining Committee before the first of April or the first of October. The examinations shall be conducted by a committee annually appointed for this purpose by the Association.

Any Hospital or Training School represented by one or more candidates for examination may delegate one of its staff to be present at the practical examination for reference.

Any candidate failing to pass an examination may present himself or herself at the next or any later one of the stated examinations.

4. Special Prize. John MacWillie offers annually a Silver Medal in memory of Sidney R. Hodge, M.R.C.S., L.R.C.P. Once a year, this medal will be presented by the Association to the nurse, male or female, obtaining the highest number of marks in either the spring or the autumn examinations, provided the marks be not less than eighty per cent. The candidate may only compete once for this prize.

5. Special Certificates for proficiency in Obstetrics will be given to women; and for proficiency in First Aid and Ambulance Service will be given to men, after they have passed the Association's special examinations in these respective subjects. These special examinations may not be taken earlier than six months after passing the regular Nursing Examination.

Scheme for Examination of Nurses in Midwifery under the Central China Medical Missionary Association.

Candidates for the Special Certificate in Midwifery given by the C. C. M. A., shall comply with the following requirements:

1. They shall be over twenty years of age (English reckoning).
2. They must already hold the Certificate of the Association for proficiency in nursing.
3. They must produce a written statement signed by the authorities of a recognized hospital that they have satisfactorily attended twenty cases of confinement, at least one-half of which they have personally delivered.
4. They shall be required to pass an examination in midwifery, which shall be both written and oral, including practical demonstration with a model.

SYLLABUS FOR EXAMINATION.

Section A.

Candidates will be expected to show a fair knowledge of the subjects here specified, especially in their practical aspects:

Elementary Anatomy of the Female Pelvis and Genital Organs. Ovulation and Menstruation.

Pregnancy.—Its Symptoms, Diagnosis and common Disorders. Changes in the Uterus, including an outline of the Development of Placenta, Ovum and Foetus.

Abnormal Pregnancies—molar, extra-uterine, etc. The Nature and Use of Antiseptics in Midwifery. Abortion.

The Foetus—Characters at full Term, Dimensions of Head, Presentation, etc.

Normal Labour—Mechanism, Course, Management.

Puerperium, course of—normal management of mother and child, including Care of Breasts, Douching, Catheterisation, Resuscitation of Infant, Infant Feeding.

Difficult Labour—Causes of (1) in Mother and (2) in Foetus, with recognition of the various conditions.

Section B.

Candidates must show themselves familiar with the obstetric operations mentioned below including the indications for the use of each:

The Application of Forceps, high and low. Version—external, internal, or combined.

Removal of Adherent Placenta.

Suturing Ruptured Perineum.

Section C.

Candidates must be able to recognise conditions requiring more extensive operative interference for which the help of a qualified medical practitioner would be necessary, and must understand the nature of such operations as:

Craniotomy.

Fetsecration.

Caesarian section.

Symphysiotomy.

Induction of Premature Labour.

A minimum of forty per cent. shall be required in either written or oral, and a minimum of fifty per cent. on the whole in order to pass. Over eighty per cent. shall be honours.
One piece of apparatus for the intravenous infusion of normal saline solution, that was devised out of material on hand in any hospital. As it has proven satisfactory, and seems to fill the requirements of asepsis and convenience, it is reported.

The materials used in putting the apparatus together were:

1. Empty 1 lb. Ether bottle, No. 3.
2. Empty tube that contained B. and W. Effervescent Sodium Sulphate Tablets, No. 4.
3. Bath thermometer, registering to 212 degrees.
5. A few feet small rubber tubing.
6. A few feet small glass tubing.
7. Rubber corks.
8. Medicine dropper.
9. Large hypodermic needle.

Rubber stoppers were selected to fit the bottle No. 3, and the tube No. 4, and two small round holes were bored in each with a file. A short piece of glass tubing, just long enough to reach through the stopper and a long piece, long enough to reach to the bottom of the bottle, were put in each stopper, and bent to a right angle.

The short tube is the inlet, and the long tube, the outlet, in both bottles.

The bulb of an atomizer is connected with a short piece of tubing and is connected with the inlet of the large bottle. The outlet of this bottle is connected with the inlet of the small tube with several feet of rubber tubing. The thermometer is placed in the small tube, and the outlet is connected with the pipette of the medicine dropper with another short length of rubber tubing.

In practice, the whole apparatus, except the bulb of the atomizer is placed in water and boiled. The thermometer goes in too, provided it will stand 212 degrees. After sterilization, the bottle 3 is nearly filled with hot, sterile, filtered, normal saline solution, and the stopper is put in tightly. The short inlet tube is lightly plugged with dry, sterile, cotton wool, and the bulb attached. The siphonage is started with the bulb, and the solution is allowed to completely fill the tube 4, which contains the thermometer. When this tube is completely full, the stopper is in-
serted, and the solution flows out at the nozzle. Any bubbles coming down are arrested in this small bottle, and as long as it is kept anywhere near upright, it will be impossible to introduce air into the circulation even should a large number of bubbles be caught in the upper part of the bottle. Making sure that the outlet tube extends nearly to the bottom of this bottle, makes it more efficient as an automatic bubble catcher.

The temperature of the solution just at the needle is also seen here, and may be quickly raised or lowered by coiling the delivery tubing from bottle 3 in hotter or colder water as is desired. Or the whole bottle may be placed in water of the desired temperature by an assistant.

Summary.—The following advantages are claimed for this piece of home-made apparatus.

1. It is easily made in a few minutes, and without cash outlay.
2. It is easily and completely rendered sterile.
3. The temperature of the solution is known at the point of entrance to the body, and it is easily regulated.
4. Entrance of air is provided against.
5. By pumping with the bulb, pressure may be secured, or hydrostatic pressure alone may be used. In this case it is well to detach the bulb after the siphonage has started, so as to allow free entrance of air.
6. Hypodermoclysis is provided for by substituting a needle for the glass medicine dropper.

A. S. TAYLOR.

HAIYTIAN, June 9th, 1911.

To the Editors of "The China Medical Journal."

DEAR SIRS: The letter in the May number from Dr. Aspland in regard to Kala-azar Infantum was a very interesting one to us.

We have, in this region, a considerable number of these patients and their symptoms are precisely similar to those he reports. They are numerous enough to form quite a feature of our clinic and since the prognosis is exceedingly bad they form one of the most important problems we have before us. From personal communications I know that the disease is very prevalent also to the north of us, extending up into Shantung.

With us the disease occurs almost, if not quite, entirely among children, though I am not prepared to say that adults never contract it. It is possible that cases of large spleen developing among adults may be due to other causes though simulating Kala-azar. For instance one of the first patients whose blood I examined seemed a straight enough case on admission to the hospital but the examination showed him to be suffering from leucemia.

The cases with us almost invariably date to the early summer, which goes well enough with Major Rogers' theory of its transmission by bedbugs. This would allow just about time for a fair incubation period after the time when the bugs, which are quiescent all winter, begin to bite again in the spring.

The positive diagnosis by finding the parasite is much more difficult than that of other protozoal diseases, such as malaria, sleeping sickness, relapsing fever and syphilis. It is often not present in the circulating blood or present in such small numbers that its search is exceedingly tedious and the method is not practically effective. In our cases I have spent long hours in examining the blood of a number of undoubted cases but without finding a single parasite. Puncture of the spleen is hardly justifiable as a routine measure because of the record of death that has followed its use in this disease. Puncture of the liver can hardly
be considered free from risk or a means to be lightly followed. Besides it does not always reveal the parasite in sufficient numbers for an easy diagnosis, as I know from the only case in which I have tried it, when I did not succeed in finding any. Also I have tried the serum from fly-blisters and croton oil pustules without success. I also tried scrapings from the tonsil in one case but found no parasites and in the cases I have examined the tonsils are not enlarged, so this is not a likely source of Leishmania.

At length, last December, we found the parasite with considerable ease by a method that has not, so far as we know, been previously described. We had in the hospital a case in which we had ventured, for the first and only time, and with the greatest care, to puncture the spleen. I found, after several hours search, one white cell containing what I believe to be Leishmania but which I was uncertain about on the first sight. The next day a post-cervical lymphnode was removed under local anaesthesia (quinine and urea hydrochloride ½ per cent. solution), and the smears obtained from its cut surface contained Leishmania in great profusion. Since then our investigation has had to be cut short by having to abandon everything for famine relief work, but in the four or five cases in which we have tried it we have found the parasite with very little trouble, the longest search being twenty minutes.

Our hospital has received a grant from the Craggs Research Fund, of the London School of Tropical Medicine, to aid us in the investigation of Kala-azar in China. We are planning to try and mark out its endemic area, by means of a circular letter to the various mission hospitals. In view of the importance of the subject we are hoping that the busy men in charge of them will forgive the arrival of one more set of questions to answer, and contribute a few minutes more of their time to the public good.

In case any who read this have suspicious cases offering themselves but do not have the time, facilities, or inclination for work with the microscope, we should be glad to stain and report on smears from liver punctures, but especially on those from lymph-nodes. Slides sent should be accompanied by a brief history of the case if possible and, if they are obtainable, it would be better to send three or four slides in each case.

Yours very sincerely,
Samuel Cochran.

TIENTSIN CITY, June 9, 1911.

To the Editor of "THE CHINA MEDICAL JOURNAL."

Dear Sir: I note a letter from Dr. Graham Aspland in the current number of the CHINA MEDICAL JOURNAL on Kala-Azar Infantum. I noticed this disease, peculiarly limited to young children, previous to 1900. During the Spring of 1901, I worked at it with Stabsarzt Perthus, a German Army Surgeon, and on his return to Europe he read a paper, describing the disease. We were on the wrong track. I limited my examinations to peripheral blood, and necrotic tissue of mouth, and found no parasite, only certainly excluding malaria. With very limited leisure I could not use the frequent material at hand in Peking, perhaps a case once a week, or oftener. On removal to Tientsin, with more leisure, I set out determined to
find the parasite, and have been greatly disappointed to find the disease non-existent here. I have seen at least twelve thousand new patients, an unusually large proportion of them being small children, in the last two years, and have met only two cases. In neither of these could I get a spleen puncture. One came from the country between here and Peking, and one was apparently from a purely Tientsin family. The disease is thus a local one.

A camel is never seen in Tientsin, or adjacent country. We meet him constantly in Peking and district. Can there be any connexion? But if so, why are adults exempt?

Yours very truly,

Lillie E. V. Saville.

Weihsiien, June 14th, 1911.

To the Editor of "The China Medical Journal."

Dear Sir: About a year and a half ago I sent you an article on the "Choice of Operation for Vesical Calculus", which you were kind enough to print. There seems to be a feeling in the minds of some surgeons, whose experience in China is much longer and wider than my own, that my article did not do justice to the perineal operation. Both Dr. James L. Maxwell and Dr. John M. Swan are men whose opinion should have far more weight than mine. Dr. Swan's series of 1,800 cases gives him the right to speak with authority; and when he advocates the perineal operation we may be sure he has good reasons for doing so.

Yet with all respect to the large experience of these surgeons, may I be permitted to say that in this discussion it seems to me that they have "missed the alternative"? The conclusions arrived at recently in India, based on upwards of 10,000 cases, would seem to show that for small and medium-sized stones, the choice is not between supra-pubic and perineal, but between any cutting operation, and the crushing of the stone.

The work of Freyer is interesting and applicable to this point. He was accustomed to do perineal lithotomy, but he says, "The introduction of litholapaxy into my practice has had the effect of reducing the mortality in operations for stone in the adult from 18 to 3 per cent." In his 610 litholapaxies the average weight of the stone was 262 grains. Of these, 90 were one ounce and over; 31 over two ounces. Dr. Swan gives 2½ ounces as the limit of size of stones suitable for the perineal operation. Dr. Maxwell says two ounces. So it would seem that any stone small enough to come through the perineum, is small enough to come through the urethra, after the proper crushing operation.

The perineal operation certainly has a place in the treatment of stone which we all recognize; namely, for small stones, too hard for crushing. Of six operations for stone which I have done this spring, one was by the perineal route, for a stone whose "pebbly" surface led me to suspect an oxalate calculus. The speed and simplicity of the operation make it very attractive; but when we are compelled to make the choice of operation in these cases, let us not "allow the good to become the enemy of the best"; and let us keep an open mind to the funded experience of others which appears in the literature on this subject.

As Dr. F. H. Judd pointed out, in the C. M. J. for March, 1911, litholapaxy is a very easy operation. In many cases no anaesthetic,
Correspondence.

or only cocaine in the bladder, is required. Over a wide area it is displacing the cutting operations for the smaller stones. For the large ones, we all agree on the suprapubic method, by force of circumstances.

Very sincerely yours,
CHARLES K. ROYS.

SHOKA, FORMOSA.

DEAR MR. EDITOR: In recent numbers of the C. M. J. several methods of preparing catgut ligatures have been described. I should like to give my method, as it is simple and rapid and might suit some of your readers. It is a modification of Jellett's. I buy raw catgut (Hartmann's) from the Holburn Surgical Instrument Co., London. It is certified, on the envelope containing it, to have been freed from grease. So one can omit the first stage in the preparation, i.e. the steeping in ether, which, of course, takes time. I simply wind the catgut loosely on a plate of glass or horn, each length being knotted to the succeeding one. (I prefer horn plates, as they do not break and can be easily made any shape or size by any Chinaman who deals in horn.) The catgut is then placed in a Jellett's catgut steriliser and sufficient absolute alcohol poured to make the steriliser three quarters full. About 8 ounces will be sufficient. The lid of steriliser is then screwed down and the whole thing immersed in a pan of water and boiled for rather more than half an hour. The steriliser is then removed from the boiling water and as soon as it is cool (the cooling may be accelerated by placing in cold water) the lid is unscrewed and the catgut on its plate removed with sterile forceps. The absolute alcohol in the steriliser is then poured into a clean wide-mouthed bottle, which has a good well-fitting glass stopper, and the catgut is dropped into it and there stored till required. Jellett advises the addition of 5 per cent. to 15 per cent. of glycerin to the absolute alcohol used for storing (not for boiling) the catgut. I omit the glycerin but add a little corrosive sublimate (about ½ grain to the ounce). At operations the catgut and the absolute alcohol in which it has been steeping are placed in a sterile glass bowl ready for use. After the operation the catgut and the alcohol in the glass bowl are put back again into the bottle.

This method is rapid. The raw catgut can be made ready in a little over half an hour. It is also simple and it is economical of absolute alcohol, as the same alcohol is used for boiling, storing, and placing the catgut in at operations. The addition of corrosive sublimate seems to me a decided advantage. It is very important that absolute alcohol (not spiritus vini rectificatus) should be used for boiling the catgut. Sulpho-chromic catgut can be sterilised in the same way.

I have found catgut so prepared very satisfactory and it seems to keep good for a very long time.

A Jellett's catgut steriliser can be bought from any surgical instrument maker for about 12/6.

I may add that catgut, silk-worm gut, silk, needles, etc., can be rapidly and cheaply got out from home by letter post (if from England, via Siberia).

Yours sincerely,
DAVID LANDSBOROUGH.
PERSONAL RECORD.

BIRTHS.

At Yungp'ingfu, North China, February 26th, to the wife of Dr. A. Fletcher Jones, E. M. M., a son (Hugh Cecil).

At Hanyang, May 4th, to Dr. and Mrs. George A. Huntley, A. B. M. U., a son (Leslie Albert Myers).

At Kangkai, Korea, June 2nd, to Dr. and Mrs. Ralph G. Mills, Northern Presbyterian Mission, a son (Roger Lee).

ARRIVALS.

April 30th, Dr. Jorgen Nels sen, from Norway. Nor. Miss. Society.

May 5th, Miss H. Heikenheimo, M.D., Finland Missionary Society.

DEPARTURES.

May 5th, Dr. R. H. Ewen, wife and two children, Canadian Methodist Mission, for Canada.

May 15th, Dr. E. H. Hume, wife and three children, Yale Mission, Changsha, for America.

July 4th, Dr. Margaret Phillips, S. P. G., Pingyin, Shantung, for London, via U. S. A.

WANT DEPARTMENT.

[It is hoped this new departure will approve itself to the Association. Subscribers are invited to send short notices of personal, missionary and professional "wants," free of charge. Such notices will be kept in for a reasonable time or until withdrawn.—EDITOR.]

A dispensary assistant; a trained or partially trained man, Kiangsu or Chekiang preferred; bright, active, willing to learn; some knowledge of pharmacy and dispensary work in general, necessary. Any one knowing of such a man desiring a position kindly write to the Editor of the CHINA MEDICAL JOURNAL stating salary expected.

F. Porter Smith's "Contributions toward Materia Medica". Any one having a copy he would care to sell, kindly advise (stating price), M. A. Brillinger, Phar. B., Pharmacist, ChunKing, China.