UNION MEDICAL COLLEGES AND THE MISSION HOSPITAL.

A Plea for Associated Hospitals for Clinical Teaching.

By Harold Balme, F.R.C.S., Eng.

Now that Union Medical Colleges have come to take a permanent place in missionary enterprise, the question of their relationship towards mission hospitals becomes a large and important one. The supply and preparation of suitable students—the guarantees for their return to the hospital which sent them—the position of the College graduate on becoming a Hospital Assistant—the possibility of holding post-graduate courses—such points as these, as well as many others, make it advisable that exact relations between Hospitals and Colleges should be established in the near future, to the mutual advantage of both sides. But it is with none of these matters, important as they are, that this paper attempts to deal, but rather with the fundamental question of the training of students itself.

Never was there a time, in the history of China, when the call for trained leaders was so insistent as it is at present. The extraordinary march of events during the past few years has resulted in a wide-spread cry for Western education, whilst the outbreak of Plague in Manchuria and the opportunities for Red Cross work during the present Revolution have undoubtedly added considerably to the prestige of Western medical science, and revealed to China her need of efficient medical education. An additional emphasis has thus been given to this form of missionary work which can hardly be overrated, and there is, perhaps, no greater service that medical men and women can render to China at this critical period in her history, than to supply her with a large staff of godly, well-trained, Chinese doctors and nurses.

Whilst so much is granted, however practical question will always arise as to the conditions under which such training is best
given, with a view, not merely to the efficiency of the individual, but to the fulfilling of the wider purpose for which this service is undertaken. Before the days of Union Medical Colleges, Mission Hospitals possessed the whole field for training of this sort, and we do well to remember the splendid results accomplished in this direction by some of our over-worked predecessors, who, in addition to the administration of large hospitals and the care of the health of scattered missionary communities, succeeded in giving an excellent training to their Chinese student assistants. Many a Mission Hospital to-day has to thank God for the Christian character and influence, and the medical skill and ability, of reliable hospital assistants whose sole training was received under such conditions as these. At the same time it cannot be questioned that from the point of view of efficiency, and still more from that of Mission economy, this system of medical education is far from being ideal, and that Union Medical Colleges have come in to supply a very distinct want.

Are we then, as a matter of policy, to concentrate all our future energies, in the direction of medical education, upon the few Union Colleges which can satisfactorily be established and equipped? This is the practical question which demands our thought, and whilst obvious advantages can be adduced for the pursuing of such a policy, it must be confessed that serious difficulties may also be raised against it, which we do well to consider. Let us in the first instance notice the advantages which Union Medical Colleges can rightly claim.

I.—Advantages of Union Medical Colleges.

1.—Efficiency. Medical study embraces such an extensive and ever-widening range of subjects that it must be obvious to all that the training which can be given by two, or even three or four, medical missionaries, attached to a large Mission Hospital, can never hope to compare with that provided at a Union College. The Medical College at Peking has thoroughly demonstrated the fact that a large staff of teachers is required, in order to cope with the numerous classes which must be held, if satisfactory instruction and laboratory practice are to be given; in fact, it seems pretty clear that absolute efficiency in teaching will never be obtained until the staff is sufficiently large to admit of specialisation in their own subjects by the individual teachers.

2.—Continuity. One of the greatest drawbacks to the use of Mission Hospitals for purposes of medical education, as opposed to Union Colleges, arises from the lack of continuity. Furloughs, sickness, and district calls to scattered missionaries, prove most serious
hindrances to the work of teaching; and when the hospital staff is but a small one, it is inevitable that times must occur when such teaching will have to be interrupted, or even temporarily abandoned.

3. — **Economy.** By no conceivable means can medical students be given a thorough course of training without a heavy expenditure, both of time and money. This is a fact which must be faced by all, for supplies are not unlimited, and extravagance in any form is to be deplored. Where students from various localities are gathered into one central institution, there is at once a marked economy in the expensive laboratory apparatus and other teaching material, to say nothing of the time which is saved by one man teaching a subject instead of four or five doing so.

4. — **Prestige.** The day is not far distant when Government Medical Schools will multiply in the land, and when that day arrives the Mission-trained student may find himself seriously handicapped, unless he comes from a College whose very efficiency has earned for itself the recognition of the Government, or at least a thoroughly good prestige. There may be some who would urge that we do not desire such prestige, as it might prove a serious temptation to our students; but having regard to the place which we wish them to occupy and the influence which we hope they will exert, surely it is all to the advantage of the Christian Church to have in its ranks the best trained men possible, men capable of holding their own in any position. Whatever kind of training we give them, it is only an overpowering love to Christ which will enable them to "seek first His Kingdom," and if personal gain is uppermost in their thoughts, they will seek for high positions just as much if they come from a Mission Hospital of comparatively low status as if they had graduated from a high-class College, and with the additional disadvantage that having a poorer training and a lower reputation to start with, they will be all the more tempted not to increase the handicap against them by being too decided in their Christian profession.

So much for the advantages of Union Medical Colleges over Mission Hospitals as a place of a training for students. Now let us consider some of the difficulties; and although they are not numerous, they are of sufficient gravity to claim our most serious attention.

II. — **Difficulties in working of Union Medical Colleges.**

1. — **The Student's Expenses.** Among our Christian students in the provinces there are but few who come from families able to afford what is to them the heavy expense of training in one of our Union
Colleges. The journey to the city, the extra cost of living, and the tuition fees (small as they are) make up a total which is usually quite beyond the means of the poor countryman. If we wish our promising student to receive such training, we are faced with the necessity of providing the whole, or greater part, of the funds ourselves. In some cases, possibly, the native church may help with a subscription; in others, we may induce the parents to contribute a portion of the expense, such a sum, for example, as it would have cost them if the lad had been trained at our Mission Hospital; but neither course is wholly satisfactory.

2.—The Temptations of City Life. It is no small thing to bring a boy from a provincial village, with his simple country tastes and ideas, and place him for several years in a large city where money flows freely, where the standard of living and of personal requirements is infinitely higher than anything he has ever known, and where the temptations to open sin, or to selfish, personal ambition, press upon him every day of his life. These considerations are so serious that unless the whole atmosphere of the College is strongly and aggressively Christian, or unless our student has shown signs of a solid, mature, Christian character in the face of temptation, we may well pause before deciding to expose him to these risks.

3.—Loss of Personal Touch. But it is on the question of personal influence that we approach what is, to my mind, the most crucial point at issue.

We are in China the representatives of an alien race. What have we come for? We have come for the express purpose of setting up the Kingdom of Christ in the land. But how is this ever to be accomplished? Our own individual efforts at healing and preaching are never likely to attain this goal, nor was it ever intended that they should: but what we do hope and believe is that, by such efforts, we are going to succeed, under God's blessing, in calling out and establishing a native Church of well-trained, consecrated men and women, who shall be the Standard Bearers of the Cross and Heralds of the Kingdom among their own people. If this is so, then we medicals cannot forget that one of the most sacred and Christ-like tasks allotted to us is the influencing and training by constant personal contact, of those who are associated with us in our daily work, and upon whose lives we are seeking to impress the image of Christ. It is through these "disciples," if we dare to use that term, that we are perhaps going to make our best contribution towards the establishing of Christ's Kingdom in China, and I, for one, would very much
demur if the possibility of such work were to be taken away by the centralising of all our students in large Union Colleges. It is true that whilst they are there they are under the personal influence of those who are teaching them; but that can never be the same thing as being under the constant care of a man who has watched and prayed over them from their youth, and whose thoughts and efforts are concentrated upon a small group. There are many medical missionaries in China who must necessarily be located in places far distant from the big centres, owing to the claims of needy districts and of large missionary communities. Are such men and women to have no share in the training of China's future medical missionaries, beyond the supervision of those who come to them as graduates from a Medical College, and whose characters will be already assuming permanent shape? Or to look at the matter from a broader standpoint, are we doing the best thing for China if we deliberately set aside the magnificent opportunities for personally influencing these students during their most impressionable period such as a Mission Hospital presents?

I have stated the two sides of the case as fairly as I can, and it may well be argued that there is still a place for both forms of training, and that whilst many men will gladly be relieved of the burden of teaching, and will prefer to set themselves free for ordinary medical mission work by transferring all likely students to a central college, from which they hope to receive them back when qualified, there may be others in more distant localities who would feel it far better to devote a considerable portion of their time and strength to the training of their future helpers.

But the question arises: Is there not also a middle course that can be adopted, one which will combine as far as possible the advantages of both? I think there is. It will not meet all the difficulties, and it is open to many objections, but it may be worthy of consideration.

III.—The Possibility of Associated Mission Hospitals.

Let us think for a moment of the position of the smaller medical schools in London. The same difficulties have here been felt as have been discussed above under the headings of "Efficiency" and "Economy," and the result has been that, during recent years, there has been a growing tendency for these schools to combine their forces for the purpose of preliminary studies, whilst each retains its own staff for clinical teaching and the instruction in the final subjects. Thus, for example, at the present time King's College, Charing Cross, St.
George's, and Westminster Hospitals all send their students to one combined institution (King's College) for their first two or three years—until, in fact, they have passed the second or intermediate examination—after which each set of students returns to its own hospital for the final years.

Why should not a similar practice be instituted in China in the case of those hospitals where the smallness of the staff and the paucity of teaching apparatus render it exceedingly difficult to provide the full five years' course, but where the medical missionaries in charge are anxious to have a definite share in the training of their helpers? The advantage would be obvious:

1. The expenditure entailed would only involve the fitting up of a good pathological and bacteriological laboratory—an essential, surely, of any well-organised hospital.
2. The range of subjects to be taught by the hospital staff would not only be greatly reduced, but would be confined to those directly connected with clinical work.
3. In the event of the teaching work having to be abandoned for any considerable length of time, owing to furloughs or other causes, it should always be possible to arrange for students to complete their course at the Union College where they had taken their preliminary studies.
4. Although students would not commence to come under the personal influence of the medical missionary until, say, the end of their third year, they would be with him during a most important period in their student career, including the very time when they become qualified, and when the temptations to worldly ambition prove most acute.

Take the case of the hospital with which I have been connected, that at Taiyuanfu. We have never, up to the present, sent any students to the Union College at Peking, but, on the other hand, it has been obviously impossible for the two or three of us to give our helpers a full course of medicine; and though I am unable to speak for my colleagues, whose opinion I have had no opportunity of asking, I should personally give a hearty welcome to a scheme by which we were enabled to send likely students to Peking for their preliminary studies, receiving them back in time for us to take over the responsibility of their final subjects.

It must be frankly admitted that many difficulties would arise in the carrying out of such a project, and these must be honestly faced.
1.—The most serious obstacle would arise from the risk of handicapping the students. Unless the work were taken up systematically and done efficiently, such students might find themselves under a great disadvantage, as compared with their more fortunate confrères who have completed their full course at the Union College. This might at once cause friction and discontent, and, although the Mission Hospital would guard itself at the outset by entering into an agreement with the Union College that they (the College) would not retain such students after the completion of their intermediate examination, it would entirely frustrate the purpose which the medical missionary had at heart if those who completed their training under his supervision were feeling a sense of personal grievance the whole time. No Mission Hospital would have any right to enter into a scheme of this nature unless the members of the staff were prepared to make themselves thoroughly conversant with the new Chinese medical nomenclature (anyone who hopes to have qualified assistants in the future must surely know how to do that) and at the same time see to it that all instruction given in the hospital be thoroughly efficient and systematic.

2.—Another difficulty of considerable importance would arise over the question of the final examination. In many cases, doubtless, the students would be able to return to their former college in order to sit for their finals, but it is possible that they would feel they entered the examination at a distinct disadvantage as compared with those who had received their clinical practice on the spot. In other cases, if the examining body were prepared to relegate the \textit{viva voce} and practical portion of the examination to those who had been the instructors of the students, or to a member of their own staff who was willing to pay a visit to the Hospital, the examinations might all be conducted locally, the papers being sent by post.

Such points as these would need very careful consideration between the hospital staff and the Union College, but with mutual concessions the difficulty should not prove insuperable. And if this point were gained, should we not be in a position to solve a still greater problem? One of the menaces of efficient medical education in China at the present time arises from the number of small, understaffed hospitals which seek to provide a full medical course, and are, in consequence, averse to any schemes of amalgamation. There is much to be said for the desire of those in charge to continue taking a share in a work so full of potentiality as that of training students, but would it not be possible, along such lines as those indicated in this
THE OPERATIVE TREATMENT OF FRACTURE OF THE SKULL.

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Among the most noteworthy advances made in the field of brain surgery during the past decade is the treatment of fractures of the skull, whether basal, or of the vault. For years, the treatment of depressed fractures of the vault has been simple trephining in the area of the depression, and then elevation of the depressed fragment, or fragments. The improvement resulting immediately from such an operation was thought to be due to the removal of the local depression: and for years the local condition was alone considered.

Another factor, however, has now been discovered, which had always been overlooked; that factor is the cerebral oedema which results in varying degrees from any injury to the brain—from mild degrees of concussion, to the worst forms of brain contusion and laceration.

It had been frequently observed—much to the discomfort of the operator—that, during simple exploratory operations in the sub-cortical layers of the brain, or even upon its surface, in search of a possible tumor, or a cause for epilepsy of the Jacksonian type, often manipulations of an extremely delicate character, and lasting not longer than ten, fifteen, or twenty minutes, would cause the brain to protrude through the dural opening, so that, unless the operator was very skilful in approximating the dural edges, an accurate closure was impossible, and a temporary hernia resulted.

This enlargement of the brain is now known to be due to an increase in the amount of cerebro-spinal fluid and of lymph; and such observations have led to the operative treatment for fractures...
of the skull—whether depressed or not, of the vault and of the base—with a much higher percentage of recoveries with full powers than could ever be attained under the former palliative and expectant treatment, now in vogue in most hospitals.

Having had a surgical service at the Roosevelt Hospital in New York City, where the expectant treatment of ice to the head and purgatives is employed, and then the opportunity of assisting Dr. Harvey Cushing, at the Johns Hopkins Hospital, where the operative treatment is used in practically every case of fractured skull, I have had an opportunity to observe the relative value of the two methods of treatment. Recently I examined the statistics of the four big hospitals in New York City still employing the expectant treatment, and such a comparison as regards the mortality and the frequency of the post-traumatic complications, points only too clearly to the more rational operative treatment as carried on at the Johns Hopkins Hospital.

Undoubtedly, every practising physician has seen cases of fractured skulls, particularly of the basal type, in a comatose, or semi-comatose condition—possibly, with moments of semi-consciousness; pulse sixty, and below; slow, stertorous respiration, of the Cheyne-Stokes variety, associated with vomiting, and frequently with convulsions. When no depressed fracture of the vault could be ascertained, and no localizing signs observed, such patients were put to bed with an ice-cap to the head, and a liquid diet and purgatives prescribed. They either died, as is only too frequent, or, after three to eight weeks, they slowly recovered and left the hospital, pronounced "well."

I use the word "well" in quotation marks for the reason that if such cases are followed, it will be learned that the vast majority of them never fully recover that state of health enjoyed before the fracture was received, and that such complaints as epilepsy, and that long train of post-traumatic neuroses, are very common. Very frequently the parents or friends will come to that hospital employing the expectant treatment and say,—"John is not entirely well; he really is not himself as before the operation. He seems to have lost ambition, and no longer cares whether he works or not. At times he is very restless, and cannot sleep, being very irritable." Such statements are heard so frequently that it is commonly believed that once a person has had a fractured skull, that person never fully recovers his former good health.

The explanation is very simple. The minute injuries to the brain resulting from a fracture of the skull, whether basal or of the vault, have caused an increase in the amount of cerebro-spinal fluid and of
lymph within the non-elastic skull-cap and dura, and unless there is an outlet for this increasing amount of intra-cranial fluid the pressure within the skull will become so high as to interfere with the blood supply of the brain. The usual routes of escape for this pent-up intra-cranial fluid following head injuries are into the orbit and through the cribiform plate into the nasal cavity for fractures of the anterior basal fossa; through the ruptured ear-drum, and into the pharynx, in fractures of the middle fossa; and into the deep tissues of the occipital and mastoid regions for fractures of the posterior fossa.

Unfortunately, such channels of outflow are only valuable in relieving the mild degrees of intra-cranial pressure, and besides being very liable to infection, and therefore meningitis, unless scrupulous care is used, they may at any time become permanently obstructed so that the intra-cranial pressure is no longer lessened.

In the ordinary case of fracture of the skull, this increase of the intra-cranial pressure is sufficient to damage permanently the nerve cells of the cortex of the brain, by primarily diminishing their blood supply, and then, just as in scar tissue, by mild contraction of the resulting increase in the neurogliar connective tissue, and thus the proper functioning of the cortical brain cells is interfered with; such are the findings in many cases of traumatic epilepsy—merely an increase of the neurogliar cells of the cortex: undoubtedly, the same factor is present in the post-traumatic neuroses.

To avoid these post-traumatic conditions, and even death itself, in cases of high intra-cranial pressure, a method has been devised by which a suitable opening into the skull is safely made, and the excess fluid is allowed to drain off, until the normal intra-cranial pressure is established. The operation should take place as soon as possible after the accident, in order that the nerve cells may be damaged as little as possible.

In my opinion, the operative treatment as employed by Dr. Cushing is most satisfactory, for by it the mortality and the post-traumatic conditions have been reduced to a low percentage. Naturally, if the brain has been greatly contused or lacerated, the chances of a complete recovery are lessened, but in the ordinary fracture of the base, the prognosis for complete recovery with operation, is very good indeed.

Technique of Operation. The operation consists of a sub-temporal decompression on the right side, in right-handed patients,—to avoid the motor speech area of the left hemisphere; however, when there are localizing signs pointing to a lesion in the left hemisphere, then a left-sided decompression is performed.
A vertical incision of 3\(\frac{3}{4}\) inches is made through the skin and subcutaneous tissues from a point just below the parietal crest downwards to about half an inch anterior to the external auditory meatus,—the incision, therefore, being parallel to the fibers of the underlying temporal muscle. The tense external fascia of this muscle is now incised, and the muscular fibers are separated longitudinally down to the skull, by a blunt dissector, care being taken not to tear its aponeurotic attachment to the parietal crest, and, so weaken the closure of the incision. A periosteal elevator is used to remove the adherent pericranial tissue from the squamous portion of the temporal bone lying beneath the muscle, and then the skull is opened, exposing the dura, by the Doyen perforator and the Doyen burr, both hand-propelled instruments. Such simple tools may not be so fast as the electric-motor ones of Hartley, or the automatic perforator and burr of Hudson; but they are also not so dangerous. The old method of hammer and chisel, for operations to open the skull, is rather crude to-day, for, besides being fairly dangerous, it adds a certain amount of concussion to an already injured brain. However, in skilled hands, the old method is to be preferred to the much heralded electric-motor devices which sometimes do not stop at the dura, and may occasionally penetrate the cortex. Time is not so much a factor in these operations as the use of extreme care not to injure the delicate tissues directly beneath the bone, and the application of rigid haemostasis. An ordinary trephine may be used to open the skull, although the danger of tearing the middle meningeal artery is greater. [*]

Bone rongeurs are now inserted between the dura and the skull, and a circular area of bone with a diameter from 2\(\frac{1}{2}\) to 3 inches, is removed in small "bites." The middle meningeal artery may be troublesome, in that it usually channels a portion of the squamous bone in adults, so that it is unavoidably torn; its difficulties, however, can be overcome by the free use of Horsley's wax, or the application of a fine ligature, or a Cushing "silver clip," to the vessel at the point where it enters the bone.

When all bleeding has been arrested, the dura is opened by a crucial incision upon a grooved director—great care being taken not to puncture a cortical vessel; meningeal branches in the dura itself should be ligated or "clipped" before cutting. It is very common to have the blood-tinged, cerebro-spinal fluid spurt out through the first incision

* To stop the oozing from the diploetic vessels in the bone, Horsley's bone wax is excellent; if not obtainable, a sterile mixture of paraffin and beeswax will suffice. The simple rubbing of the wax along the bone edge will prevent most troublesome bleeding and obscuration of the operative field. The wax need not be removed.
of the dura to a height of several inches,—clearly demonstrating the
degree of intra-cranial pressure to which the delicate brain-cells are
being subjected. Very frequently the pent-up cerebro-spinal fluid in
the sub-arachnoid spaces will be seen oozing through the arachnoid
coat, producing an appearance known as "sweating of the arachnoid;"
in this manner the intra-cranial pressure may be very much lessened.

After a sufficient amount of cerebro-spinal fluid has escaped
through the crucial incision in the dura to allow the intra-cranial
pressure to approximate the normal, a small strip of gutta-percha, or
rubber dam tissue, one half an inch in width, is inserted beneath the
temporal lobe of the brain, so that the middle basal fossa may be freely
drained of its fluid. This drain should extend outwards through the
lower part of the skin incision.

Closure of the wound may now begin by approximating the inner
layers of the temporal muscle, either by interrupted sutures, or by a
continuous catgut suture, and then the outer layers may be united.*

The dura is not closed, for it is non-elastic in adults, and the
purposes of a decompression would be thwarted by suturing it together
again; besides, a new dura is formed after several months, making it
extremely difficult to differentiate the new dura from the old. Inter­
rupted sutures should be used to unite the fascia of the temporal muscle
very closely; while a continuous catgut suture may be used for the sub­
cutaneous tissues. Interrupted silk sutures of the skin, with an extra
suture through the drain to hold it in place: dry dressing, with a
starch head bandage, is very satisfactory. All skin sutures and the
drain should be removed at the first dressing, on the second day after
the operation: this early removal not only lessening the danger of
infection, but also the amount of connective tissue in the formation of
a scar; where possible, unsightly scars of the head and face should be
avoided.

The site of a decompression in the right sub-temporal region is to
be preferred, in that a comparatively "silent" part of the brain is
exposed, and besides, it is protected by a strong temporal muscle;
whereas the high parietal decompression operations of Horsley not only
expose the motor areas, but provide no means of protecting them, other
than the scalp.

It seems that the Chinese race is peculiarly resistant to operations
upon the nervous system, especially those operations affecting the
brain. At present, the difficulty of obtaining consent for operations

* Dr. Cushing uses fine silk in all head operations with excellent results: naturally, the asepsis
must be perfect.
upon the brain in the early stages of tumor, and even of fracture, is indeed very distressing, but it is to be hoped that such opposition will gradually disappear, at least before the cases are beyond all surgical aid.

THE PROPHYLAXIS AND TREATMENT OF DYSENTERY.*

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In considering the subject before us the writer does not presume to advance any new theories as to the treatment and prevention of dysentery, and will only attempt to give a general review of the latest methods used and thus refresh our memories.

Among the diseases in the tropics that affect the native and the foreigner, aside from malaria, there is no disease that ranks greater in importance than dysentery. Among foreigners there is no one disease more greatly to be feared. More lives are lost directly through it than any two other causes combined and, with the exception of the epidemics of plague and cholera, dysentery ranks as one of the greatest causes of death among the natives also.

While it is an endemic disease in most tropical and sub-tropical countries, yet, where due attention has been given to prophylaxis in the matter of sanitation and strict supervision made of the water supply, the disease has almost ceased to exist.

It is therefore very plainly the duty of the physician practising in the tropics to use all means possible to improve the sanitary condition of the city where he resides. It is a meritorious work to have treated thousands of patients each year, but it is vastly more important to educate the natives to the necessity of proper sanitation and good food and water supply. I believe that when the people of South China are educated up to the point of using such preventative means, diseases such as dysentery, cholera, and plague will very largely disappear. It is a well-known fact that in Havana and Santiago de Cuba, before the American occupation, contagious and infectious diseases of all kinds were endemic and a constant source of danger to all the southern coast cities of the United States. Since that time, the cities have been cleaned, the streets widened, sewers constructed, a proper water supply provided, and to-day they are said to rank among the healthy cities of the world. What was accomplished in Cuba, I believe, can be brought to pass in South China and all tropical and sub-tropical countries. But

* Read at a meeting of the South China Branch of the C.M.M.A. on February 26th, 1912.
The continuance of the present unsanitary conditions prevailing and no due regard given to water supply, we may reasonably expect that dysentery will continue to be one of the greatest causes of death among us.

The Prophylaxis of Dysentery.—The prophylaxis of dysentery should be considered under two heads. A, The measures to be used to prevent its existence; B, The measures to be used to prevent its spread.

A.—An ounce of prevention is better than many pounds of cure. It is especially true in this disease, for it is caused by bacilli of violent nature, and, when the disease is once established in the bowel tissues, it is not only exceedingly hard to combat with remedies, because it extends on into the deeper layers, but one can never safely make a definite prognosis as to the patient's ultimate recovery.

Location of Residences.—We often hear the Chinese bewail the fact after some great flood, that "there will be much sickness—especially dysentery," and the fact has been noted by McLean that, "dysentery prevails most and is most fatal on moist, alluvial soils." Davidson has also shown that the infection clings to the soil from one year to another. It is therefore manifest to any well-informed person, that to build a residence in a spot thus contaminated is to invite the disease and tempt Providence. Yet, how often it is the case that residences are built on polluted land that is subject to frequent floods, where good drainage is not possible and with native fields adjoining or near by, outside of our control, that are fertilized with the usual "night soil." In choosing the sites where foreign residences are to be constructed in the tropics, every effort should be used to secure a high elevation above the reach of floods, where good drainage is possible, and located some distance from the native vegetable fields. It is always wise to submit all such sites to a duly qualified sanitary committee of physicians for approval, and their decision in regard to the same should be final.

Drainage.—Suitable drains should be constructed so that thorough drainage is secured and the premises and surroundings kept as dry as possible. These drains should extend to a point not less than three hundred feet beyond the residence and should be flushed each day and free use made of Jeyes' Fluid or some other suitable antiseptic. If possible, all cess-pools, privies, and other causes of obnoxious odors in the immediate neighborhood should be removed.

Overcrowding and Sunlight.—We should try to educate the natives to the necessity of not overcrowding, of having more sunlight and air in their houses, of keeping their commodes and other receptacles for
faeces covered and outside of the houses, at a point far distant from where the cooking is done and the food and water kept.

Water Supply.—There is no one thing more important in the prevention of dysentery than to be absolutely sure that your water supply is from a pure source and that it reaches you in an uncontaminated condition. If rain water is used it should be received into jars having small mouths, so that they can afterward be sealed and made air-tight. No water should be used from wells that are near any sewers, outhouses, drains, stables, vegetable gardens, ponds, graves, etc., as, not infrequently, dysentery has occurred from the use of water from certain wells and cisterns that were afterward found to be swarming with amoebae—due to the fact of faecal pollution from surface water. The Japanese attribute the almost complete immunity of their soldiers from dysentery during the Russo-Japanese war to the fact that they usually sent sanitary officers ahead of the army to test the purity of the water supply. All water that is used for drinking or cooking purposes should be thoroughly boiled before using. It has been the custom with many foreigners in the tropics to be scrupulously careful that their drinking water is well boiled, but many times fail to see the importance of having all the water used for cooking purposes just as well boiled. Some things require cooking for a long time and the water used is thus well boiled, but in other cases it is not. For example, the cook in his hurry to cook the morning porridge—(using cream of wheat)—pours on a little water out of the common water koug and within a few minutes from the time it commences to boil it may be served on the table. You are therefore taking into your system water that has been boiled only a very few minutes. I might give many examples of the same kind with other quickly cooked preparations in which there is "death in the pot," or grave danger to the partaker thereof, but it is a safe principle to go by, that every drop of water that goes into the system, in whatsoever form, should be filtered and thoroughly boiled. The writer considers, however, that when all is said, no water is safer and better than distilled water. With the proper water still it is very simple and easy to distil all the water one needs, and quite inexpensive. It is said that the British Navy has introduced a regulation that when their ships are in places where there is any question about the purity of the water supply, distilled water must be given to the men to drink. The United States Quartermaster Department at Manila furnishes distilled water for all employed in Government service and I have been told that the hotels there are required by law to furnish the same to their patrons.
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Flies and Dysentery.—It was once claimed that flies are great scavengers and thus a great blessing to mankind, because they devour all the foul things they can find. It is true that they are scavengers of the highest order. Whenever there is a dead carcass around they are always there. This is also true in regard to the human feces, including those from dysentery, cholera, typhoid fever, and other patients. The flies seem to vie with each other in their eagerness to eat decayed matter of all sorts. But flies also have appetites for a sweeter morsel and, after feasting for a while on the former material, they may fly away with their legs covered with the same, enter into the kitchen or dining room through the open window, and renew their feasting, this time in the dish of jam, on the bread, in the milk or butter, on the potatoes and many other things, and finally, last of all, take a bath in the tumbler or pitcher of drinking water. It may have brought with it on its feet or body, from the place of its former feasting, hundreds of specimens of bacilli of the most violent type and scores of these may be "planted" in each dish where they multiply with tremendous rapidity. The writer must beg pardon for using such an unpleasant description in order to demonstrate what a great enemy the fly is to us, but facts are facts and we have to face these facts squarely in order to know how to remedy the evil. In South China it is considered necessary by all to use mosquito nets in order to keep from being bitten by mosquitoes and thus prevent having malaria, but a much smaller number of people realize the great importance of strict quarantine against the fly, for it is one of the greatest, if not the greatest of foes that mankind has. It is advisable, where possible, to screen the whole house, but where this cannot be done because of the large expense involved, we should insist at least on having the kitchen and dining room screened, in order that the food may be protected from the flies. It is just as important in the kitchen where the food is cooked, as in the dining room where the food is eaten, for flies will go anywhere they get the smell of food. The usual arrangement in South China of having the kitchen in a small separate building in the back, has its advantages in some ways, but it is certainly harder to control and screen against the flies than it would be if it were adjoining to, or a part of the house proper.

Dust and Air-currents.—The wire screen safe that is used during the hot months to place the food in, should not only be hung in a cool place, but kept at a point far distant from bad odors of all kinds and where it will be shielded from flying dust, for dysentery bacilli are sometimes carried from place to place by means of dust that has become contaminated being blown through the air. In sweeping the floor this
safe should always be covered. No food should be left there in an open dish at any time.

The Use of Raw Vegetables.—It is never very safe to eat raw vegetables, even after scalding them and using great care in the preparation of the same, for when this is all done and it is ready to be served on the table, it is still possible for bacilli to be lodged in some crevice and be a source of danger. Davidson says that, "uncooked vegetables and fruits are, perhaps, almost as frequent vehicles of the infection in tropical countries as water." He also says, "that Musgrave and Clegg cultivated an amoeba, pathogenic to animals, from a lettuce that had already been washed several times with more care than the ordinary kitchen-maid bestows on the cleansing of vegetables." There is the same danger in the use of salads where uncooked vegetables are used, even when carefully washed.

Soiled Shoes.—Where there are very small children in the family one ought never to wear the same shoes in the house that he wears on the street, for a person walking in the streets can not always choose the cleanest spots to step on and many times he may return home with the bacilli of dysentery or other bacilli adherent to the soles of his shoes. These may later be transferred to the floor matting of the room where the creeping child plays and be a source of danger to him. This precaution is especially necessary for the physician who has a family, for he goes into the hospital where there are all kinds of diseases, and into the streets and into all classes of homes and conditions, and it would be almost a marvel if his shoes should escape contamination.

Clothing and Dampness.—A person should keep rather warmly clad, avoid chilling as much as possible, and it is advisable to wear an abdominal belt of light flannel both night and day during the whole of the year. When the clothing becomes wet from rain or perspiration it ought to be changed as soon as possible to avoid chilling, especially after exposure to the tropical sun. Unusual care should be exercised in this respect during typhoon weather.

Diarrhoea and Constipation.—The bowels should be kept regular by exercise, by drinking plenty of water, eating carefully prepared fruit, by massage over the abdomen, and, if necessary, by the use of certain laxatives such as mineral waters, cascara sagrada etc. All cases of diarrhoea should be isolated at once and given prompt attention and treatment until they have entirely recovered. As a general rule, except under certain conditions, one should avoid too much violent purging.
Alcoholic Stimulants.—The free use of alcoholics in dysentery is extremely dangerous. They should therefore be prohibited or taken in strictest moderation.

Malaria.—All cases of malaria should receive prompt and thorough treatment with quinine. People living in very malarial regions, especially those who are very susceptible to it, should take ten grain doses of quinine once or twice a week as a prophylaxis, for malaria is certainly, in many cases, a predisposing factor in dysentery.

Intestinal Parasites.—A vermifuge should be given, as a prophylactic measure, to all children and most adults at stated intervals. It has been claimed by some that ninety-five per cent. of the children in the tropics harbor intestinal parasites in their intestinal tract. A large number of the cases of true and pseudo-dysentery in the native children might be avoided if they were given a suitable vermifuge every few weeks.

Food.—One should avoid coarse and unwholesome food, and the main portion of the diet should consist principally of good, nourishing, well-cooked food. Over-eating is likewise to be avoided.

B.—In considering the prophylactic means to be used to prevent the spread of dysentery we must bear in mind the fact that it is a contagious disease and every case should be isolated, visitors not being allowed to freely enter the room. Every article of clothing, bedding, towels, and in fact everything that has in any way come in contact with the patient, should be considered as infected articles and should be disinfected, boiled or soaked in a strong antiseptic solution before they are allowed to come in contact with uncontaminated articles or used by other people. Separate dishes should be used to serve the patient’s food on and these should afterwards be immersed in a 1 to 500 carbolic acid solution or other suitable antiseptic, washed and not allowed to be used for other purposes. If an enema has been given the point should be thoroughly sterilized both before and after using, as many cases of dysentery have developed through the use of a contaminated, insufficiently sterilized enema point. The bedpan should be washed in a strong carbolic acid or creolin solution each time after it is used, and kept wrapped up in a paper or cloth away from the flies. All stools should immediately be carried out and a strong antiseptic solution poured into it and then, unless there is some other better mode of disposing of it, it should, in turn, be put into a tightly-fitting, covered receptacle, carried away and buried deep in the ground at quite a distance from any residence. Scrupulous care should be given to see
that the food and drinking water is not only kept covered, but is kept in a place well away from the patient's room. Redoubled attention should be given to all the prophylactic measures during an epidemic.

Treatment of Acute Dysentery.—When called upon to treat a case of what appears to be dysentery, there are certain steps that the physician should take at once, even before he may have time to make a positive diagnosis, for when there is considerable diarrhea with abdominal pain, it shows that there is some irritant or poison in the bowel that must, if possible, be gotten rid of whether it is due to dysentery or some other cause, and the preliminary treatment is practically the same in either case. The quicker, therefore, that you can commence this, the greater are the chances of the patient's recovery. He should be immediately ordered to bed, all food temporarily withheld and be given a good dose of magnesium sulphate—castor oil being given in case of children. The physician should examine the stools carefully, noting their character, the odor, the presence or absence of blood and mucus, and examine under the microscope as early as possible to verify the diagnosis.

General measures of treatment.—There is no definite fixed line of treatment that will answer for all cases. What will give excellent results in one case may prove to be of little benefit in another. In acute dysentery, rest in bed is absolutely necessary and it should be a fixed rule that the patient is not allowed to get out of bed when his bowels move, but be required to use the bedpan. This should continue until the case has well recovered. We have to bear in mind the fact that the bowel is ulcerated and inflamed at the point of the focus of infection and the part must be placed at rest as much as possible.

Food.—For the same reason as the foregoing all solid food must be stopped. Some authorities recommend that the patient be starved for a day or two, unless he is already weakened from one cause or another, in order that the bowel that has already been emptied can be kept empty long enough for repair to begin to take place. In theory, this seems as excellent thing and in many cases can be carried out, but usually some liquid food has to be allowed after the first ten to twelve hours in cases of children and adults that are debilitated. From this time on only liquid food should be given and that, too, which forms the smallest faecal residue, while possessing good nutritive value. Chicken broth, egg albumen, rice water, beef broth, or barley water are the foods usually best borne, but care should be used that they are not given too hot or too cold as they excite peristalsis. Milk is the best
and most nourishing food that can be given, but if there is a badly coated tongue it should be given sparingly or withdrawn temporarily until the tongue clears some. It is often well to give it with a little barley water or lime water. The patient should be fed often and in small quantities. No solid food is to be allowed until recovery is well established. In case of a nursing child do not change his food if the milk agrees with him and there is no vomiting. If bottle fed, examine into the purity of the milk and give it diluted if it agrees with him. If the milk disagrees, then give barley water, chicken broth, beef broth, albumen water, etc.

Drug Treatment.—Authorities differ very widely as to the drugs to be used in the treatment of dysentery.

In former years opium, bismuth, and calomel were the drugs mainly used, and used freely, in conjunction with bleeding. Calomel is still used, but in smaller doses as a usual thing. It can be used to good effect in many cases in one-tenth grain doses for children and one-fourth grain or even more for adults, three times a day right through the course of the disease, unless the stools become watery.

After the bowel is emptied by a saline, sometimes a dose or two of tincture of opium in the beginning of an attack stops the peristalsis, allows repair to take place and the disease is checked, requiring nothing further except rest and careful dieting for a few days, but, after this time, if the case is no better, it is usually bad practice to give very much, if any, opium, as it thus locks up the poison in the bowels and the disease becomes more aggravated instead of improving.

Ipecacuanha.—Captain E. B. Vedder, M.D., of the Manila Bureau of Science, gave a report at the recent Congress of the Far Eastern Association of Tropical Medicine at Hongkong, of deductions made as a result of an experimental study of the action of ipecacuanha on amoebae. By their experiments, which dated over quite a considerable length time, they proved that the amoebae can not live in the presence of ipecacuanha. Large numbers of the amoebae were repeatedly placed in solutions of fluid extract of ipecac in the strength of 1 to 10,000, 1 to 50,000, and 1 to 100,000, and they soon lost their power of motion and died, thus showing that ipecac is specific in the amöebic form of dysentery. In the bacillary form it inhibits, but is not specific. We therefore have a drug that is of great value in amöebic dysentery if used early in the disease, as it is then that it has its best effect. Vedder used the fluid extract in his experiments as the powdered extract is hard to dissolve. The writer has had no expe-
rience in using this form of the drug in dysentery, but in theory it would seem that it is much preferable to the ordinary extract which certainly takes a long time to dissolve and many times when it has been prepared in the usual way and the patients vomits two or three hours after taking it, a large part of the ipecac is seen in the vomit undissolved. In giving ipecac the usual method is to give 20 to 30 drops of tincture of opium in water on an empty stomach and half an hour later give 35 grains or more of the extract of ipecac prepared in form of a bolus or given in a capsule. You should receive the full cooperation of the patient in this treatment or it will be a failure. He should be instructed to lie as quietly as possible and not swallow any of the saliva that gathers in his mouth. He must not use a pillow as the head needs to be kept low. Sometimes a mustard plaster applied over the stomach will aid some in preventing vomiting. If, however, after using these precautions, the patient should vomit within an hour or two after taking the drug, the same dose may be repeated in the same manner within a few hours, if he is not too nauseated. Manson recommends that, if it is not too depressing on the patient and he can take it, this may be repeated daily for several days or even oftener, reducing the amount of ipecacuanha by five grains at each dose.

When these means fail, resort should be had to other drugs and first of importance is the treatment by aperient sulphates, in fact many physicians use these from the very first. Excellent results have been had in many cases from the use of these sulphates, especially in the bacillary form of the disease.

After the initial dose and bowel has been emptied, a small dose of magnesium sulphate given once a day will keep the bowel flushed of the decayed and fermented matter and many times will check the disease. Care must be taken, however, that the dose is not large enough to cause purging. This treatment should be continued even for a short time after all signs of dysentery have disappeared and the stools become normal. Some prefer to give initial large doses and later give drachm doses every fifteen minutes or half hour until you get gentle purging effect. It is then repeated often enough in this manner to secure a daily gentle flushing of the bowel.

Some physicians use sodium sulphate as it is less irritating, giving it in pretty much the manner as magnesium sulphate. These may be combined with salol, B-napthol or other intestinal antiseptics.

If malaria is present the patient should take large doses of quinine by the mouth, but if for any reason that is impossible or inadvisable then it must be given hypodermically.
Opium and Bismuth.—The writer considers the indiscriminate and
general use of these two drugs in dysentery to be bad practice and
fraught with many dangers. If we have an ulcerated and inflamed
surface on some external portion of the body, it is always agreed
that there should be free exit for the discharge in order to prevent
absorption of the toxins. This is equally necessary in the treatment
of dysentery. By freely using bismuth and opium the toxins are
locked up in the bowel and the disease in many cases is aggravated.
If, however, the blood and mucus cease and there is still diarrhoea
and you are satisfied that the original exciting cause is removed,
then, perhaps, the use of from 12 to 20 grains of opium will be
helpful to control the diarrhoea and end the trouble. Many other
drugs are recommended and some of them have been very useful
in the hands of some practitioners. One that has been used to
great advantage in Shanghai and other places is simaruba. Manson
describes its use in detail in "Tropical Diseases", to which the reader
is referred.

Anti-dysentery Serum.—This serum has not yet come into general
use as a routine treatment in dysentery, but its value has been seen
in many cases. Shiga produced a serum which was used in Japan
during the epidemic of 1898-99. In cases where the serum was used
the mortality was from eight to twelve per cent. while in those treated
in the ordinary way without the serum the mortality was from 28.6 to
37.9 per cent. This would seem to show that there is merit in its
use. It should be used early in the disease. No definite beneficial
results were noticed in its use with children in Japan.

Enemas.—The use of enemas is one of the best possible means
at our disposal to combat the disease and should be tried in every
case. The water used should be previously boiled and used at
body temperature. One may use a saline solution, a boric acid
solution, or even plain boiled water. Ford recommends 0.10 to 0.40
per cent. solutions of eucalyptus gum as one of the most valuable
drugs for rectal use in the acute form—given in milk, water, or mix-
ture of milk and olive oil. In case of sloughing, a little turpentine
may be put in the enema. Osier highly recommends the use of
quinine solutions of the strength of from 1 to 5,000, 1 to 2,500, 1 to
1,000, or even stronger if there is no improvement. From one to	hree pints may be safely introduced into the bowel slowly by gravit-
atation. Loesh found that, by giving quinine by the mouth and injecting
a 1 to 5,000 solution of the same drug into the bowel, the amöbæ
were quickly killed and the patient improved, but the disease returned if the treatment was not continued for some time. Sandwith recommends that if there are no signs of threatened perforation, enemas of copper sulphate with starch and opium may be used from the outset.

**Use of The Long Rectal Tube.**—Ever since it became the practice to give enemas in the treatment of dysentery, and even up to the present time, the long rubber tube has been considered a necessary part of that treatment by many authorities and practitioners. Most of us will agree that there are some dangers associated with its use and all are agreed that, if used at all, it should be used with the greatest care. We must bear in mind the fact that there is an ulcerated condition of the bowel, and, in introducing the rubber tube we are introducing a foreign body and sometimes over the inflamed surface. One may be able to introduce it and feel reasonably sure in his own mind that no harm has been done to the bowel by its use, but one can not always tell in regard to this. At times, in spite of the greatest care that is being used in introducing it, it may turn around in the bowel and finally when you think it is in sufficiently far, to your astonishment you find that the point is near the anal opening. The point probably always turns around if attempt is made to pass it high up. With due deference and respect for the opinion of those who use the tube in their practice, I wish to say that by the mere fact of introducing it into the bowel we are quite likely to undo a lot of good that the enema might otherwise do and very often do positive harm. I believe, therefore, that its general use should be discouraged. We have ceased entirely to use it in our work at the Stout Memorial Hospital and believe that we are able to attain the desired results by a much safer and easier method of giving enemas, namely simple gravitation. An ordinary rectal douche point is used and the foot of the bed is elevated quite a little. The water container is held at a point slightly above the level of the patient's body, to avoid too rapid flow and consequently too great a strain on the bowel. The water thus runs into the bowel gently by gravitation and usually reaches just as high a point as it would with the use of the tube. The foot of the bed should be lowered as soon as it is desired for the evacuation of the solution.

**Tenesmus and Griping.**—These two conditions are usually relieved best by hot turpentine stupes. Many times there is marked relief after each time an enema is given. An enema of about two ounces of thin starch with thirty to forty drops of tincture of opium will often give relief. At times it is necessary to resort to morphine hypodermically.
Treatment of the Complications.—If there is brisk intestinal haemorrhage apply ice to the abdomen, give enema of the tincture or liquor ferri perchloride solution in very cold or ice water. Ergotin or adrenalin may be tried. For the sloughing one may give a very small dose of turpentine in mucilage, or a larger dose in castor oil, but it should be used with caution, and probably not at all if there is any renal disturbance. When there is perforation or peritonitis about the only thing that can be done is to relieve the pain and support the heart. In all cases of great prostration and indications of the heart's action weakening, cardiac tonics, brandy and whisky etc., should be given. Subcutaneous injections of normal salt solutions have done wonders at times in restoring the heart's action.

TREATMENT OF CHRONIC DYSENTERY.

As in acute dysentery, the first thing to do is to order the patient to bed. It is well in the beginning to give a course of the aperient sulphates, giving a dose each morning, or castor oil, or the saline in very small doses three times a day. One should be guided in the amount to be given at each dose by its effect on the individual patient. It is well to accompany this treatment by the use of salol or B-napthol to control the fermentation in the bowel. Manson recommends that in all cases of chronic amebic dysentery a preliminary course of ipecacuanha should be given in the same manner as in acute dysentery, giving 30, 25, 20, 15, 10, and 5 grains on successive evenings. Ipecacuanha has been proved to be specific and it should therefore be given a thorough and prolonged trial if necessary, but, unfortunately, in a very large number of cases, the disease does not seem to respond to any treatment, and the condition may improve, only to grow worse again. In this case, if the patient is a foreigner, he should go to some temperate climate for a time or take a long sea voyage. It is well in all cases to give gravitation enemas of boracic acid, sodium bicarbonate, normal salt, or quinine solution. The latter is especially indicated in the amebic form—which is usually the case in the tropics—and may be used following, or while giving, a course of ipecacuanha. Sometimes tannic acid solutions are beneficial. In chronic ulceration of the lower bowel, enemas of silver nitrate one half grain to an ounce of water, or copper sulphate one grain to one ounce of water. These should not be given while there are acute symptoms, and the bowel should always be thoroughly flushed first with a simple enema. Many other drugs have been used with considerable success in many cases and should be given a trial when the usual remedies fail to give relief.
Surgical Treatment.—The surgical treatment of chronic dysentery, in performing right inguinal colotomy or appendicostomy, has been recommended by some surgeons for some years past, but the profession has been rather slow to take it up because there are some dangers attached to it, and the patient's consent is not easily secured while there is any hope for benefit from using the ordinary means. Dr. Muller gave a report at the recent Medical Congress at Hongkong of a number of cases that he had operated on, in which excellent results were obtained in most cases and strongly recommended that surgical procedure should be resorted to more frequently than it is at present.

Diet.—The regulation of the diet is of the greatest importance in the treatment of chronic dysentery as well as in the acute form of the disease, for without it there is usually very little hope of any treatment being successful. No solid food should be allowed and the patient must be given only liquid food at first. Milk is usually the best food that a patient can take if it agrees with him. It may be alternated with barley water, chicken broth, or other nourishing broths. Later on, he may be given a raw egg in the form of an egg-nog, or very slightly boiled, and as the patient improves he may be given a little easily digested and thoroughly cooked vegetables and perhaps also some kinds of fruit. If the disease shows no improvement on the liquid or semi-liquid diet, sometimes by changing temporarily to an easily digested diet of solid or semi-solid food there is marked improvement.

Baths and Clothing.—During the interval between the recurrences the patient should wear warm clothing and avoid getting chilled or wet. A person that is at all subject to attacks of chronic dysentery should keep in the house during cold, wet weather. Cold baths or sea bathing are, as a rule, not very safe for such people. An abdominal belt ought always to be worn to prevent chilling of the bowels.

After-treatment.—If there is constipation following, due to cicatrices, gentle laxatives may be needed to keep the bowels regular. Massage to the abdomen and enemas are often very beneficial in these cases. Every effort needs to be made to keep the liver functions active, by exercise and by drugs if necessary, as there is considerable danger of liver abscess following. Should there be some diarrhoea, a little bismuth subnitrate may be guardedly given in conjunction with salol.

Conclusion.—There are methods and methods in the treatment of dysentery, and the best method is the one that gives the best results, but after we have faithfully used all of the latest tried and proven remedies, we must all admit that there is as yet no “sure cure.”
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treatment that can be always depended upon. Medical science has made considerable progress in this line during the past few years, but until a better and more effective remedy can be found than we now possess, dysentery will continue to be one of the most difficult diseases that the medical profession has to deal with, as well as one of the most fatal to mankind when once contracted.

CASE OF DOUBLE ANEURISM.


The following case is interesting because aneurism is not common among the Chinese. It is now over sixteen years since I first came to Formosa and, during that time, I have seen only two or three cases of thoracic aneurism and, until this patient presented himself, I had never come across a case of popliteal or femoral aneurism.

The patient—a Chinaman, Sia Lim Chhoan, M., 40 years of age. Occupation—a shop-keeper, sells cloth. History of Syphilis. Seldom took alcohol. Admitted to hospital on 24th May 1911, suffering from a large pulsating expansile swelling which filled the whole of the right popliteal space preventing the leg from being fully extended. Patient complained of feeling of pain in the swelling and down the calf of the leg. Pulsation completely disappeared on compressing the right femoral artery. The swelling had been present for some months but had been growing much more rapidly of late.

On 25th May, the patient was chloroformed and the right femoral artery ligatured with a silk ligature at the apex of Scarpa’s triangle. Pulsation ceased at once and the swelling gradually decreased in size. Wound healed by first intention. Patient was discharged on 13th June with the swelling very much reduced in size and quite free from pulsation.

On 4th March 1912, he was readmitted with an aneurism of his left common femoral artery the size of a pigeon’s egg. At the site of the aneurism of his right popliteal artery nothing could be felt except a small, hard lump which gave him no inconvenience. On 7th March, he was chloroformed and the left external iliac artery was tied by Abernethy’s operation about one inch above Poupart’s ligament, two rather fine silk ligatures being used. The whole of the left lower extremity was swathed in cotton wool in case of
gangrene. Slight numbness was felt in the limb, but there was no swelling or tendency to gangrene in the leg. Unfortunately, however, gangrene did occur in the wound, the aponeuroris of the external oblique sloughing en masse for an inch on each side of the incision in it. I attribute this sloughing not to septic infection of the wound but to interference with the blood supply to a tissue of low vitality and in a patient who, as I am about to mention, was suffering from phthisis, and whose general nutrition was much impaired thereby. Fortunately the sloughing did not seem to extend deeper than the external oblique which made me much less afraid of secondary hæmorrhage than I would otherwise have been. Shortly after the operation, however, the patient began to cough and it was found that he had phthisis, the left apex showing marked physical signs. His phthisis made rapid progress and he went rapidly down hill. The slough of the aponeurosis of the external oblique separated, leaving a clean wound which, however, showed little signs of healing, owing, no doubt, to the rapid advance of his phthisis, and he died suddenly on 13th April, 31 days after the operation, of exhaustion. There was no secondary hæmorrhage.

With regard to this case of double aneurism it is to be noted in the first place that the patient seldom took alcohol and that his occupation—that of a shop-keeper—was not one that subjected him to severe physical strains. It is further to be noted that there was a distinct history of syphilis and that the patient was suffering from phthisis. While the causal connection between syphilis and aneurism is well established, one would imagine that a wasting disease like phthisis would be antagonistic to aneurism.

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CLINICAL NOTES FROM KAIFENG.

By Sidney H. Carr.

Stung at last to action by the repeated and touching appeals from the Editorial Chair, I am obeying the law of summation of stimuli, and sitting down to record a few notes of cases seen here or elsewhere in Honan during the last ten years or so; not that there is anything of startling interest or value to relate, but, if I can rid myself of the awful reproach of never having helped the Journal except by subscribing to it, and can urge others in similar plight to take the same step, some good may be accomplished.
In China, we see far more diseases in an advanced condition than we do at home, and in this connection I might mention an ovarian cyst which I tapped several years ago while visiting a friend at a country station; we took off four buckets of fluid, i.e., two coolie loads, and I have lately heard from my friend that he had just tapped another, and released five and a half bucketfuls, or about 150 lbs. It would be interesting to know if this amount is often exceeded. The patients appear none the worse for losing so much fluid at one sitting.

Another case of some interest, seen lately, was that of a large haematocele in a young man, extending from the clavicular region on the left side to several inches below the nipple. It was so tense that at first I suspected sarcoma but on directing one of the assistants to explore it with a hypodermic needle, I was surprised to see blood flow. We did a second tapping later on, and took away about eight pints of blood. The patient, who had noticed the swelling for many years, but apparently had not developed it at birth, went away very pleased, but will probably return, when I suppose we shall tap again, and inject Ferri Perchlor. or Iodine.

A disease not often seen here is Fibroma Molluscum, but not long ago we had a very marked case in a young man. One or two of the tumours had attained a large size, and there were the associated brown pigmentary stains. I tried excising the largest mass, but found it most difficult, the tissue being so lax that it was impossible to get hold of anything. Suppuration set in later, and the case gave a good deal of trouble, until one morning when the assistant who dressed it found that the whole tumour had completely collapsed, how or why I do not know, and cannot imagine. These tumours are verily, as Hutchinson says, like purses with no money inside. We often have cases of old dislocation of several months' standing, and, while we are very loth to send them away, we feel the cure is too difficult to attempt lightly. Not many days ago I operated for a dislocated thigh, in a healthy man. Having never seen this done, and finding no very full description of it, I felt it was somewhat of an experiment. To free the neck of the femur of all attachments was not easy, and to find the site of the acetabulum was no less difficult, and I was astonished at the amount of tissue that had to be cut or scraped away;—even then we could not pull the head into position until a considerable part of the Tensor Fasciae Femoris had been cut across. We had formerly made two attempts to reduce under chloroform, but the operation soon revealed how utterly hopeless such efforts must necessarily have been. Sad
Clinical Notes from Kaifeng.

to relate, the man contracted very acute tetanus some days after the operation, and died. I should much like to know the experience of others in old dislocations of thigh and elbow, and the results obtained as regards movement. They are amongst the most distressing cases we have, but it seems to me that unless you are going to cure a Chinese fairly completely it is best to let him alone.

Another thing I should like further light upon is the treatment of cleft palate in adults;—we get very many harelips, and they all do well, but palates are by no means so easy, and the result as far as speaking is concerned is not encouraging. A young man the other day announced some time after the operation that his speech was worse than ever! We assured him it was not, and later on he agreed to being better.

May I add a few words on differential diagnosis of a few common diseases? We have several thousand soldiers about Kaifeng, and many of these have, at different times, come complaining of pain in the sole of the foot. It was not until I went home on furlough and learnt, or re-learnt, the affinity of the gonorrheal poison for fasciae, especially the plantar, that I knew the treatment of these cases. The first man I questioned afterwards as to a discharge replied in the affirmative. And, whilst on venereal disease, I may say that a condition often seen, which is almost absolutely diagnostic of syphilis, is an excoriated condition about the anus. The patient comes complaining of piles (ch'i ch'uang) and probably there may be a condylomatous condition as well. As is, perhaps, well known many patients with condylomata complain that they have piles. Another condition very often met with here is glaucoma, and I believe the mistake of confusing this with cataract is none too seldom made, with somewhat dire results. If only the history is gone into, the tension felt, the largeness and immobility of the pupil noted, the error need, I think, never be committed. When I first came to China and knew everything, I was inclined to be very sceptical about the patients' statements that their ills were brought on by fits of anger (seng ch'i) but now, having seen what this condition is like, I can understand better how diseases of apparently almost every kind are induced thereby.

In conclusion, and in apology for the scrappiness of these few remarks, which may, or may not, be worth printing, may I say that they are written to show a very real appreciation of the Journal and of those who have the laborious task of editing it; and that it has only been a genuine fear of not having anything of sufficient interest to relate, that has hindered the writer up till now from "rushing into print."
SCHISTOMIASIS (JAPONICUM) AND "URTICARIAL FEVER".
A DISCLAIMER OF THE PRIORITY OF SUGGESTING THAT THESE DISEASES WERE INDENTICAL.

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

It was my privilege to report in the Journal in March 1911, (pp. 104-108,) a case of Schistosoma japonicum infection in an American child. In the sub-heading of the article and in the conclusions I ventured an opinion that the cases of Urticarial Fever reported by Lambert (C. M. J., September 1910, pp. 357-362) were incipient schistosomiasis, but it was Houghton who first, so far as I know, suggested that the diseases might be the one and the same thing. I said very plainly that this was so in my article above referred to, in the following words: "Houghton, in consultation over this case, called my attention to the similarity between the cutaneous signs presented in the incipiency of our patient’s apparent infection and those of Lambert’s wading patients."

In spite of this credit I so plainly gave my distinguished friend Houghton, by some oversight, Lambert (C. M. J., September 1911, pp. 308-313) and Hume, in the same issue, (p. 327) gave me the credit of first calling attention to the identity of these two conditions.

If any credit is due me it is in seeing a thing after it was pointed out and being willing to put myself on record as one who confirmed Houghton in his hypothesis.

The importance of the linking of this tandem into a single unit can hardly be over-estimated. It means that we have penetrated considerably into some of the dark regions of Unknown Fever Land. Many cases of "Yangtsze Valley Fever," "Hankow Fever," and "Kiukiang Fever" and most cases of "Urticarial Fever" in endemic areas are now as plain as an open book. What is still better, as Lambert pointed out in his articles, it is possible to avoid contracting schistosomiasis by protecting the exposed parts well with clothing. It is hardly less important that it has been found that disease which at first was thought by many of us incurable, is probably not serious except in heavy and repeated infections. Even very heavy infections, I now believe, may often be outlived if the patient is well cared for and reinfection prevented. I am confirmed in this view by letters I receive from the mother of the American child who was the subject of one of my articles on schistomiasis and whose clear history enabled Houghton to connect the early and late symptoms of this disease. In spite of the bloody
stools and anemia, the child is gaining in weight and strength, even to
the extent of being able to enter into athletics and keep up a fair
average in his studies.

I insist on some credit in the present issue; I showed good judg­
ment, for once, when I called my genial friend to consult with me in
the case of the American child. I knew Houghton was highly
infected with scientific spirit and skill in addition to his other virtues
and I hoped I should become slightly infected by contact with him.
I think I have caught some of his spirit, but I appear to be immune
to his skill. To have been present when he made the above important
discovery and later to have been in some of his classes while he easily
convinced us that metazoal parasites are not only the most important
objects extant but the most beautiful when cleared and stained to
show their organs with which they play such beautiful tunes at
the expense of others—this is quite enough for the author of this
disclaimer.

THREE INTERESTING GYNECOLOGICAL CASES.

ELLIOTT I. OSGOOD, M.D., CHUCHOW, CHINA.

All three cases were young women under twenty-five. They were
country women and, with one exception, appeared quite healthy. The
one exception had had hip joint disease in childhood which had
deformed the hip and narrowed the calibre of the parturient canal.
Doubtless this also caused the trouble for which she entered the
hospital here.

1. The first case had a history of having been somewhat loose in
her relations with other men until her husband wanted to turn her
out. Probably the condition of the vaginal tract also influenced him.
When we made an examination we found tract so small in calibre that
it was with difficulty the finger could be passed into the canal. She
consulted us for a urethral fistula and for constant dribbling of urine.
Both the fistula and the state of the vaginal tract were the result of
tearing at childbirth. The lack of control of the urine could be
accounted for by the irritation from the scar tissue which bound the
membranes so closely.

We operated three times. In restoring the vaginal tract to some­
thing like a normal condition we were successful and also in bringing
about conditions which gave her control of the bladder. The scar
tissue about the fistulous opening was so extensive and tense that we did not entirely succeed in closing the aperture. But she went home much better in general condition.

2. The second case was the young woman who had had hip joint disease when a child. There was a complete transverse tear across both the urethral tract and down into the rectum. The perineum was, strange to say, intact. She had no control of either bowels or bladder and her life was a miserable one. The mucous membrane about the urethral tract was inflamed and extensively ulcerated.

We gave her local treatment for a number of days in preparation for the operation. Again extensive scar tissue defied us. We operated upon her three times also. The urethral fistula we succeeded in overcoming and greatly improved the condition of all the surrounding tissues. The rectal fistula failed to close entirely.

3. This last case had a history of being sold from one husband to another because she was incapable of giving their passions satisfaction. When she came for examination we found tense membrane entirely closing the vaginal passage, while the urethral passage had been forced until a virgin speculum could be inserted into the bladder, or rather up to the sphincter muscle. She had control of her urine.

On the right side we found a small blind pocket. Nowhere could we find even the smallest opening into the vagina. She claimed that she began menstruating when about sixteen. She had menstruated a number of times but never any great amount of blood has passed off. Last year in August was the last time she had noticed any blood. She was subject to severe pains at times which rendered her, for the time being, unfit for any manual work. Her abdomen showed enlargement which one might expect in a six months' pregnancy. Upon rectal examination a large tumor was readily palpable. No bulging was noticeable on the membrane which closed the vagina.

On operating, we worked through tissue for two inches before reaching the inner surface of the occluding membrane. Then our fingers suddenly broke into the cavity and dark sauous fluid began pouring out. We did not measure the quantity as we kept a stream of saline fluid pouring in to prevent any possible danger from collapse. When the water ran clear, we enlarged the opening and packed with gauze. We are awaiting with interest the time for her next menstrual period to see what the result will be.
Snakes and Snakebite in the Fukien Province.

SNAKES AND SNAKEBITE IN THE FUKIEN PROVINCE.

By J. PRESTON MAXWELL, M.D., F.R.C.S.

Severe snakebite is a comparatively rare occurrence in the Fukien Province, not that there are no snakes, but the really poisonous ones which are vicious are few in number. It is fortunately so, as there are 110 native remedies which seem to be of the slightest use. Tying a ligature above the seat of injury is used as a routine treatment, but, as a rule, the remedy is worse or at any rate as bad as the injury, for it is kept on without discrimination, and in many cases undoubtedly contributes to the sloughing or gangrene which sometimes follows the bite. The poisonous snakes of the Fukien Province which I have been able to verify are the following:—

1. Bungarus candidus.
2. Bungarus fasciatus. (甲 靈 蟒)
3. Naja tripudians. (頸 白)
4. Lachesis mucrosquamatus. (鑰 鍠 蟒)
5. Lachesis graminens. (竹 青)
6. Ancistrodon acutus.

The first five I have collected myself, and the last named has been once secured in the hills behind Foochow. The first two are "kraits", the third is the common cobra, the fourth and fifth are loreal pit vipers, and the last a very characteristic horned viper.

The common names by which the first five are known in the south of Fukien are appended in brackets after the names, but I am informed that the name given here for Lachesis mucrosquamatus is used in the north of Formosa for Naja tripudians.

In the course of the work on which this paper is based there were also collected the following non-poisonous snakes, and it must be remembered that their bite may be painful and lead to some localized inflammation, but, as a rule, the matter goes no further:

Python molurus.
Tropidonotus ecrasedogaster.
Tropidonotus percarnatus.
Tropidonotus piscator.
Simotes formosanus.
Simotes violaceous.
Coluber radiatus.
Coluber tenuirus.
With regard to the poisonous snakes, it is a matter for surprise that severe constitutional symptoms as a result of the bite of one of them are so rare, and in many instances there is no doubt that the only result which follows is serious inflammation of the part bitten.

This inflammation may go on to gangrene, as in the case of one of my patients, a boy of 16, who, while searching for crayfish along the banks of a stream, was bitten on the hand by either Bungarus candidus or fasciatus. Severe inflammation supervened at once, followed by sloughing, and when he came to me a fortnight after the bite, the condition of his left forearm was hopeless, and I had to amputate the left arm above the elbow.

On the other hand, all of these snakes may give rise to serious constitutional symptoms, and in the case of two of them I am able to give proof.

a. Lachesis gramineus (green bamboo snake).

A man aged 34, living at the foot of Toa-Bo, a mountain in the Changchew prefecture, went out one night in the dark to the wood pile, and was bitten on the bare leg just above the right ankle. He called out that he was bitten, and others came out and killed the snake so that its identity is beyond doubt. He walked back with difficulty to the house, and it was noticed that the leg was already beginning to swell, and that an area around the bite was discoloured. Blood was running from the wounds, two in number. The swelling rapidly extended upwards and the man became unconscious in about twenty minutes. Patches of ecchymosis appeared on the thigh of the bitten leg, and it was already bluish in places. The swelling extended to the abdomen, and before death, which took place in about three hours, the whole body, including the face, was more or less swollen.

b. Lachesis mucrosquamatus.

Three children were playing in a wood amongst the hills to the north of Yungchun, and disturbed a snake which was clearly seen by others, and was of this species. It bit all three children on the legs. All three suffered from shock, ecchymosis, and swelling of the injured
limb, and were seriously ill. Two died with great sloughing of the limb, one was brought to hospital with the leg gangrenous. After the injury a firm ligature had been tied around the upper part of the limb, and this, on the one hand, may have contributed to the gangrene, and, on the other hand, may have helped to save the child's life. The limb had to be amputated in the upper third. Besides the cases narrated above I have had to amputate another arm and two lower limbs for snake bite, the arm about the middle, one leg through the knee, and one at the seat of election, gangrene having supervened in all; but the snake in these cases was only momentarily seen, and its classification remains, therefore, a matter of doubt.

There is great probability that there are one or two more poisonous snakes to be found in this province and in any case this short paper is not exhaustive: but only a contribution to the subject under discussion.

The writer is much indebted to Lt. Col. Alcock, C. I. E., F. R. S., and to Dr. Boulenger, F. R. S., for kind help in the identification of the specimens.

IN MEMORIAM:—ROBERT T. BOOTH, M. B., Ch. B.,

HODGE MEMORIAL HOSPITAL, HANKOW.

It is with particular sorrow that the C. M. M. A. and the JOURNAL are called upon so soon again to mourn the loss of one of its most devoted workers and a former editor in the call to the higher life of Dr. Booth which came suddenly on June 25th while on furlough in England. As yet we have received no particulars as to the cause. Dr. Booth was in Hankow throughout the recent revolution and did an immense amount of work for the wounded of both armies.

Accompanied by his family and sister he sailed for England on February 17th last, in excellent health and spirits.

That a man of Dr. Booth's ability, energy, and devotion should thus be called away in the midst of his work is a revelation of God's ways in his dealings with us before which we can offer only our humble questioning appeal for light and guidance; and extend to those most closely endeared to him by ties of family and friendship the sincere heart-felt sympathy of the whole medical missionary body.

C. S. F. L.
Customs Surgeons' Reports.

REPORT ON THE HEALTH OF ICHANG FOR THE YEAR ENDED 31st MARCH 1912.

Dr. Andrew Graham's.

The health of the foreign residents of the Ichang community has been excellent, no serious illness having occurred amongst them.

The following epidemic diseases have been prevalent amongst the natives: relapsing fever, small pox, and measles. These have in no way differed from similar epidemics in former years. Relapsing fever was again most commonly seen during the spring months amongst the railway construction coolies. At the time of writing, as the railway work has ceased and the coolies have mostly left the district, the disease is comparatively seldom seen. I would again remark on the very profound anaemia seen in those who have had this fever. During the autumn months we again saw numerous cases of phagedenic ulceration. This we consider also to be one of the sequels to relapsing fevers. These ulcers occur in those who have been very ill with the fever in the spring and whose blood shows marked anaemia. The main point of interest in this ulceration is the circumscribed area, the rapid formation, and the great depth. The ulcers usually occur on the lower limbs, and the initial injury is usually but a small scratch. The necrosed tissue separates in about 10 days, and soon there is a good healing surface.

Malaria.—This fever seems to become more and more prevalent. It is no longer confined to the warm period, but numerous cases are seen during the winter months.

Ankylostomiasis.—A routine microscopical examination of the faces of all in-patients in the hospital has revealed the fact that many of the cases of anaemia formerly thought to be due to malaria are really due to this disease. The treatment used has been either thymol or beta-naphthol, either of which seems to be successful in moving the undesirable parasite, and the anaemia clears up rapidly under ordinary iron and arsenic treatment.

Schistosomiasis.—We have, during these examinations, failed to find any trace of this disease, and we do not consider that it occurs in this district.
Dysentery.—During the year 31 cases of dysentery were treated in the hospital. These were mostly of the amebic form. I would again point out the danger which the foreign community runs in taking their water from the side of the river when dysentery is so prevalent among the boating population.

REPORT ON THE HEALTH OF SWATOW FOR THE HALF-YEAR ENDED 31ST MARCH 1912.

Dr. C. H. Brangwin's.

The medical history of the port for the period under consideration compares favourably with the winter report for previous years.

The general health of the Europeans has been good, but there have been two or three severe attacks of dysentery.

Two deaths have occurred, one from cystitis and one from drowning.

Three births are recorded, twins on one occasion.

Cholera and plague have been absent.

No cases of small-pox have been observed amongst the foreign inhabitants, but the Chinese report a few cases of a mild type; it is to be remembered that during the previous two winters Swatow suffered severely from this disease.

There have been two mild cases of typhoid fever.

REPORT ON THE HEALTH OF TENGYUEH FOR THE HALF-YEAR ENDED 31ST MARCH 1912.

Dr. Ram Lal, Sircar's.

The general health of this port was good during the period under review.

The most prevalent diseases were those of the eye and skin and malarial fevers and venereal diseases.

I have nothing to add under the heading of relation of diseases to season, etc., except to refer to my last report.

No new cases of leprosy were treated. The case of the young woman mentioned in my previous report is still under occasional treatment.
As far as I know there was no epidemic of small-pox here during the above period. Vaccination is making great progress among the people. I have vaccinated over 100 children this year. Many Chinese vaccinators were busy during the season.

The case of incised wound of the throat, detailed in my last report, was progressing favourably, but the man left hospital after the revolution broke out here on the 27th October, 1911. Since then I have not heard anything about him.

Two cases of midwifery were attended. Both were primipara. Forceps were used in each case. The mothers and babies were doing well.

Very few cases of dentistry were attended to during the period, on account of unrest and the unsettled condition of the country.

Six months ago, samples of blood from the so-called ya chang and other cases of malarial fevers were sent to Peking for microscopical examination, but I have not since heard anything about them.
The China Medical Journal.

VOL. XXVI. JULY, 1912. NO. 4.

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

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

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

Editorial.

MEDICAL EDUCATION IN CHINA.

The report of the conference of representatives of the missionary societies of Great Britain and Ireland, held at Swanwick in June, contains the interim report of the Sub-Committee on Medical Education in China, and is interesting reading.

After speaking of the two Government medical colleges in Tientsin and the Hongkong School of Medicine (British), which is now an integral part of the new Hongkong University, the report takes up the missionary efforts in the direction of medical education and, while giving credit for the good accomplished, points out how pitifully inadequate are the institutions to the needs, commends the efforts at cooperation of missions, urges more of it, and also more concentration of men and resources in important centers.

The Union Colleges in Peking, Chinanfu, Nanking, and Chentu have set a good example. The first two are fairly started and are doing well; the two latter need only peaceful conditions and a fair chance to get started.

Canton Province is well supplied by Hongkong University, the University of Pennsylvania Medical School in connection with the Canton Christian College, and the Hackett Medical College for Women.

The situation at the Wu Han center is far from satisfactory and needs much greater amalgamation of missions, money, and men.

But in justice to the Hankow men it must be said that every one is waiting to see what the much talked of Wu Han University
is going to develop into before entering into any scheme of education which may be broken up in a short time. In Fukien, the C. M. S. has been struggling along with few men and little money trying to work the miracle of making bricks without straw. There is in Fukien ample scope for a good medical college and union of missions and resources is the urgent necessity.

The new medical college in Moukden is another effort at union, and will probably succeed until, with its surroundings, it meets the fate of being peacefully assimilated by the most favored nation.

The report goes on to mention the work of Dr. Main and staff in Hangchow, where, after thirty years, his Mission Board, the C. M. S., has rejected his proposal to strengthen the medical educational work by increasing the staff and providing more suitable buildings for teaching purposes; which is regrettable for, from the unsolicited testimony of a doctor of another mission, few, if any, hospitals in China have turned out so many really efficient well-trained native doctors as has the C. M. S. Hospital in Hangchow.

In Shanghai, the teaching in all the medical schools is in a foreign language. St. John's, with a fair equipment, is still handicapped by lack of sufficient staff; the German school, established five years ago, has just graduated its first class, while the Red Cross School and the Harvard Medical School have only recently started and their future is their greatest present asset.

That eventually all medical schools will come under Government control there can be little doubt; but, until the Chinese Government is more firmly established, it will have little time and less money to devote to medical schools, so that if the constantly increasing need of this country is to be met at all, it must be, for some years to come, largely through the effort and inspiration of missionary enterprise, and of the young men who have been influenced to take up the study of medicine abroad.

A desirable five years' course of study is outlined and other suggestions made in regard to buildings, equipment, and staff needed to conduct a thoroughly efficient institution, which, as the report intimates, "does not at present exist even in any one of the five important centers indicated by the C. M. M. A.," and that
Editorial.

"Further diffusion is likely to take place," from which, and all other sins of omission and commission in the cause of medical education, may we mercifully be delivered.

SUGGESTIONS FROM THE PRESIDENT.

In a recent letter from Dr. Cousland he makes the following valuable suggestions in regard to the work of the C. M. M. A.

First: The composition and powers of the Executive need to be more clearly defined.

Second: More frequent meetings: biennial: one in the North or South and one in Shanghai; every second meeting being in Shanghai.

Third: All notices, motions, and resolutions for the next meeting should be sent in time for publication in the November Journal (not later than October 15th).

Fourth: At the last conference some important issues were proposed very late. This should be avoided. No futile or ill-digested resolutions.

Fifth: There should be a question and answer session. It is good news to know that Dr. Cousland expects to come out to China in the fall and stay over for the meeting in Pekin.

ON TO PEKIN.

In view of the fact that the members of the C. M. M. A. are so scattered that communication with them is difficult and keeping in touch with them still more so, the Pekin Committee of Arrangements for our Triennial Meeting in January next urges that all members who are planning and expect to attend should notify the Secretary, Dr. E. R. Wheeler, Union Medical College, that arrangement may be made for their entertainment. (See Pekin Branch Report.)

It will also facilitate the preparation of the program, as it is impossible to arrange for papers or request members to open discussion on them without knowing who will be there.

In all probability, on account of distance and expense of travel, most of the burden of this meeting will fall on the men in the North. In spite of the unsettled conditions we ought the have a big
The China Medical Journal.

meeting and we hope larger than at Hankow in 1910. South and Mid China should be well represented, and it will be conferring a great favor on the Pekin, and also the executive Committee, if the members from these sections in particular, who are going to Pekin, will notify Dr. Davenport, the General Secretary in Shanghai, and Dr. Wheeler in Pekin, as early as possible.

PUBLICATION COMMITTEE.


This is a condensed translation of a well-known Edinburgh handbook of surgery which is entirely practical and exceedingly useful to students, house-surgeons, and practitioners. It deals with case-taking, treatment of patients before and after operation, anaesthetics, antiseptics, arrest of haemorrhage, shock, emergency cases, minor surgical operations, bandaging, fractures, etc., etc. The Chinese book is based upon Dr. Main's lectures to his students. It should have been published several years ago, but an extraordinary series of hindrances has delayed it. The Editor is greatly indebted to Dr. Churchill, the late Dr. George Stuart, and Dr. R. T. Shields for their help.

Some copies of the English book can be obtained from the Presbyterian Press.

The Editorial Secretary has been fortunate in obtaining a very efficient literary Chinese helper in Edinburgh. The work in hand at present is as follows:—Printing: vol. iv. Rose and Carless: vol. i. Stengels' Pathology: Roys' Pharmacology and Pharmacy. Revising: Medical Lexicon. Stuckey's Medical Jurisprudence and Toxicology, Nursing manuals.

Dr. Mary Niles kindly came to Shanghai to expedite the publication of the second edition of the obstetrics. This edition is taken entirely from the last edition of Dr. Evans' book. It should be ready for publication very soon.

The books in the press will not be ready until the autumn.

Attention is drawn to our Military Hygiene. Although prepared for army use it contains much useful teaching on hygiene and should be read by every Chinese student of medicine. So far the Editorial Secretary has not succeeded in having a book on Public Health translated.

F. B. C.
Financial Statement.

FINANCIAL STATEMENT

of the Publication Committee of the China Medical Missionary Association in account with the Presbyterian Mission Press and Dr. Cousland, from June 1910, to December 1912.

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Yen 1,809.82  $2,118.00

Grants, China Inland Mission                                               | 110.49  |
| English Baptist Mission                                                    | 111.48  |
| Emergency Committee                                                        | 1,000.00 |
| London Mission                                                             | 115.08  |
| English Baptist Mission                                                    | 98.97   |
| Am. Presb. Mission, North                                                  | 217.77  |
| Canadian Methodist Mission                                                 | 56.80   |

Donations, Pennsylvania Medical School, Canton                              | 30.00   |
| J. C. E.                                                                   | 7.00    |
| Per Miss Macgregor, Sale of Stamps                                         | 10.00   |
| Mrs. Sureau                                                                | 10.00   |
| Per Dr. Ballantyne                                                         | 10.00   |
| H. S. Welcome, Esq., Balance of Trust Fund                                 | 4,208.50|
| Net Sales                                                                  | 5,973.95|
| Interest on current account                                                | 57.46   |

Total. $27,875.21
### Expenditure

#### 1910

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#### 1911

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A few items in the 1911 accounts are omitted from the above as accurate information has not yet come to hand from the Presbyterian Press. Also interest on sum at F. D. in the bank not maturing at the end of the year. These will appear in the next statement. The balance in hand is held by the Hongkong and Shanghai Bank in Shang-
Financial Statement.

H. S. WELLCOME FUND.

RECEIPTS.

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EXPENDITURE.

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P. B. COUSLAND,
Treasurer, Pub. C'ty.
Book Notes.

In response to a request, Dr. A. K. Baxter, M. M., of Chu-chia, Shantung, kindly forwarded a copy of the Royal Army Medical Corps Training containing the full text of the Geneva Convention, commonly known as the Red Cross Society, regulations which were printed in the short form in the March Journal.

The Book is exceedingly interesting and would be very valuable in the training of nurses and hospital attendants. It is published by the War Office and can be purchased through most any English bookseller at home at the price of ninepence.

Blakiston's Sons and Company of Philadelphia kindly call attention to the following recent publications.

Webster. Diagnostic Methods, Chemical, Bacteriological, and Microscopical. By Ralph W. Webster, M.D., Ph.G., Assistant Professor of Pharmacologic Therapeutics, and Instructor in Medicine, Rush Medical College (Medical Department, University of Chicago); Pathologic Chemist, Cook County Hospital. Second Edition, Revised and Enlarged. xxxv + 682 pages, with 57 Colored Plates and 164 other Illustrations. Cloth, 14.50; Half Morocco, 16.00.


This edition has 5 more plates and 15 more figures than the first, and the color figures have been increased by 36.

THE PEKING MEDICAL SOCIETY.

The Society met in the reading room of the Union Medical College on Wednesday evening, May 22nd. Fifteen members were present, Dr. Peill in the chair. After a few unimportant items of miscellaneous business the following members were voted in, the names having been proposed at a previous meeting. Into ordinary membership: Dr. Stryker, Dr. Love, Dr. Rivington; as honorary members, Dr. Gatrell, Dr. Bolt, Dr. Shoemaker, and Mr. B. E. Read, M. P. S., Ph. C.

The officers elected at the last meeting were re-elected for the ensuing year, viz.: President Dr. K. J. Peill, Vice-President Dr. E. J. Stuckey, Vice Dr. Asplaud, returned to England; Treasurer Dr. E. R. Wheeler; Secretary Dr. F. J. Hall.

It was voted that the appointment of Committees for the conference be left to the Council. They subsequently appointed the following: Program Committee: Dr. R. A. P. Hill (Chairman), Dr. Gray, Dr. Hall. The understanding is that those men shall constitute the nucleus of the committee, but are to call on others in the various medical centers of China to assist in the program.

ENTERTAINMENT COMMITTEE.

Dr. E. R. Wheeler, (Chairman), Dr. Manderson, Mrs. Stuckey, Dr. Dilley, Dr. Rivington, Dr. Love.

The Society then informally discussed the subject: Medical Ethics for the Chinese, the discussion being opened by the Secretary. At the close of the discussion it was voted that the Peking Medical Society recommend to the Faculty of the Union Medical College that they give their students instruction in Medical Ethics along the lines followed in Western countries.

Adjourned to meet the first Wednesday in October.

Important.

The Entertainment Committee are anxious to know as early as possible how many expect to attend the Conference in January. Entertainment will be provided by the members and friends of the Society. Now is the chance to see Peking; bring your wives and children. Will all who expect to attend please notify Dr. E. R. Wheeler, Union Medical College, Peking, as soon as possible?

F. J. Hall,
Secretary.

GRADUATION CEREMONY OF UNION MEDICAL COLLEGE!

The Second Graduation Ceremony of the Union Medical College, Peking, was held yesterday afternoon, at the London Mission, in the presence of a distinguished audience. The President of the Republic sent Mr. Liang Shih-yi as his representative. On the platform were the British and Dutch Ministers, the Vice-Minister of Education, representatives of the Ministers of Foreign Affairs, of Home Affairs, and of War, with the Principal, Dean, and 13 teachers of the College.

On the arrival of the President's representative, the audience rose and sang one verse of a National Hymn "China, the land I love." After the singing of the Doxology and prayer by Rev. C. Y. Ch'eng, Mr. Liang read the message from
the President which, in brief, is as follows:

It is a great pleasure to me that I am able to specially delegate Chief Secretary Liang Shih-yi to be present at the second Graduation Ceremony of your College. I believe the happiness of the people depends largely upon the strong physique of individuals. Past history shows us that improvement of health depends upon medical science. As the world becomes more civilized sanitary measures are improved and medical science spreads its influence throughout the world. Your College has the worthy object of working for the happiness of this nation and is sending forth trained doctors to contribute their share towards helping the people to be a healthy nation. All this is due to your charitable spirit. I, therefore, as President, would lead this whole nation to acknowledge with gratitude your great work.

The Principal of the College, Dr. K. J. Stuckey, then read the Report of the College.

The 15 Graduates were then presented by the Principal to Mr. Liang, who distributed to them the Diplomas of the College conferring the Degree of Doctor of Medicine, and the Diplomas of the Ministry of Education. The students were robed in Geneva gowns with facings of purple satin, and wore trenched caps; on ascending the platform they were greeted with loud applause from their school-fellows and friends.

In the unavoidable absence of the Minister of Education, Mr. Fan Yuan-lien addressed the gathering, and congratulated the College on the graduation of its second class of Graduates.

After a vote of thanks to the visitors by the Principal, Bishop Scott closed the meeting with the benediction.

After the ceremony, most of the visitors accepted the invitation of the Faculty to partake of refreshments at the College, and to inspect the exhibit of work, showing some of the various departments of the College activities. The various rooms at the College were utilized for the following exhibits:

1. — Operating Theatre, in charge of Dr. Wenham.
2. — Anatomical Models and Drawings, in charge of Dr. Wheeler.
3. — X-Ray Apparatus, in charge of Dr. Peill.
4. — Materia Medica Exhibit, in charge of Mr. B. E. Read, Ph. C.
5. — Bacteriological and Pathological Specimens, in charge of Dr. Hill and Dr. Hsu.
6. — Physiological Apparatus, in charge of Dr. Hopkins.

In the quadrangle three tents had been erected and equipped to show the working of a field hospital and the conveyance of the wounded from the field to the hospital by a Red Cross party. This most instructive exhibit was in charge of Dr. Gibb and Dr. Hsieh. Some of the visitors also took the opportunity to visit the new Hospital to accommodate sixty or more patients, which is now being built in the Hsin K'ai Lu — Peking Daily News.
CHOLERA AND ITS TREATMENT *

A brief abstract of a work published by Dr. Leonard Rogers this year, with the above title.

Our real knowledge of the causative nature of cholera, dates from Koch's discovery of the comma bacillus at the time of the Egyptian outbreak in 1853. The conclusions arrived at by Koch were disputed by the researches of others. The wrangling went on until in the Hamburg cholera outbreak of 1892 a number of cases occurred before an organism giving the typical characters of Koch's first described comma bacillus was isolated. The subject was largely rescued from this very complicated and confused position by Pfeifer's great discovery of the phenomena of agglutination. The various comma bacilli of cholera agglutinate in very high dilutions while harmless saprophytic water comma organisms fail to do so, and can thus be readily differentiated. The serum may be purchased in dried form from the Vienna Bacteriological Institute. This clumps cholera commas as a rule up to dilutions of 1 in 10,000 thus furnishing a convenient microscopic test. The comma bacilli possess feeble resistance to desiccation which will destroy their vitality in a few hours, if they are spread in a thin layer. On the other hand, if kept moist, as in soiled clothes, under conditions which prevent complete drying, the organism may retain its vitality for a long period. Instances are on record of the infection having been conveyed long distances by linen soiled by cholera stools and leading to outbreaks among those who have subsequently handled the clothes. They are quickly killed by heating to a temperature of 56°C. for one hour or to 60°C. for ten minutes, but can resist cold of several degrees below the freezing point for some days. On the surface of fruits and vegetables they may live for days in a cool, moist place. They die in sterile water in a short time, but in natural water they may live for many days, or even for months. The supply of filtered water to ships on the Hooghly river has greatly reduced the prevalence of cholera among the sailors.

The gastric juice affords powerful protection against the passage of the cholera bacillus through the stomach if the organism is in a healthy condition. As a rule, the cholera commas cannot be found in the stools of patients a few days after the attack is over. Still they have been isolated from convalescents at from eight to fifty days after the symptoms had ceased. In regard to the way by which the cholera bacilli gain access to the human body: all evidence goes to show that it is through ingested food and water. Ernest Hart says: "You can eat cholera and you can drink cholera, but you cannot catch it."

For the disinfection of wells, evidence has accumulated during recent years regarding the great value of permanganate of potash. One or two ounces for an ordinary well should be used as follows: the salt is placed in the bucket and gently lowered into the water to fill it, it is then drawn up and the

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*Read at the Kuliang Medical Association, August 24th, 1911.
water poured carefully into the well without allowing the undisolved crystals to escape. This process is repeated until the whole has passed into solution, when the well water should have a faint pink color, which will disappear in a day or two. No harm will result from its being drunk at once. During a recent outbreak of cholera in a district hospital in Bengal, in addition to disinfecting the well all the patients were given permanganate solutions to drink and no further cases of cholera occurred.

(The clinical picture of the disease which Dr. Rogers gives is the same with which we are all familiar.)

**Diagnosis.** During an epidemic there is little difficulty in the recognition of well marked cases. With the mildest forms it is very difficult, and these cases are liable to be overlooked. It is of the greatest importance that these cases be recognised as they are just as likely to spread the infection. The only way in which they can certainly be detected is by bacteriological methods. During the prevalence of the disease it is wise to regard all cases of severe diarrhoea as being possibly the premonitory stage of cholera, as it is in this early period many believe that astringent treatment may sometimes cut short an attack, while the use of purgatives in an early stage of cholera will certainly materially hasten the occurrence of the dangerous collapse stage. The diseases most likely to be taken for cholera are ptomaine poisoning, infantile diarrhoea, acute enteritis, the algid form of pernicious malarial fever, arsenical poisoning, and certain very acute dysenteries.

**TREATMENT.**

First in regard to the Premonitory Diarrhoea. As it is impossible to say, without the delay caused by a bacteriological examination, whether the attack is the premonitory stage of cholera or not, it should be treated with astringent remedies, such as kino and dilute sulphuric acid. The use of opium requires greater consideration, as it is undoubtedly a very dangerous drug in fully developed cholera. I never allow this drug once rice water evacuations have commenced, and prefer to do without it in the diarrhoecal stage in any case where a suspicion of cholera exists. If there is any reason to suspect the onset of cholera, no purgative should be given, salines being especially dangerous. Rest in bed, avoidance of chills, including those from a punkah in tropical climates, and barley water in small quantities at a time to drink are the indications in the premonitory stage.

**Stage of Copious Evacuations and Collapse.** Drugs are of no avail. The great problem is to restore and maintain the circulation, and if this can be successfully accomplished, the toxins will be rapidly excreted through the kidneys and recovery take place.

**Methods of Replacing the Lost Fluids and Salts in Cholera.** In comparatively mild cases of cholera the large bowel retains its power of absorption as long as there is a fair pulse, and the patient may often be tided over the danger of collapse by frequently repeated saline enemata. A close watch must be kept on the patient and the condition of the pulse; if possible, the actual blood pressure should be noted after any large stool or vomit, in order to detect immediately any fall of the tension below 70 mm. which will necessitate more active measures.

For enemata from one-half to one pint (90 grains sodium chloride to one pint) should be given every two hours during the stage of evacuations, this being reduced to every four hours after reaction has...
taken place, if urine is being passed in good quantity.

Prof. Rogers does not think very much can be accomplished by subcutaneous injections of salines, and says that intravenous injections are much more effective. He says after a very little experience the intravenous method presents not the slightest difficulty, and enables a given quantity of fluid to be administered far more quickly than by subcutaneous injection. He also speaks favorably of intraperitoneal injections and describes an easy and safe way of giving them by means of a little instrument he has devised. He regards it, however, as altogether inferior to the intravenous method. By the use of the normal saline solution—one dram to the pint—which he calls the isotonic solution, the mortality was 59.5 per cent. Rogers was not satisfied with this and, on thinking over the possible causes of failure, it occurred to him that the injection of stronger saline solutions to maintain a high salt content of the blood, might tend to lessen the loss of the fluid from the bowel and so maintain the circulation much more effectively than by the use of weaker salines. This plan was tested during the year 1908, with the immediate result of reducing the death-rate from cholera in a large number of cases to a little more than half the rate of the previous eleven years. This great improvement was more than maintained during the two following years, so that in nearly 400 cases the mortality was only 30 per cent. In these cases the diagnosis was confirmed bacteriologically.

The condition of the pulse affords the simplest indication of necessity or otherwise for an intravenous saline in cholera. Much more accurate and reliable information, however, can be obtained from taking blood pressure readings. He speaks of two instruments sold in England convenient for this purpose. One costs £1.5s., another, more portable as it can be carried in the vest pocket, costs £2.15s.

Prof. Rogers has come to regard a blood pressure of below 70 mm. as an indication of the presence of a dangerous degree of collapse, necessitating an intravenous saline injection. During the last two years, no patient whose pressure remained throughout at over 70 mm. has died in the collapse stage. On the other hand, he has several times had occasion to regret having postponed transfusion in cases with a pressure a little below 70 mm. on account of their general condition appearing to be fairly good. A blood pressure a little below 70 mm. means a very feeble pulse at the wrist, while above that point the pulse is generally a fairly full, but still very soft, one.

Experience has convinced Prof. Rogers that the finger is a very fallacious guide in estimating the exact arterial pressure in such degrees of collapse as are indicated by about 70 mm. and even with his experience he would be greatly handicapped in borderland cases without the aid of the sphygmometer, and would urge its regular use in Cholera wards.

Restlessness, Cyanosis, and Cramps, when present in marked degree, leave no doubt that an intravenous saline should be used and used at once. Increased restlessness on the part of the patient is the most important because the first of the above named symptoms. If the finger be pricked and a drop of blood squeezed out it will be black and often obviously much thicker in consistency than normal, showing great concentration of the blood.

The Technique of Intravenous Injections.—The choice of a vein. In all but children under two, one
of the veins at the bend of the elbow will suffice for the purpose, as long as the end of the cannula is sufficiently small. Prof. Rogers has had one made with the end tapering instead of the bulbous end of some patterns. It is furnished with a stop cock.

In small children the veins of the arm may be too small even for the tapering cannula to enter, but either the long saphenous in the thigh or a large vein which runs over the front of the internal malleolus of the ankle will suffice for the purpose. If the cannula available will not enter these, the exposed vein may be punctured with a large hypodermic needle attached to the transfusion apparatus, the bulb being well raised to ensure as rapid an entrance of the fluid as possible. A small-calibred cannula can also be easily improvised out of a piece of glass tubing drawn out to the required size and cut off at a convenient length.

The Insertion of the Cannula.—No anaesthetic is required. The site chosen having been sterilized as well as circumstances will permit, a piece of bandage is tied tightly around the limb above the position so as to distend the veins as far as possible. An incision one inch or more in length is made over the course of the vein, which must be carefully exposed and dissected out from the surrounding structures before being opened. A double strand of silk is now passed under the vein and the lower or distal part tied with one strand while the other is looped loosely round the upper portion ready to be tightened the moment the cannula is inserted. The vessel is then opened in the following manner. It will still be distended with blood on account of the ligature round the arm, except in the rare cases in which the circulation through the extremities has almost ceased. The superficial wall is seized with a small forceps and an oblique cut sloping upwards and backwards beneath the forceps is made with a pair of scissors through half the circumference of the vessel thus forming a small flap which is held open by the forceps. The cannula is then passed beneath the flap with the other hand and guided by the undivided deep wall of the vein, it must enter its lumen if it is small enough to do so. After being in for about an inch, the remaining ligature is tightened around it. By this method a cannula as large as the vein can be inserted, as the flap gives a counter pull while the tube is pressed into the lumen of the vessel. The vessel holding the solution having been previously filled and all air carefully excluded from the tubing by allowing a full stream to run through before inserting the cannula, it only remains to remove the bandage round the limb to allow the fluid to pass on into the vein. A piece of sterile gauze should be placed over the wound to protect it from contamination during the injection. The top of the flask should be covered in the same way.

Composition of the Hypertonic Solution.—Prof. Rogers prefers the following for general adoption in cholera, for subcutaneous, intraperitoneal, and intravenous injections:

Sodium chloride grs. 120 (grammes 8)
Calcium chloride grs. 4 ( ,, 0.25)
Potassium chloride grs. 6 ( ,, 0.4)
Water add 1 pint.

Temperature of the Fluid.—Prof. Rogers prefers to inject the fluid as nearly as possible at the normal temperature of the body. To allow for cooling during the passage of the fluid through the tubing it may be at 110°F. in the flask unless the temperature of the air is but little below blood heat. In the rare cases in which the rectal temperature is a degree or more below normal the solution should be from 102°-104°F.
at first, being lowered if the surface heat returns. If the rectal temperature is considerably above normal at the time of injection, the solution should be several degrees below the normal rectal temperature. He also speaks of a case of acute dysentery admitted to hospital in a state of collapse with rectal temperature 106°F., which was saved by an intravenous saline at 86°F.

The Quantity of Saline to be Injected.—About four pints are required in averagely severe collapse stage of cholera in an adult male. Pulse and blood pressure must be noted in order to know the exact amount to be injected. In females about three and one half pints will suffice, while in children from ten to fifteen years of age two pints may be given.

The Rate of Injection.—When marked collapse is present the saline solution should be first run in quickly to restore the pulse as soon as possible. It may, as a rule, be given at the rate of one pint in five minutes, or four ounces per minute, but a careful watch must be kept for any sign of distress, especially in old people. If severe headache or oppression in the chest with quickened breathing is produced, the rate should be at once much slowed.

Repetition of Intravenous Injections.—In a considerable majority of cases a single hypertonic transfusion suffices to tide the patient over the collapse stage. A blood pressure below 70 mm. and restlessness with feeble pulse are the principal indications for another injection.

Fluid by the Mouth.—By allowing an ounce or two at a time with short intervals a surprisingly large amount of water will be retained and absorbed. As long as the rectal temperature is not subnormal, ice may be given to suck and help to allay the irritability of the stomach. He does not approve of adding salt to the drinking water.

Reaction Stage.—The temperature of the rectum should be taken every quarter of an hour after intravenous injections. If there is a rise in temperature it should be treated with iced-water rectal saline of not less than one pint, at as low a temperature as can be quickly obtained. Ice should be applied to the head, and cold sponging continued until the temperature falls. Hot water bottles should not be applied around the patient during an intravenous injection.

Do not check diarrhoea in the after stage of reaction. Prof. Rogers says: "I make no attempt to check the diarrhoea of the after stage, but leave the reparatory processes in the bowel entirely to Nature. Opium and acetate of lead are particularly bad as they actively predispose to fatal uremia. As long as rectal salines have to be continued, fairly frequent watery, but colored, stools will be passed, but this is of no consequence and will cease when the salt solutions can be safely omitted on the free secretion of urine being thoroughly established.

Diet.—Barley water, farinaceous foods such as arrowroot or corn-flour gruel during two or three days. No milk given except in the form of whey to avoid the irritant action of curds. When the acute diarrhoea has stopped for two days or more, custards and other light foods may be commenced. Even in mild cases it is safest to err on the side of excessive caution for fear of relapse. As long as the kidneys are not acting freely meat soups should be especially avoided. Alcohol should be avoided except in the case of aged persons who have long been habituated to its use. Prof. Rogers never prescribes it for native patients, preferring ammonia in all cases.
A CASE OF MADURA FOOT

PHILIP REES, M.D., B.Sc., Wuchow Wesleyan Hospital.
B. RANDAL VICKERS, M.B., B.S., Wuchow Wesleyan Hospital.

We have had in our wards during the past six months three cases which have closely corresponded to the usual clinical picture of Madura foot. In two of these we were unable to confirm the diagnosis by microscopical evidence. In the third case, however, we were more successful. In Jefferys and Maxwell's "Diseases of China" this particular disease is referred to as follows:—" Madura foot has been reported from South China, but in the absence of bacterial examination these cases remain doubtful." The following brief report of an undoubted case may therefore prove interesting.

The patient, a man aged 46, was an agricultural labourer. He was unaware that any of his neighbours had been troubled by a like complaint. Six years ago he noticed a swelling on the dorsum of his right foot which, after treatment according to Chinese fashion, burst and discharged some semi-purulent fluid. The swelling was followed by others in the same region which burst in similar fashion and continued to discharge periodically. About three years ago a lump appeared in the popliteal region which burst and in its turn was succeeded by others in the neighbourhood. On admission, the patient's ankle was seen to be much swollen and altered in shape. All the normal anatomical marks were obliterated. No definite fluctuation was obtained, but the whole joint gave the impression of having been changed into a firmly-elastic homogeneous tumour-like substance. A small swelling just above the internal malleolus was red and semi-fluctuating. The sole of the foot was unaffected. Above the ankle the leg appeared normal until the popliteal space was reached. Here the popliteal angle was found to be enormously swollen, being filled with a triangular mass which on palpation showed the same characteristics as those just described in the case of the ankle. The hamstring tendons were involved and firmly adherent to the mass. The leg was kept in a flexed position and could not be straightened. There were again no signs of fluctuation except in a small area just over the inner surface of the tibia. The femoral glands were enlarged and hard. There was very little pain or tenderness and no impairment of sensation.

The skin overlying both of the affected parts showed brownish discoloration interspersed with white patches of scar tissue. Scattered about were several discharging areas. These areas were lighter and more purplish in colour than the surrounding pigmentation, and had a peculiar sodden appearance. They were raised above the surrounding skin, and might be compared to small craters in a volcanic region. The discharge from these raised areas came from a small red opening in the middle. In some cases, however, this small red point was missing and there was no discharge. A probe could be passed underneath the skin from opening to opening without difficulty. The probe could also be passed in deeply but no actual bare bone was felt. The patient remarked that there were two kinds of discharge. One described as resembling pus (膿), the other as resembling urine (尿). The latter of these discharges was described by an onlooker as resembling olive oil. On exerting pressure in the neighbourhood of any
of these openings, both kinds of dis¬
charge could usually be obtained.

Microscopical examination of the dis¬
charges revealed the presence of
many pus cells and also of small
masses of material containing de¬
finite mycelial elements. The my¬
celial arrangement could be seen
most clearly at the edge of the
concretions. The terminations of
the mycelial threads showed a
very slight tendency to club-like
expansion.

Amputation, high up the thigh,
was advised. The patient went
home to his native village in order
to consult his relatives, and has
not yet returned.

The case appears to be unusual
owing to the involvement of both
ankle and popliteal space. As the
intervening parts were free from
disease, one must either suppose a
double independent infection or
one must regard the mass behind
the knee as the result of meta¬
tasis. The latter seems the more
probable supposition although
most authorities agree that in this
disease true metastases are very
rare. The enlargement of the
femoral glands was possibly simply
due to absorption of septic material.

THREE CASES OF INTEREST.

C. J. Davenport, F.R.C.S.,
Shantung Road Hospital, Shanghai.

1. Self-incised strangulated Her¬
nia.—Hsie, aged 21, from Hupeh.
Admitted 4th May. Had suffered
7 years from right inguinal hernia.
For a week unable to reduce the
swelling. On the morning of 4th,
after defecation, was seized with
great pain in the swelling.

In desperation seized a knife
and by a transverse incision opened
the upper part of the sac. When
brought to hospital 2 inches of blue¬
black congested gut was protruding
from the wound. After thorough
cleaning the constricting ring was
incised, and the 2-ft. of gut,
external to the constriction, thor¬
oughly examined. One spot, the
size of a half dollar, appeared
nearly gangrenous, but the whole
was returned. The case did well.

2. Self mutilation—cut throat
and double castration.—Yao, aged
30, admitted 21st May in a very
distressed condition—pulse 132,
much shocked and wild in manner.
Patient was suffering from recent
superficial wound over the front of
the neck, and in the centre of the
scrotum; and complained of much
pain over the liver and down the
right loin.

He gave the history of having
suffered such intense pain over
the liver, that in desperation he
had cut his throat, and excised his
testicles, both of which he pro¬
duced as evidence. On examina¬
tion the scrotum was found to be
empty. Tenderness and dullness
extended from the upper border of
the third rib to the level of the
umbilicus. The heart was dis¬
placed somewhat to the left.

Abscess of the liver was diag¬
nosed, and the aspirator put in in the
mid axillary line about 10th space.
80 oz. of blood-stained serous fluid
were drawn off and the chest con¬
ditions returned to normal. The
patient did well, no temperature,
pulse 100. Within a week he sud¬
denly took himself off from hospital
and has not been heard of since.

3. Traumatic Aneurism of Femoral
Artery. Ligature of External Iliac.
Chin, aged 36, admitted 29th
March. Shot by pistol about the
centre of left Poupart's ligament.
The bullet could be felt under the
skin about the posterior fold of
buttock. The wound of entrance
appeared to be just external to the
main artery. Iodine and a dry
sterile pad were applied. On 31st
the temperature ran up to 101.3°
and as patient complained of pain
The China Medical Journal.

at the seat of the bullet it was removed, letting out a small quantity of pus. For some weeks the patient complained of much aching pain down the thigh, but the swelling and extensive ecchymosis cleared up, the temperature varying from 99 to 101. On 19th April it was noted that the wounds were healed, that of entrance appearing to be immediately over the femoral artery, which at the spot was enlarged, with a distinct bruit audible over it. On 9th May, as the aneurysmal swelling had evidently increased, Dr. R. J. Marshall tied the external iliac artery. As the man was thin, with a retracted abdomen, the operation proved easy. One or two enlarged glands were removed, a single silk ligature being placed round the artery.

Everything healed "per primam." The limb kept warm; and, by the end of the month, he appeared in Court to give evidence against his assailant.

NOTES ON TWO CASES OF LARGE OVARIAN TUMOURS SUCCESSFULLY REMOVED.

W. M. MEAT, M.B.

Weihaiwei.

Case 1.—Aged 27; had been married 9 years and was the mother of one child aged six, the birth of which presented no special difficulty except that placenta was not expelled for 30 hours. Menstruation commenced at 14 and has always been regular in quantity and period until one year ago; since then it has been irregular in appearance and quantity. The last menstrual period occurred 14 days before operation and lasted 11 days. She first noticed enlargement of the abdomen shortly after the birth of her child six years ago, swelling being on the left side and very regular in growth. During this period there were neither bladder nor bowel troubles; breathing, however, was interfered with while lying on the back or on exertion, but she could sleep in comfort when lying on left side. On examination, the abdomen was found to measure 46½ inches in circumference, with slightly more prominence on left side and in right hypochondrium. Patient was well nourished and in good condition as regards heart and other organs.

The skin was prepared by painting with Tinct. Iodi the night before operation and again shortly before the incision was made. This was 3 inches long, in the middle line, between umbilicus and pubes, but later had to be extended upwards to 1 inch above the umbilicus owing to presence of thick firm adhesions between cyst and anterior abdominal wall, produced by repeated needlings of a Chinese doctor. The cyst was found to be adherent also to the omentum in two places.

After great trouble the adhesions were finally separated or tied off and thus the duration of the operation was extended to 1¼ hours. The tumour was found to be in the left ovary and to consist of one large cyst with a subsidiary cyst lying in the right hypochondrium. The pedicle which was fairly broad was transfixed and tied off.

On examination of the right ovary it was found to be cystic in one half; this half was tied off and removed. During the removal of the fluid a certain quantity escaped into Douglas's pouch and was sponged out with dry sterile swabs.

The skin incision was sutured through and through with nine silk sutures and the line of incision was once more painted with Tinct. Iodi.

The after result of operation was perfect, the highest temperature recorded being 99.8 on the night succeeding operation. Sickness for the first 24 hours was troublesome,
but was relieved on the patient vomiting several round worms.

Stitches were removed on the 8th day, when the wound was found to be soundly healed.

The total weight of tumour and fluid was 52 lbs. Patient was discharged on the 24th day and menstruated normally 42 days after the operation.

Case 2.—Aged 39; married 22 years, and mother of 3 children, the youngest being 5 years of age. She commenced to menstruate at 16 and was always regular in period and quantity until 15 years ago when she first noticed a swelling in her abdomen situated above the pubes. For 9 years it progressed slowly, but during the last 6 years enlargement became much more rapid. She last menstruated 15 days before operation, the period lasting 4 days. There had never been much interference with breathing except that she could not lie on her back.

The abdomen measured 45½ inches in circumference and was uniformly enlarged.

After painting the skin with Tinct. Iodi as in the last case, the usual incision was made when a unilocular cyst of right ovary was found.

It was free from adhesions except to the omentum which was tied off and removed with the cyst. The abdomen was sutured through and through with silk ligatures and more Iodine painted on to the wound. Patient made an uninterrupted recovery. The highest temperature was 101°F. on the 2nd day, the cause of which was not clear. It fell to normal on 5th day and stitches were removed on 8th day following operation when the wound was firmly healed.

The weight of the tumour was 60 lbs. and duration of operation 40 minutes.

To the Editor of

"The China Medical Journal."

Dear Sir: Expensive drugs, such as alkaloids, naturally exert a peculiar fascination on the unscrupulous faker of the get-rich-quick-by-any-method kind, but it is when the market price of some largely sold drug of this description shows an upward tendency that his business flourishes. The recent advance in price of SANTONIN brought to light another instance of this contemptible form of trading on afflicted humanity. As reported in the London trade journals, Mr. John C. Umney found that Santonin was being offered adulterated with 25 per cent. of acetanilid.

The use of this adulterant is not new, indeed some time ago Santonin containing as much as 80 per cent. of acetanilid was sold in France. Boric acid, however, still appears to be the adulterant generally employed, and in this connection it may interest you to hear that in 1904 I had occasion to analyse in my research laboratory a number of samples of "santonin" which was being sold in India at prices which made it clear that the article was adulterated. This so-called santonin consisted of boric acid, in one case of borax, with only traces of santonin. This bare-faced fraud did not escape the vigilance of the Indian Customs authorities, and the goods were ordered to be re-shipped. In one in-
I have before me a bottle sent to me a short time ago by my traveling representative in India. The label bears the wording: "Mix Santouninum"—"Manufactured in Calcutta", in addition to the contradictory statement, "Deutsches Fabrikat." An analysis of the contents revealed the presence of boric acid without a trace of santonin. It was shown that the adulteration was committed in Calcutta by a firm whose name was ascertained by me.

Such flagrant cases of adulteration are again a warning to the pharmacist to purchase his supplies of alkaloids and other high-priced drugs from a reliable maker with a reputation to maintain. The inexplicable absence of the desired action following the administration of an adulterated drug is very apt to engender suspicion in the mind of the doctor or patient as to the business integrity of the pharmacist, who, under such circumstances, is made to suffer, while the real culprit, the faker, gets off scot-free with the profits.

Yours faithfully,

E. MERCK.

To the Editor of "THE CHINA MEDICAL JOURNAL."

Dear Sir: I enclose a report of the graduation of the second class of 15 graduates of this College.

In future, the professional examinations will be held at the close of the summer term, and the entrance examinations in the autumn. This year the latter will be held on Sept. 3rd and 5th; all prospective students should be in Peking by the end of August. Any places desiring to have entrance exams held locally should communicate as early as possible with the Principal.

Notice has been received from the Board of Education that they propose to discontinue the issue of certificates to the graduates of the Union Medical College, Peking. In future "the College alone should issue a diploma without an additional certificate from this Ministry, but the seal of this Ministry together with the signature of the Director of Technical Education (Chuan Men Ssu Ssu Chang), will be affixed to the College Diploma by way of authentication."

I am, sincerely yours,

E. J. STUCKEY,
Principal.

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**Personal Record.**

**BIRTHS.**

At Syen Chyun, Korea, April 12th, to Dr. and Mrs. Alfred M. Shorrocks, American Presbyterian Mission (North), a son, (Horace Fielding.)

At Pekin, April 27th, 1912, to Dr. and Mrs. F. E. Dilley, A. P. M., a daughter (Muriel Constance.)

**DEATH.**

At Swatow, on June 15th, Elizabeth Taylor, beloved wife of A. Wight, M.B., English Presbyterian Mission, Chaochowfu, Swatow.

**ARRIVALS.**

June 2nd, Dr. and Mrs. A. Hogg and two children, C. I. M., returning from England.

June 7th, Dr. and Mrs. J. W. Hewett and two children, C. I. M., returning from England.

**DEPARTURES.**

June 24th, Dr. and Mrs. J. A. Anderson and four children, C. I. M., for England, via Siberia.