The China Medical Journal.


Original Communications:

Intracapsular Cataract Extraction versus Capsule Laceration for the Extraction of Cataract.

By J. Howard Montgomery, M.B., Ch.B. 377

The Special Aspects of Hernia and Its Proper Treatment in China .... .... .... By W. H. Jefferys, M.D. 386

Some Vegetable Bodies Found in the Faeces.

By C. W. Young, M.D. 398

A Sporadic Case of Epidemic Cerebro-Spinal Meningitis.

By Ernest C. Peake, M.B. 404

Low Fever .... .... .... By P. B. Cousland, M.B. 408

A Plea for the Lateral Perineal Operation for Vesical Calculus.

By James L. Maxwell, M.D. 412

Some Dispensary Observations By Mrs. B.C. Patterson, M.D. 413

Medical Supervision of Students By J. C. McCracken, M.D. 415

How Can We Stimulate Scientific Interest in Medical Students?

By James Boyd Neal, M.D. 420

Medical Education for Women in North China

By Anna Gloss, M.D. 423

The English-Speaking Medical School.

By C. S. F. Lincoln, M.D. 425

Traumatic Fistula of the Pancreas .... .... .... .... 427

Editorial:

World Missionary Conference .... .... .... .... .... .... 429

Executive Committee Minutes .... .... .... .... .... .... 434

Book Review .... .... .... .... .... .... .... .... 435

Branch Reports: South China; Shanghai .... .... .... .... 435

Nurses' Department: Annual Meeting .... .... .... .... .... 439

Medical and Surgical Progress:

Skin Diseases .... .... .... .... .... .... .... .... .... 441

Gynecological Notes .... .... .... .... .... .... .... .... 442

Correspondence:

Ankylostomiasis .... .... .... .... .... .... .... .... .... 446

Spinal Therapy .... .... .... .... .... .... .... .... .... 448

Sterilization of Catgut .... .... .... .... .... .... .... .... 450

Information Sought .... .... .... .... .... .... .... .... 450

Purity League for China .... .... .... .... .... .... .... .... 450

A Correction .... .... .... .... .... .... .... .... .... .... 451

New Members of Korea Branch .... .... .... .... .... .... .... 451

Quinine Purchasing .... .... .... .... .... .... .... .... .... 451

Necator Americanus .... .... .... .... .... .... .... .... .... 451

Personal Record .... .... .... .... .... .... .... .... .... .... 452

Want Department .... .... .... .... .... .... .... .... .... .... 452
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<table>
<thead>
<tr>
<th>NAME</th>
<th>QUALIFICATION.</th>
<th>MISSION.</th>
<th>STATION AND POST OFFICE.</th>
<th>PROPOSERS.</th>
<th>INSERTION.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Geo. A. Stuart.</td>
<td></td>
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<td>M. A. Beath.</td>
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<td></td>
<td>John M. Swan.</td>
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<td>Edgerton H. Hart.</td>
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</table>

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The China Medical Journal

PUBLISHED BY

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The membership fee of the Medical Missionary Association is Four Dollars a year. This includes the CHINA MEDICAL JOURNAL. There are six numbers in each year. Payment should be forwarded to the Presbyterian Mission Press, Shanghai.

Articles intended for THE CHINA MEDICAL JOURNAL should be sent to the Editors, who solicit contributions from all Medical Practitioners in China, Korea, Japan, Siam, Philippine Islands, or elsewhere.
INTRACAPSULAR CATARACT EXTRACTION VERSUS CAPSULE LACERATION FOR THE EXTRACTION OF CATARACT.*

By J. Howard Montgomery, M.B., Ch.B. (Ed.), Changpoo.

India has been a battlefield not only for those of military disposition and training, but also for members of the medical profession. Conflicting schools of thought and teaching have waged war in the same cities and districts as those of the military profession, not with the idea of total extinction, or full surrender of one's opponents, but with the desire to obtain all the possible light and evidence bearing on any subject under discussion, seeking to get at the truth on the matter, and by so doing prepare the way for an advance in more scientific and modern methods of treatment. Other countries have proved battlefields also, but in India perhaps our medical men are imbued with the military atmosphere in which they live at any rate they are keen on any discussion they take up and like, if possible, to see a fight to the finish and definite conclusions arrived at. India has been the battlefield where the question of litholopaxy as opposed to lithotomy and lithotrity has been fought, and I might almost say won; the majority of Indian surgeons now prefer the operation introduced 22 years ago by the late Prof. Bigelow, of Harvard, namely the crushing and at once evacuating through the natural passages, at one sitting, the whole of the stone, no matter how large and hard, provided that it could be caught and crushed by the large lithotrites then introduced. This operation was coldly received at first, chiefly owing to the ridicule

* Paper read before the Kuling Branch, C. M. M. A., August, 1910.
heaped on it by Sir Henry Thompson, the apostle of the old cutting method or lithotomy. Later litholopaxy was taken up by Mr. P. J. Freyer, then Surgeon Lt. Col. in Bengal, and by Surgeon Col. Keegan, and in the hands of these two operators became so extraordinarily successful that in the northwest provinces, Punjab and Bombay government hospitals alone from 1891-1894 no less than 7,694 litholopaxies were performed in patients of all ages with a mortality of 3.45 per cent., while previous to the time of Bigelow not half a dozen were attempted annually in all India. Other questions of vital importance have been fought and decided in India, but I particularly called your attention to litholopaxy and lithotomy, as there seems to me to be a very striking analogy between these operations and the way they were received and the two operations under discussion in this paper, viz., the intracapsular method of cataract extraction and the capsule laceration method of cataract extraction and the way the former or recently revived method has been received. The questions of cataract extraction is an important one to doctors in South China; of North China I cannot speak, as I have no hospital reports showing how often cataracts appear and come for treatment, but doubtless it is just as important in that region also, and although we see fewer cases than our medical friends in India, the home of cataract, it behoves us to do all in our power to provide the very best surgical treatment for these cases. An experienced doctor, who had worked many years in South China, said to me: a doctor's reputation is made or marred by his ability or inability to deal with cataracts. Such a statement, although perhaps a little prejudiced or exaggerated, is sufficiently true to have great weight and to make one and all labour diligently to keep abreast of modern methods of diagnosis and treatment both surgical and medical, and it is for this reason I have called your attention to this important subject to-day.

Capt. H. Gidney, I. M. S., in his paper on the above subject at the Bombay Medical Congress last year, has called this subject the "Battle of the Capsule," for he says the omission of one step, the opening of the capsule constitutes the chief point over which various forces have been waging a scientific war for many years in the columns of the Indian Medical Gazette. My own interest was first aroused in intracapsular extraction by an experience similar to that reported by Capt. McKechnie at the Bombay Conference. I was proposing to do for an old lady with double cataract the operation in the way best known to us in China, viz., with capsulotomy; when the incision was complete, the patient, who was very restless, moved her head, contracted her eye
muscles, and before one had time to see what was happening the lens was lying on the cornea smooth glistening and hard; there was no escape of vitreous; the pupil was round, small and jet black; so the eye was at once bandaged up, and two hours later the woman was removed to her ward. No complications of any kind occurred, no irritation of the iris either non-infective or infective was present, and after 24 hours, when I looked at the eye, there was very little vascular injection of the sclerotic, and the after-result as regards vision was better than the best case I have had by the capsulotomy method; she left the hospital in eight days. This was a matter for reflection, and I began to wish I could do the same every time, and resolved to attempt the operation when the lady returned to have her other eye done. The sequel is interesting; the next attempt proved a failure on the other eye, due undoubtedly to my ignorance on the subject; the lens refused to come out without what I considered under force, and the patient did not accommodate me by a timely movement of the eye to aid the lens on to her cheek; capsulotomy was performed and the lens removed, but it was not smooth and glistening as the former one; no escape of vitreous took place, and the after-treatment was practically the same, though the result was far different; 24 hours later, on looking at the eye, there was what I usually find vascular injection of the sclerotic, a slightly whitish film at the lower edge of the iris and a good deal of lacrimation, and the patient complained of more discomfort than after the previous operation. As regards vision the patient was disappointed, though for the ordinary operation I would have considered it good, but she was of course comparing it with the first eye operated on. My second case was a man of 50 with tension in both eyes, probably chronic glaucoma, and I was doubtful if any operation could help his vision or if an operation was justifiable; his entreaties were so earnest that reluctantly I attempted to do it. On making the incision the iris got in front of the knife and was cut, which is likely to happen; no matter how careful one is, if there is increased ocular tension and the lens followed forcibly the back of the knife out of the wound; in fact I think it was neck and neck as to which was out first; this was followed by a fairly free escape of vitreous, and at once the speculum was removed in case it exerted pressure on the eye ball; a little later the vitreous was cut off even with the incision, part of the iris that had been everted into the wound, for only a small part was cut off at the first incision was replaced and a firm pad and bandage applied, and great was my joy next day to see again that gratifying densely black pupil and very little vascular injection of the sclerotic, and as regards
vision, in spite of loss of vitreous, vision was as good as in the majority of my cases done by capsulotomy.

A reference to the text-books on the subjects did not stimulate one to make further attempt. Mr. G. A. Berry describes the operation as certainly much more risky, as it entails the loss of more or less vitreous. In Haal's operative ophthalmology, it is described as specially adapted for over ripe cataracts with an atrophic zonule of Zinn and thus the cataract is more easily separated from its suspensory ligament, and further it is pointed out the special danger of asepsis as the post chamber is opened up in all cases and the further danger of loss of vitreous. In Mr. Nettleship's diseases of the eye, the subject is raised only to be dismissed by saying that a few operators use the method of Pagenstecher, in which the lens and capsule are removed by a scoop. In Swanzy's book I see no reference to this operation, though this may be remedied in a later edition than I possess. In Fink's methods of operating for cataract he advises intracapsular for morjajnian cataracts, which consist of a fluid cortex with a small nucleus floating in it. In other cases he says it is well to try if the lens will come away without interfering with the capsule. Thus the matter lay in abeyance, and I went on doing the capsulotomy operation with ordinary success till I got a copy of the transactions of the Bombay Medical Congress, in which the pros and cons of the matter are thrashed out in detail and the experience of the most skilled operators given, and after reading the extraordinary results of the intracapsular extraction, one cannot but feel that the other operation is already superseded, and those practising it are behind the times. The idea of extracting the capsule together with the lens is due to Pagenstecher, who believed in and practised the operation successfully, but few surgeons of note took up his operation, and not much attention was paid to the subject. In recent years a new champion of the intracapsular operation has appeared in the person of Major Henry Smith, Jullunder, Punjab, and it is due to him and to his perfecting the technique of the operation that ophthalmologists of all countries have been led to see that it is an operation far in advance of capsule laceration for extraction of cataract, and gives brilliant results as far as vision is concerned. Major Smith has operated on over 20,000 cases by his new method, in the last decade, with the most extraordinary visual results, the least possible suffering to the patient, a minimum of post-operative complications, asking the shortest time required by any surgeon for the patient to remain in hospital and with the assurance that no secondary operation is needed, and it is because of these facts that his hospital
in a remote and poor township is fast becoming the mecca for sufferers from cataract. His hospital is described by one surgeon who went to him for training as like a farm building, poorly equipped and inadequately staffed; the staff consisting of Smith himself, the important factor, a native assistant surgeon, a hospital assistant and a few dressers; the nursing being left to the patient friends, and yet he has patients under treatment for major operations on the eye as many as 450 at one time; this is only possible because the operation for cataract gives such perfect results and there is practically no after-treatment; did the patients need dressing, say twice a week, obviously the staff could not deal with the cases, but as a rule the eye is left for eight days without dressing, and on that day the eye is examined, tested and the patient usually discharged the same day. Nor is there any preliminary treatment; the cases are operated on the day they arrive. Further, there is no selection of cases; even if there is old trachoma and blepharitis, glaucoma of old standing, eyes with iris adherent to the lens and eyes in every stage of cataractous degeneration, from the first hazy beginnings to complete atrophy, Smith operates on all, assuming the retinal condition indicates function sufficient to admit of improvement of vision when the lens is removed. If both eyes are cataractous both are done at the same time. It is only when anything abnormal occurs during the operation that eyes are looked at before the eighth day, and such a condition is in almost all cases foretold by the operator, who notes how the eye has reacted to the operation. Some may fear that such results are not to be expected in China and that it is a special gift developed by extraordinary practise that has given Smith such skill and success. To allay such fears one has only to look at the results of others whom Smith has taught the operation, and here we see that with careful training and a little practice, almost the same skill can be attained as Smith possesses, and the records of Captains Sidney and McKechnie and Mr. Jameson, of Belfast, are very little short of Smith's own results. These three surgeons with Knapp, of America, went and were taught under Smith, doing as many as 500 operations, each under his personal supervision; the first of the three named says, after considerable experience later, that all the three surgeons can do the operation with ease and confidence and an almost uniform success; this is a very bold statement to make, but results show that it is a fact. Knapp had returned no report on the cases done by him after his return to America. Smith's operation seems to differ essentially from the original operation introduced and practised by Pagenstecher, for in a short account I have read of the latter's
operation, after the incision was made and an iridectomy performed, a scoop was introduced behind the lens, and by pressure on the cornea and manipulation of the scoop, the lens with its capsule entire was extracted. In this operation there must surely have nearly always been rupture of the hyaloid membrane and escape of vitreous. In Smith's operation, or the complete operation as some prefer to call it, no scoop is used; there is therefore less instrumentation, less danger to the hyaloid membrane, and less chance of vitreous escape.

The Intracapsular Operation.—The ideal operation for cataract all must agree, is removing the obstructing element which prevents light from passing through the eye to the retina; this obstruction is the lens with its capsule, as all who have had to do a secondary cataract operation to perforate the capsule must know. If therefore we tear the capsule and leave it behind, only removing the lens it encloses, we only do part of what we admit to be ideal. Attempts have been made to deliver lens and capsule by many surgeons, some attempting by passing a probe behind the lens through the sclerotic to dislocate the lens into the anterior chamber and thus extract lens and capsule with the post surface foremost; others have used a zonulotome for detaching the zonule of Zinn, and others again have tried simply to pull the lens out directly by hooks, forceps or wire loop; such attempts all proved failures the eye will not stand such treatment. Then came Pagenstecher's method, to which attention has been drawn, but I understand he finally gave up the operation, as he so frequently ruptured the capsule and hyaloid with necessary escape of vitreous. The problem now seems to be solved, and Smith's method is essentially dislocation and expulsion of the lens by means of pressure on the cornea, so that no direct pressure is put on the lens, which is forced out of the eye by the corneal pressure in front and the counter pressure exerted by the contents of the globe at the back. This sounds simple, but apparently requires considerable dexterity and experience before it can be successfully performed in all cases, excluding of course traumatic cataracts and the cataracts of adolescens.

The Operation.—It is said without a skilful assistant this operation cannot be successfully performed; in no operation in surgery does he play such an important part, and an unskilled assistant will spoil as many eyes as an unskilled operator. The assistant's duties are the same exactly as in the old operation until after the iridectomy has been done; the speculum is then taken out and the assistant has to take all pressure off the globe and take care at the same time that he keeps his
The Extraction of Cataract.

hands and arms out of the way of the surgeon. He stands at the surgeon's left side and pulls the lower lid down with the face of his left thumb placed on the cheek below the lid; at the same time he lifts the upper lid straight forwards, or forwards and slightly downwards, never upwards, as thus the peripheral fibres of the orbicularis would get a chance of exerting pressure on the globe; he does this by means of a hook, like a stout strabismus one, held between the thumb and first two fingers of the right hand like a pen—it being held at such a length that the tips of the ring and little fingers fully extended can push the peripheral fibres of the orbicularis upwards on the forehead and keep them there by pressing firmly on the upper margin of the orbit. This prevents the orbicularis acting on the globe and gives a good view of the upper fornix, and thus exposes the field of operation, for the patient from now on is allowed to move his eye in any direction he likes, and as a rule he rolls it strongly upwards. Pressure is now applied with a spatula, held vertically in the left hand like a pen, over the lower third of the cornea close to its left margin, and further pressure is applied with a stout strabismus hook over the lower one-third of the cornea between the end of the spatula and the right margin. The direction of the pressure is straight back towards the optic nerve. The spatula should not move, but the hook may be moved slowly twice or thrice across the cornea till the lens appears in the wound and is about half delivered, then the pressure of the hook is slackened and its direction gradually changed from backward to upward so as to fold the corneal flap under the lens until the latter topples over on to the cornea. During this stage the hook exerts gradually less and less backward pressure until at the end the pressure is directed entirely upward, while the spatula keeps up just enough backward pressure to prevent the lens slipping back into the eye. By this means also the lips of the wound are kept close to the eye, and there is little room for escape of vitreous even if the pressure were sufficient to force it out. When the lens topples over, the pressure of the spatula is taken off the globe and the lens is caught in the hollow of the hook, which is pressed well under it so that it is lifted away—on no account to be pulled or pushed away by the point of the hook for fear of a rupture to the capsule which might even then have a slight attachment to the zonule.

This is the operation as performed for all immature cataracts, and in these cases there is seldom any difficulty, but there are minor modifications of the operation to deal with other forms of cataract, but to enlarge on these modifications would be beyond the scope of
In conclusion I wish to draw your attention to the disadvantages of Major Smith’s operation or the complete operation as it has been well called as brought forward by the capsule laceration school and lastly the advantages claimed by the supporters of Smith’s operation as opposed to capsule laceration. The claims of these two contending schools have been fairly and admirably summed up by Capt. H. Gidney, and I cannot do better than briefly to state what he says.

A. The “capsule laceration school” brings forward the following disadvantages against extraction in the capsule:

1. Frequent loss of vitreous with its immediate and ultimate dangers: (a) Impairment of vision. (b) Infective inflammations. (c) Retinal detachment. (d) Haemorrhage. (e) Delayed union. (f) Prolonged lowering of tension. (g) Distorted pupil.

2. That by so frequently rupturing the supporting diaphragm, consisting of the suspensory ligament, the post part of the lens capsule, and the hyaloid membrane, which acts as a guard against the inroad of infection and a safeguard to the anatomical equilibrium of the eye, we ipso facto surrender the integrity of the organ.

3. The operation violates the essential conservation of correct surgery in so much that it introduces an unnecessary risk for the sake of advantages which can be otherwise more equally and safely obtained.

4. Frequent rupture of the capsule with its bad effect on vision.

5. Incarceration and prolapse of iris.


7. The necessity of unjustifiable pressure to extract the lens in its capsule.

8. Prolonged irritability, redness, lachrymation, and chemosis.


10. It is not an operation to be recommended for beginners.

B. The advantages claimed by the intracapsular school for Smith’s operation are:

1. A cataract can be extracted at any stage of its maturity.

2. Its superiority over all other operative procedures in the extraction of immature cataract.

3. Unless the capsule bursts, which it seldom does, especially if a selection be made, the entire lens in its capsule is extracted, which is the goal all aim at.

4. The marked absence of iritis as an after complication.

5. The absence of need for a secondary decisive operation.

6. Absence of the train of post operative inflammatory symptoms so closely connected with, and mainly caused by, retained cortex.

7. Absence of impaction in the incision of capsular tags and its adhesion to the iris with its subsequent dangers.

8. Fewer instruments are introduced, thereby reducing the chances of infection and the ill effects of over free instrumentation.
The Extraction of Cataract.

9. Convalescence is markedly shortened.
10. Increased degree of visual acuity with a much higher percentage of good vision, i.e., between 6/6 and 6/36 more especially 6/6 results.
11. Atropine is unnecessary in the after treatment.
12. Lower percentage of striped keratitis.
13. Lastly in all respects it is an infinitely superior operation.

It would be interesting and I think profitable to go through systematically and in detail the advantages and disadvantages of the two operations, but space forbids, therefore suffice it to say that theoretically and practically the intracapsular school have established the advantages they claim and dispelled the fears and reduced to a minimum the disadvantages as stated by the capsule laceration school, and the new operation of Smith or the complete operation has come to stay and will shortly be universally adopted as the ideal operation for all cataracts, save those of adolescens and traumatic cataracts which fortunately are infrequent.

Before closing this paper I must refer to a paper on the above subject, read by Dr. G. C. Savage before the ophthalmological section of the American Medical Association in June, 1910, and published in the journal of that Association in the July number, 1910 (see Vol. 55, No. 4, *The Journal of the American Medical Association*) in which he describes another operation for extracting the lens and capsule. It differs essentially from the Smith operation, in that a new instrument with complicated curves is introduced into the eye to tear loose the ligaments supporting the lens, and thus make easy its expulsion. At the time of writing the total number of operations performed by this method was only 38, and these by five different operators; 19 of these being done by Dr. Savage himself. He asserts that he is satisfied with his instrument and the results obtained, but as no details of the cases have yet been published, judgment must be reserved, and it is necessary to wait and see the details of his results as compared with the results of the Smith operation before anything can be said in comparison of the two operations. In the discussion following the reading of Dr. Savage’s paper, Dr. Wood, who had operated on 13 cases by this new method and others who took part in the subject brought forward the following objections: 1. Increased traumatism. 2. Its unsuitability in nervous and restless patients. 3. Subsequent vitreous opacities. 4. It requires two skilled assistants. 5. Complicated movements of an extra instrument inside the eye. 6. Capsule liable to be torn. 7. After capsule and lens are detached, they have still to be delivered, whereas in the Smith operation both are
done together by one movement. 8. Prolonged after-treatment; dressings twice or thrice daily for two weeks.

With such grave objections brought forward, and with no apparent advantage over the Smith operation, it is difficult to believe that Savage's operation can ever threaten the position now reached by the Smith or complete operation for intracapsular extraction of cataract.

THE SPECIAL ASPECTS OF HERNIA AND ITS PROPER TREATMENT IN CHINA.

By W. H. Jefferys, M.D., Shanghai.

Hernia is an extremely common affection among the Chinese, both among the labouring classes as well as among those of more sedentary occupation. Among the former, owing to the strains and stresses incident to their life; among the latter, owing to the muscular atony and degeneration brought about by theirs.

The labouring classes of China are a hardy, rugged, strenuous lot; the life of many being more like that of beasts of burden than of men—carriers of heavy loads, rowers of heavy boats, drawers of heavy carts, and so on. One has but to look into the face of a wheel-barrow coolie trying to start his barrow laden with eight to ten passengers, or up hill with a large load of bricks, and notice his congested face and tense, straining muscles, to realise the amount of abdominal pressure that must be brought to bear before he gets under way. This is but a type of the kind of strain we mean.

In direct contrast to the labouring man is the clerk, the teacher, the well-to-do Chinese of almost any scholarly or clerical occupation, including the wife and all the female relations of the same. The most violent exercise of these consists of a stroll up the street at a leisurely pace. Sports are unnatural and acquired. Energetic movements are rare and unprepared for. The muscles are insufficiently developed, fat predominates, or an anaemic relaxation, both of which conditions are conducive to the formation of hernia.

All types of hernia are found in both men and women. In men, inguinal and inguino-scrotal predominate; the latter being in excess because no early treatment of the former is instituted. Umbilical and femoral are occasionally found in men; the former usually associated with ascites, the latter usually of rapid onset and immediate strangulation. Among women by far the commonest form of hernia is ventral
between the recti. It is usually umbilical, but often due to multiple labour with separation of the recti muscles. As in so many other surgical conditions among the Chinese, the average of herniae is large and overgrown. When not so, the patient is almost invariably young, or the hernia has appeared very recently.

It is almost true that no treatment is resorted to by the Chinese themselves for this condition. But as the Chinese baby wears a tight and fairly well fitting abdominal binder (usually outside the clothes, but firm and even in its pressure for all that), and wears this for several years, we may attribute to this fact possibly the limited number of infantile umbilical herniae met with in later life.

In dealing with the subject under discussion, the special aspects of hernia and its treatment in China, we shall do so under the following headings:—

(a). The choice of operation upon inguinal hernia and its after-care.
(b). Operation upon large inguinal hernia; its advisability and method.
(c). Strangulated hernia: early stage, late stage.
(d). Treatment of the cord and closure of the hernial sac in operations for the cure of infantile hernia.
(e). Operative treatment of large umbilical and abdominal herniae.

(a). The choice of operation upon inguinal hernia and its after­care.—There is no difficulty whatever about obtaining consent to the operation for inguinal hernia in Shanghai. It is not regarded by the Chinese as an abdominal operation. It is supposed to be extra­abdominal. It is to the working man a serious impediment to his gaining a livelihood, and to the well-to-do because so frequently large and cumbersome a source of great discomfort.

In China, Bassini's, when applicable, is the favourite operation among surgeons, and into the technique of this it is not worth our while to go. But certain points, as the result of mature personal experience, may be worth noting, which will tend materially to satisfaction and success. The factors which enter most conspicuously into bringing about real success in the Bassini operation are: first, absolute sterilization of the skin, the use of rubber gloves, the very dainty handling of all tissues, the assured finding of the sac before attempting to isolate it, the careful placing of the deep sutures so that, while giving support, they embrace the minimum of tissue and, while firmly tied, yet do not strangulate the surrounding tissues. Chromicized gut and kangaroo tendon are the only legitimate materials for this use. William B. Coley, of New York, places one suture above the cord, and it is an excellent practice because it allows the cord to come out in a normal position and not around a curve. Our own custom is
to ligate the sac as high as possible, leaving the ends of the ligature long and using these for the first stitch, placing it above the cord. The cord comes out directly beneath it; otherwise the Bassini is according to rule.

A rather large proportion of inguinal hernia in China are direct, and in many others the canal is so old and so dilated that it has lost its original character, and appears as an indurated ring at the position of the external ring; the whole looking directly into the abdominal cavity. In these cases the ordinary Bassini hardly applies, and a very simple method of treatment, practiced by Duncan Reid for years in Shanghai, is to allow the cord to come out at the lower angle of, shall we say the external ring, or better, the canal, and close everything above it, being careful not to strangulate it by overzealousness. Attempts at more elaborate treatment will give no better results, will require more handling of the tissues, and will frequently endanger the deep epigastric artery. In these the conjoined tendon is stitched directly to Poupart's ligament. Silkworm gut should be used for the skin, again not too tightly tied, and in cases where much handling is required or oozing is anticipated, a small gauze drain in the lower angle of the wound and a firm pad at the fold of the groin. It is a very good rule to use rubber mackintosh over the dressing, making a small hole for the penis and thus to prevent the dribbling of urine on the dressing, as the Chinese are careless about the matter. Attempts to keep the average Chinese patient flat for more than a very few days will prove futile; therefore little reliance may be placed on such hopes. Excellent results, however, may be anticipated, and it is rare, in our experience, to have reports of recrudescence, always supposing that the wound heals properly without stitch abscess.

Halstead's operation we have used, but it required even better nursing than Bassini's and is not therefore so satisfactory in China.

(b). Operation upon large inguinal hernia; its advisability and method.

So much for inguinal herniae of ordinary size. But in China one is constantly facing the question of the advisability of operation for herniae of exaggerated size and long duration. Both these factors affect the conditions and advisability of operation very materially; the large size by reason of its greater seriousness, owing to the greater age of the patient on the average, the weaker condition of the same, and the likelihood that the hernia will be associated with a cough; this cough being part of a vicious circle and due to a chronic bronchitis, very
often tubercular but not invariably so. The length of the duration of
the hernia affects the question by the fact that tissue changes take
place in these old tumors, the mesentery becomes permanently elon­
gated and thickened; there is very apt to be a descent of abdominal
organs into the sac, and far more serious yet there takes place a dimi­
nution of the calibre of the abdominal space by muscular contraction
and fixation, rendering it next to impossible to reduce the entire large
hernial contents into the abdominal cavity, or when so reduced, pro­
ducing so much pressure that closure and retention of the hernial ring
becomes difficult or impossible. There is hardly any surgical condition
more embarrassing than having opened up a large hernia to find it
impossible to retain the contents thereof in the abdomen while proceed­
ing with the operation.

In the first place, in operating upon these large herniae, the gener­
al condition of the patient must be carefully considered—age, occupa­
tion, condition of heart and lungs and kidneys, the advantages pro and
con, the possibility of keeping the patient at rest for a number of
weeks perhaps. These must all be weighed against the advisability of
leaving bad enough alone. The local condition also must be considered
in the following respects: the tone of the muscles, the possibility of
complete reduction without excessive pressure, and the probable contents
of the sac. This sounds easy enough as so stated, but in practice is by
no means so. In the first place, these herniae are often irreducible, or
at least partially irreducible owing to adhesions from old inflammatory
reaction; not infrequently from Chinese needling, or from local perito­
nitis from any cause. If one has reason to believe that the hernia is
reducible after separation of adhesions and so on and that the abdomen
will contain it, then if the patient’s condition will warrant the opera­
tion and no chronic cough be present, there is almost no limit to the
size of an inguinal hernia which one may fearlessly tackle. Mere size
does not militate against the procedure nor even against the possibility
of a very good and permanent result. These herniae are the easiest of
all in many cases as far as mere operative technique goes. When in
doubt of the contents of the hernial sac, where other conditions favour
operation, there is no possible objection to an exploratory “look­see.”
In fat persons even the probability of being unable to reduce the con­
tents of the sac into the abdomen would not forbid this procedure, as in
more than one instance we have explored, thinking it likely that a
large amount of fatty omentum would prove to occupy the sac which
when removed would render reduction possible. In these cases one is
guided by the general adipose condition of the patient together with
the percussion sound of the tumor and also the feel of the contents. In such, if the tumor appeared to be all intestinal, the exploration might not be warranted, whereas if omentum were largely in evidence the operation might be most successfully performed.

With regard to the technique.—After careful dissection and reduction the sac is usually found to be much thickened and to require considerable effort for its isolation and removal. These cases are among the number in which the typical Bassini is not usually practical, and being frequently associated with chronic orchitis and usually found in older patients, a castration is often warranted and complete closure of the abdominal opening permissible. A binder and firm support must be worn for a long time by the patient.

A typical case of these large herniae is reported by Doctors Gos-sard and Baldwin, Yenping, Fukien. The weight of the patient was about 130 pounds. The doctors note a slight bronchitis and a very large tumor of the scrotum. We would ourselves re-emphasize this association of bronchitis with large herniae, as we believe it to be, if not the cause of the herniae, a certainly determining factor in their very large size. The scrotal mass was larger than a man's head, the neck immensely thickened, opaque, transmitting light, the upper part was tympanitic, the lower part dull on percussion and gave water fluctuation. The right inguinal canal was large, and at the external ring there was an impulse on coughing. The lower part of the tumor was tapped and 700 cc. of water drawn off. This reduced the tumor slightly, but the effect was ephemeral. The cough was treated for a short time with success. At operation 1,000 cc. of fluid was withdrawn before incision. The sac was very much thickened; the transverse colon covered by the great omentum came first into view. It was necessary to enlarge the inguinal canal to replace the viscera. The great omentum, ascending colon, calcum and appendix, and the entire ileum with its mesentery were found in the sac. The appendix was thickened and contained faecal concretions. It was emptied but was not removed. The right testicle was six inches in circumference (note this particularly) and was removed, simplifying the operation. Closure was by imbrocation and No. 2 chromacised catgut used. The scrotum was amputated. The cough returned after operation (this is to be expected), and there was slight suppuration in the wound due to colon bacillus. At least temporary success was attained.

We quote this case with pleasure, as it bears out so accurately our own experience. The reporters are to be congratulated on their careful observation and notes.
(c). Strangulated hernia; early state.—Where hernia is common, frequent strangulation may be expected. In our Shanghai experience we have noticed with satisfaction that the great pain and other alarming sensations produced by strangulation usually result in a prompt presentation of the patient for treatment. We remember one patient who, although dwelling at distance, was relieved by operation within an hour of strangulation, and we usually get these cases before much damage is done. This, however, is not the experience of most surgeons in China, in whose minds strangulated hernia calls up a picture of gangrenous bowel and faecal fistula.

In our experience there is nothing very peculiar in the early strangulated herniae of China. They are according to rule. The majority of them occur in small herniae with tight canals, the result of pressure or bruising, and occasionally from enteritis or dysentery. It so happens that we have not yet lost a case of strangulated hernia, but this is merely owing to good luck. The most interesting in our practice was in the case of a man who presented himself for double entropion. He also had bronchitis, which proved to be tubercular. After staying in hospital for some time he revealed the fact that he had chronic orchitis on both sides; each testicle being enormously enlarged, and an inguinal hernia on each side; the whole scrotal mass being about the size of a cocoanut. After successful treatment for the entropion, he insisted on operation for the herniae. It was refused on account of his tuberculosis, and a well-fitting double truss applied. Unfortunately one hernia came down at night while the truss was still on, and before morning there were active symptoms of strangulation. We were compelled to operate, and did a one-sided castration at that time. But before the patient left hospital the other side went wrong, strangulated, and operation was again performed with castration. If it had not been for the cough and tuberculosis there is every reason to suppose that both of these would have remained successful. Within two years the patient died of his lung trouble, and there was a slight recurrence of each hernia, a bubonocele brought on by the coughing, which was hard and persistent.

Dr. Claude Lee, of Wusih, reports a case of strangulated femoral hernia in a man. Operation was successful and a radical cure obtained.

We would repeat the old warning that in all cases of strangulated hernia, before reduction is permitted, a very careful inspection of the contents of the sac should be made. An anomalous case of strangulated hernia occurred in our practice some years ago. A man presented himself with symptoms of an inflamed hernia, and as there was some
œdema and infection of the scrotal wall a misdirected attempt was
made on our part to quiet the thing down by rest and local measures.
Symptoms of peritonitis, however, developed, and a tardy operation was
performed, which revealed a sac full of pus but without other contents.
It seemed to be shut off from the abdominal cavity. We never quite
satisfied ourselves as to the pathology of the condition, whether an
inflamed hernia reduced itself, carrying infection with it, or whether
inflammation took place in an empty sac, or possibly a hydrocele. In
any case, we acknowledge fault in delaying operation.

The common experience of surgeons in China is to see their
strangulated herniae in an advanced stage, necessitating resection of
the gut or even the treatment of sequential faecal fistulae; these faecal
fistulae being nature's attempt at cure. In practically every case of
their formation the history given by the patient is that of terrible
suffering and a narrow escape from death, and of course many in
China die without relief either artificial or natural. A case in our own
practice presented himself for the first time in a moribund condition
with about four feet of gangrenous intestine hanging from a sloughed
scrotum. Even in that late condition operation was refused. It was
difficult to imagine why the patient applied for treatment.

Typical cases are reported by Dr. McCartney, of Chungking, and
Dr. J. Preston Maxwell, of Yungchun. Dr. McCartney's case is one of
strangulated hernia becoming gangrenous, sloughing off and healing
with faecal fistula. The patient had had hernia from his early youth.
At thirty-five years of age the hernia strangulated and after fifty-six
hours of strangulation he became insensible and remained so for a long
time. On recovering consciousness he found the scrotom gangrenous
and the intestine gradually sloughed off, leaving five or six faecal
fistulae from the hernial ring to the bottom of the scrotum. After eight
months of passing all his faeces through these fistulae he applied for
treatment. Emaciation was extreme. On account of the filthy
condition of the openings and the bad health of the patient a resection
was not considered. A local operation, with a view of closing certain
of the fistulae proved partially successful, but obstruction of the bowel
finally carried away the patient.

Dr. J. P. Maxwell's case was a man thirty-eight years of age.
About three years before an inguinal hernia had strangulated and
he was very ill for some time. Eventually the whole mass sloughed
and a faecal fistula was left in the right groin with a large mass
of inverted bowel protruding. He has remained an invalid since.
On admission he was very emaciated, at least three knuckles of
inverted bowel protruded, the skin was much excoriated, there were five openings in the lumen of the bowel; two of these at the level of the skin and all of them leading into the afferent portion of the small intestine. An incision was made in the right line, a semilunaris well above the fistulae and the abdomen opened. The parts were seriously matted together—the omentum, bowel, bladder, and so forth. After three hours' dissection a large mass was brought out and the bowel divided above and below it. Murphy's button was used and reinforced with Lembert sutures. A foot of bowel was excised. Three months after the patient was at work in the fields. This case illustrates the fact that it is not worth while to undertake this condition except with a view of radical cure. It goes without saying that the abdomen should not be opened at the seat of the fistulae without very good reason for so doing, by which we mean a single fistula and only partial sloughing of the lumen of the gut.

(d). Treatment of the cord and closure of the hernial sac in operations for the cure of infantile hernia.

It has struck us that undescended or maldescended testis associated with inguinal hernia is peculiarly common in China, and infantile hernia also so. The treatment of the former condition is a so many-sided question that we do not feel warranted in taking it up, especially as the larger systems of surgery cover the points thoroughly. The authority on the subject is William B. Coley, of New York, and his paper, "The Treatment of the Undescended or Maldescended Testis Associated with Inguinal Hernia," (Annals of Surgery, September, 1908), is well worth a careful reading, as well as his chapters in Keen's System of Surgery. We have ourselves found the treatment of the condition and the closure of the hernial sac in operations for the radical cure of infantile hernia, with or without maldescent of the testis, one of the very most difficult in this whole field of work, far more taxing to our ingenuity than mere strangulation or intestinal resection, and yet it is a condition which anyone is liable to meet with unexpectedly if in the hernia business at all. And to the novice there is perhaps no condition in surgery which is more difficult of proper treatment than infantile hernia. The proposition of handling the cord without injury to the testicle and closure of the neck of the sac in infantile hernia is one of extreme difficulty and one upon which too little has been written by those who have given their life to the important subject of the radical cure of inguinal
hernia. It is perhaps sufficiently taxing to the average general surgeon to do a Bassini or a Halstead neatly and without laceration and obtain a satisfactory cure, and the anatomy and technique of the operation is by no means a simple one. But when in inspecting an acquired hernia, the surgeon finds that the cord is not without, but within, the sac, and the testicle likewise so, and both, as it were, a part of the sac and yet extraperitoneal, and the cord not a cord but an expanded surface in which the vessels, nerves, and vas are spread out to a width of perhaps two inches beneath the peritoneum, and where, if one could isolate these tissues without laceration thereof (which one cannot), one would have opened the sac in such a way that to merely ligate that which was not part of the cord would be not to close the neck of the sac at all; then a condition is presented which, unless one is prepared to meet it in some definite way, would bring the operation to a standstill owing to the inability to complete the same.

In this we speak from experience and confess frankly that such were the conditions under which we first operated for infantile hernia. The case was as follows:

A double inguinal hernia, in a young man, with a history of many years' duration of the same. There was only, apparently, a right testicle; the left could not be palpated. We began on the right side, having in mind the usual acquired hernia. We found the cord widely spread out over the inner surface of the sac and the testicle practically within the sac. We tried to dissect out the cord, and failed completely. We finally cut along each edge of the expanded cord and so completely opened the sac. We then ligated what was left and removed it. There was then no possibility of closing the sac, and we merely laid the expanded surface at the lower angle of the external ring and closed the external ring with sutures down to the point where further closure would have strangulated the vessels and vas, so leaving the peritoneum open at the ring. On the left side, after dissecting out the scrotal sac of the hernia, we found the sac extended upon the abdominal wall and contained a flattened-out, atrophied testicle, when for total lack of knowledge as to how to proceed, placing a double ligature around the sac and cord, we removed the whole en masse, doing a one-sided castration. At this point in the operation a profuse haemorrhage took place from under the bladder, proceeding, as we found, from the right side, which we had to open again to find that in attempting to dissect out the cord on that side we had torn the spermatic artery, which had slipped into the pelvis. It was extremely difficult to catch and ligate...
and the patient completely collapsing, we had to simply pack gauze over each external ring and abandon the operation at that point. The further history of the case involved a pelvic peritonitis, a faecal fistula, considerable irritation of the bladder, congestion of the right testicle (from pressure we suppose), and at the end of several months a final closure of the wound with considerable scarring, a result which was anything but a source of pride to the surgeon and anything but a satisfaction to the patient.

As a natural result of this experience we have given much time and study to the subject and have had the very great satisfaction of meeting the condition in after years with a consciousness that we can now handle it with satisfaction, both to ourselves and to the patient, according to the following method, which we believe to be by far the most satisfactory procedure possible under the circumstances and thoroughly sound from the surgical standpoint.

The incision is made down to the sac, which is very carefully isolated. The testicle is drawn up out of the scrotum and the vas, with its accompanying nutritive structures, located by incising the sac in a straight line in the axis of the cord. This cannot usually be done without opening the sac and seeing with one's eyes exactly where the structures lie. A broad band averaging two inches in width is cut with a straight scissors from the testicle to the internal ring, including all the structures of the cord. At the angle where one of the two incisions ends at the internal ring, a chromacised gut-threaded needle is inserted from the outside, passed in front of the band which includes the cord and, taking small stitches in it at one or two points, brought out at the corresponding angle of the incision on the opposite side and then the two ends of this stitch are wrapped around the portion of the sac which does not contain the cord and firmly ligated at the internal ring. The portion of the sac included in this ligature is then amputated and the two ends of the ligature left long, to be used afterwards as the first stitch to close the rings. Enough of the amputated portion of the sac is left below to be purse-stringed and closed over the testicle as the new tunica vaginalis. The band containing the cord naturally puckers itself laterally, or folds itself into a structure which resembles the ordinary cord and may be treated exactly as in the Bassini operation. The testicle is then replaced in the scrotum, from which it has never been separated, but merely turned out, as it were; the upper strand of the ligating stitch is placed in the upper edge of the ring and the lower in Poupart's ligament sufficiently beneath the upper angle of the ring to allow circulation to the testicle. The remaining
portion of the ring below this stitch is closed with three or four chromacised gut ligatures, the cord laid upon these stitches, the fascia sewed over the cord and the skin over that. The final result is a Bassini, in which, though the neck of the sac is not absolutely closed, it is practically so, to all intents and purposes, as one could not get more than a probe through the space between the first ligature and the new-formed cord. In every respect besides that of the manufacture of the cord and the placing of the first stitch, the operation is in its doing exactly according to the procedure in acquired hernia.

The points that we would emphasize are:

(a) That no slightest effort should be made to dissect out the cord in infantile hernia, that it should be acknowledged as impossible and its structures merely included in a broad band including the whole.

(b) The careful placing of the stitch which is to have the three-fold use of closing the neck of the sac, folding up the band which is to be the cord, and acting as the first stitch to close the rings.

(c) The puckering of the band and treatment of it as the cord is treated in the ordinary Bassini.

(d) The manufacture of a new tunica vaginalis by withdrawing the testicle from scrotum and purse-stringing the lower sufficient portion of the sac of the hernia.

(e) Operative treatment of large umbilical and abdominal herniae. —The last important form to which we shall refer is the large abdominal hernia, umbilical or ventral. These are reported from all over China and are usually in women and associated with labour. They are most commonly umbilical, next between the recti, and after that lateral, in the line a semilunaris, and so on. These vary in size from a walnut to a waterpail; the latter variety containing most of the abdominal contents. These large herniae become pendulous, the coverings are thin and prone to ulceration, and the contents in constant danger of strangulation by twisting and by their own weight. In many umbilical and ventral herniae there will be found ascites present in the abdomen which will affect the prognosis and the question of operation very positively, especially if it is of so great an extent as to make pressure on the wound before it has had time to heal. Drs. Betow and Draper (Singiu, Fukien) report ventral hernia three inches to the right of the umbilicus caused by native doctors using needles piercing the abdominal wall, causing sloughing and local gangrene and consequent weakening of the abdominal muscles and fascia. In this case the sac was the size of a child's head and its contents easily reduced, as the ring was three inches in diameter. Dr. Wells, of Pyengyang (Korea), reports "an enormous umbilical hernia as big as two hats." Operation was not performed in this case.
With regard to the treatment of these cases.—In the aged many are best treated by a well-fitting abdominal supporter consisting, if irreducible, merely of a firm sling; if reducible, of a padded concave hard-rubber plate which extends beyond the margin of the ring and is held in place by a canvas or cellular band with straps. Only those cases are rightly operable where the age and health of the patient will admit and the hernia is reducible as to size, that is, where we are sure that the abdomen will contain the contents of the hernia without undue pressure.

With regard to the methods of operating they are simple enough. The sac is dissected out, the hernia reduced, the neck of the sac ligated with the utmost assurance of not including any portion of its contents. According to its size, the ring may be either directly drawn together with interrupted sutures of chromacised gut or, when large with sharp edges, it is better to split the ring, even into the muscle, in order to bring wider and fresher surfaces together. Dr. Booth, of Hankow (C. M. J., March, 1909), describes the filigree implantation method in abdominal hernia previously considered inoperable. His paper is worthy of a careful perusal. In abdominal herniae with extensive areas of protrusion it is perhaps the only method by which success can be attained. It is especially applicable to those cases where, after operation, considerable fascial sloughing with atrophy of the muscle has resulted in extensive abdominal hernia. The method involves the use of silver wire No. 28 gauge, in all filigree, with eight loops to the inch, laid if possible next to the peritoneum, and the wound closed as described by McGavin in the Lancet for November 23rd, 1907, with Mitchell's clips and stout salmon gut sutures. The method is not an easy one of application and is rarely necessary except in wound herniae where tissue is actually lost.
SOME VEGETABLE BODIES FOUND IN THE FAECES.

By C. W. Young, M.D., Peking.

When we stop to reflect that by far the larger proportion of the food of man, especially in the Orient, is of vegetable origin, and that cellulose, which surrounds most plant cells is indigestible, we realize that vegetable detritus forms a very considerable proportion of the faeces. Further, this detritus may contain tissues or bodies resembling more or less closely tissues or bodies of animal origin; the latter being perhaps of pathological significance. From this it is seen that some knowledge of plant histology, as well as of the morphology of the fungi and algae is essential to one who is to study the faeces intelligently.

The purpose of this paper is not to enumerate bodies of vegetable origin that have been found in the stools by any one or several observers, but rather to describe briefly those plant structures which may be expected to appear. They may be whole plants, as fungi or algae, or they may be their spores, or only fragments of fungi, algae or of the higher plants.

As these enter the body with the food, a study of the diet of the patient will often give valuable evidence as to whether an unfamiliar object is of this origin, or has been produced in the intestinal tract by parasites living there.

Whether the food has been cooked or not makes a great difference in the microscopic appearance of the remains that appear in the stools. This preparation of the food may lead to swelling, shrinking or other distortion, and the passage through the intestinal tract and its being subjected to the maceration and the chemical action of the warm secretions still further changes the appearance. This modification may be so complete as to render the recognition difficult or impossible.

As most of the objects met with are definitely food detritus, we may first consider the cell products and then the histological structure of the higher plants.

First, as to cell contents and products.—Normally, as in animal tissues, there is protoplasm, a nucleus and sometimes a nucleolus. The cell-wall, however, consists of cellulose, a substance having the same empirical chemical formula as starch \((C_6 H_{10} O_5)\). It differs in not turning blue when treated with a watery solution of iodine, but it does assume this color if subjected to sulphuric acid and iodine or to a mixture of iodine, potassium iodide and chloride of zinc.

The cell walls may undergo changes in composition. (1). They may become cuticularized when, on account of their containing cutin,
they turn yellow when treated with sulphuric acid and iodine or with iodized zinc chloride. Or (2) they may become lignified, i.e., impregnated with lignin. This may be recognized by treatment with aniline chloride and hydrochloric acid, when they turn yellow; or with phloroglucin and hydrochloric acid when they become a deep pink. When treated with a mixture of nitric acid and potassium chlorate, the lignin is dissolved out, and the tissues give the cellulose reactions instead of those of lignin. Lignin does not appear in the lower plants, i.e., below the ferns.

(3). The cell-wall may become more or less mucilaginous, but it still reacts like cellulose to the reagents mentioned.

(4). Mineral matter may be deposited in the cell-walls. This is especially true of silica in the grasses and scouring rushes. Calcium oxalate and carbonate are also found in the cell walls or as cell-inclusions.

CELL CONTENTS.

(1). Chlorophyll, the substance that gives to ordinary plants their green color, is found in the leaves and in some other tissue that are exposed to the light. It exists in granules of various shapes called chloroplastids. These are of importance because it is within them that the plant forms starch by the influence of light.

(2). The starch grains are usually not seen there, however, but in the storage parts of the plant where they have been re-deposited within or on the side of the so-called leucoplastids. Starch grains are round or oval granules with one or more centres around which the material is arranged in alternating concentric light and dark zones. This characteristic appearance is destroyed by cooking.

(3). Fats. Oil drops are found in many plants, especially in the seeds. This may be recognized by treating with osmic acid solution, when it turns black.

(4). Proteid grains may be spherical or oval, and occur in many seeds. They show no structure, but generally contain a mass of mineral matter, which may be spherical or crystalline. In some seeds, a portion of the proteid (globulin) may form a body having the shape of a crystal and hence called a crystalloid.

(5). Mineral crystals are frequently found in plant cells. These are octohedral or acicular crystals of calcium oxalate or more rarely of calcium carbonate.

All these may be found in fragments of vegetable matter in the faeces especially when the food is incompletely masticated and is eaten uncooked.
PLANT TISSUES.

Plant tissues, like those of animals, consist of cells. These may be simple or may be fused together with one cell-wall forming a syncyte which roughly may be compared to a giant cell, i.e., there are several nuclei to one mass of protoplasm. Plant tissues may be divided into two general groups: Parenchyma, in which there is no great difference in the three axes of a somewhat cuboidal cell; and Prosenchyma, in which the cells are very much longer than broad, and the wedge shaped ends interdigitate.

In plant tissues the cell-wall is very much more prominent than in animal tissues and may in a certain sense be compared to the intercellular substance of the latter. Its character, together with the shape of the cells, serves as a basis for the classification of the forms of tissues.

Thus we may recognize:—

1. Thin-walled parenchyma, found especially in fleshy and succulent parts of a plant (e.g., leaves, fruits, tubers, tuberous roots, etc.). This tissue is constantly met with in faecal examinations when the patient has been on a diet containing foods of the above varieties.

2. Thin-walled parenchyma may be lignified or not. The latter is more common and is found in the mid-rib of leaves, young shoots, etc.

3. Cuticularized tissue is usually parenchymatous.

4. Sclerenchyma is usually prosenchymatous and is hollow (i.e., having lost its protoplasm, contains only air or water). Such cells are called fibers and are typically found in flax and hemp. The walls are marked with round or with narrow oblique pits. There is, however, an important form of sclerenchyma which is irregular or rounded. The roundish cells are found in great abundance in pears and give the gritty character to the flesh of some varieties. These cells are not digested, and hence appear in the feces.

5. Tracheal Tissue.—As may be suspected from its name, this tissue is so called because of the fact that the thickening of the cell-wall resemble in appearance the cartilaginous rings of the trachea. This is true of some forms, i.e., the wall has annular thickenings. There are many other forms of markings, however, e.g., oblique rings or irregular thickenings, the so-called "bordered pits," latticed bands, etc., etc. Sometimes the thickenings are spiral, and these spirals, becoming detached from the cell-wall, appear in the feces as highly refractile, pale greenish bodies. They might be deceptive to one
unfamiliar with them. Tracheal tissue is found in the vascular system of all plants above the mosses.

(6). Glandular Tissue.—This may form either solid or hollow multicellular glands or unicellular "sacs." The secretion may consist of mucilage, gumresin, ethereal oil, or balsam, or other substances less commonly.

It is hardly profitable to enter into a description of the combination of the above tissues into tissue-systems, but fragments of such are constantly met with in the faeces, and the constituents of such fragments enable one to recognize them as vegetable tissue. To one really expert in the differences in the structure of the various orders, it may be possible to name the plant from which the fragment was derived.

There are two other structures often seen and sometimes confusing: One is plant hairs. They occur on many leaves, as well, to a less extent on other parts of a plant. They are indigestible, and hence often appear in the faeces. They vary greatly in size and shape, may be simple and conical or stellate or irregular. They may be glandular, i.e., hollow and containing secretion. They may be uni- or multicellular. Cotton fibers belong to this class of structures and are often seen in the faeces.

The second structure to which I wish to call attention is pollen-grains. They differ very greatly in size and appearance. Those of the higher plants (the Angiosperms) are spherical, oval, triangular, etc. (or long and cylindrical in a few orders). The wall is usually distinguishable as divided into two layers, the extine and the intine. The latter is usually cuticularized and may bear spines or ridges forming patterns of various kinds. In the Conifers the pollen grain has a different appearance. The exine is expanded to form two air-sacs, whose thin walls bear a tracery design inside. These sacs, with the grain proper, make the body trilobed in cross section. Pollen grains are not digestible and might easily appear in the faeces. Their recognition is of further importance, as they might be mistaken for the egg of some intestinal parasite.

I wish now to take a hurried review of the different divisions of the vegetable kingdom below the mosses and note some of the forms that may appear in the faeces. The water forms, especially those with silicious or cuticularized cell-walls may be ingested with water from pools, streams, and springs; less commonly from wells. If such water is drunk "raw," these forms will pass through the alimentary tract and appear in the faeces. The diatom shells will be unaffected by
boiling. The possibility of using water contaminated with vegetable (or animal) organisms in diluting faeces for examination should always be kept in mind.

All plants below the mosses are divided into two great groups: the Algæ which contain chlorophyll, and the Fungi, which are devoid of it.

I. ALGÆ.—Only a few orders are of interest to us.

1. Cyanophyceæ (the blue-green algæ).—If seen alive, the Oscillariaceæ may be confusing because the free end has a slow swaying or oscillating motion. Their color is a blue-green.

2. Chlorophyceæ (or green algæ).—Sometimes desmids are seen, though usually they would be digested. They are bicornate or boat-shaped, bright green, unicellular organisms, whose one or two chloroplasts are fluted or ridged.

Fragments of some of the Characeæ might be seen, as they have silica in their cell-walls. Their cylindrical leaves are in whorls and the internodes consist of one or more cells, which may be straight or spirally twisted.

(2). Phæophyceæ (or brown algæ).—The diatoms are important because they are sometimes abundant in water used for drinking, and they are encased in capsules, whose two parts fit together like the cover and body of a pill box. The cell-walls are marked with fine lines or ridges. The shapes are various, being round, oblong, and spindle-shaped. Fragments of the seaweeds may be expected in the faeces in many cases, as they are common articles of diet.

II. FUNGI.—The lowest group is the Schizomycetes, to which the bacteria belong. It is unnecessary to call attention to the fact that bacteria, both living and dead, form a very considerable proportion of the faeces. Strasburger estimated that about one-third of the dried faeces is composed of them. We know that some forms are normal to the intestinal tract appearing within two or three days of birth. It is not necessary to refer further to these organisms.

The second sub-class (Myxomycetes) need not be mentioned except to say that in some stages they closely resemble the amœbæ and possibly might be mistaken for them, though they could hardly survive the passage through the digestive tract. (Here let me make a side remark to any who may wish to show amœboid organisms to students. If a leaf of the common Chinese cabbage is soaked in water a day or two a plentiful supply of these amœba-like myxomycetes can be obtained.)
Of the other fungi, few possess interest except so far as their spores are concerned. The plant body itself would hardly appear in the stools save perhaps in the case of the Basidiomycetes, to which the mushrooms belong. Spores of the fungi are of great importance, however, and are commonly seen. This is especially true of the rusts and smuts which affect grains and must commonly be swallowed with the food.

Sub-class III. Phycomycetes.—One of the commonest moulds of this group is Mucor, which bears oval or spherical spores in a thin-walled sporangium which terminates a branch of the mycelium. Another though less common group is the mildews. One variety affects the leaves of the potato plant. The oval or heart-shaped spores (gonidia) are borne on the branched gonidiophores. Oidium albicans, the organism of thrush, belongs to this group.

Sub-class IV. Ascomycetes.—Probably the commonest of the moulds is Penicillium, also called the "blue-mould." It gets its name from the fact that its asexual spores or gonidia are united in rows on the ends of the branched gonidiophores, so that the whole looks like a little brush. The spores are very small, spherical and of a bluish pearly color. Aspergillus is also common. It has similar rows of gonidia bristling from a knoblike gonidiophore. The sub-class gets its name from the fact that the sexual spores (spores proper) are found inside oval sacs (asci), which again are inside a brownish ascocarp. This ascocarp has appendages which terminate variously, e.g., in hooks or in dichotomous branchings. Inside the asci are the ascospores, which vary in number. Once seen these bodies are easily remembered. They hardly resemble any animal body, but the ascus might possibly be mistaken for the shell of the egg of some worm and the ascospores for the dividing ovum.

Sub-class V. Acidiomycetes.—This group is divided into two orders:

1. Uredineae, the "rusts."
2. Ustilagineae, the "smuts." The cycle of development of the Ustilagineae is rather complicated, but they bear two forms of spores that should be mentioned: (a) the Uredospores (or more properly the uredogonia), which are single-celled, oval and often covered with spines; and (b) Teleutospores (or better teleutogonia), which are either simple or compound; yellow, brown or black in color, and with a thick cuticularized but usually smooth outer covering. The teleutospores are very resistant, and may readily pass into the fæces. Specimens of this group were reported by Dr. Jefferys in the China Medical Journal last year as being found in the stools.
Sub-class VI, *Basidiomycetes*—the Mushrooms.—Various members of this group form part of the diet of the Chinese, especially of the upper classes, so that we may well expect to find the spores in the stools. The asexual spores are produced in great numbers, and give the pink, yellow, brown or black color to the under surface of the field mushrooms, as well as to the members of this group that attach themselves, shelf-like, to trees and rocks.

The yeasts belong to the same sub-class and are occasionally seen.

The mosses and ferns are not ordinarily articles of diet, and their spores are but rarely found in the stools.

From this brief review it will be seen that a great variety of structures of vegetable origin are found normally in the faeces and that another large group may be there accidentally. Practically none of them are pathogenic.

The value of their detection lies in the fact that they may be mistaken for pathological human tissues or parasites, and it is therefore important that they be recognized. If this paper proves of any help in avoiding the pitfalls that have been pointed out, its writing will have been justified.

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**A SPORADIC CASE OF EPIDEMIC CEREBRO-SPINAL MENINGITIS.**

By ERNEST C. PEAKE, M.B. (Edin.), Hengchowfu.

The patient, my own house-coolie, age 33, native of Hengchow, southern Hunan, had complained for several days of headache, loss of appetite, and weakness.

On the evening of May 8th, 1909, I was called to his beside and found him in a high fever (104° F.), with intense headache, and his back and bones ached badly also. He had had a rigor, and now vomiting had come on. Feeling confident that I had to deal with a bad attack of malaria, I prescribed accordingly.

May 9th.—When I saw the patient the next morning, I learnt that he had been delirious nearly all night. His temperature had fallen to 99° F., but his headache was more intense than ever, and the vomiting continued. In the evening his temperature was 101° F., and not feeling happy about him, I injected with a hypodermic syringe quin. hydrochlor., grs. 3, deep into the gluteal muscles. The headache that night, however, was such as to preclude the possibility of sleep.
May 10th.—On the morning of May 10th the temperature was over 102° F. (see chart p. 407). The headache had become so fearfully intense and paroxysmal that the patient seemed to be driven nearly frantic by it. When I saw him at 7.30 a.m. he was shouting out with the pain and beating his head with his hands. I felt that morphia was the only drug that could subdue such intense agony, and accordingly injected gr. ½ hypodermically. I also felt that I must revise my diagnosis. Having taken a specimen of his blood and stained it, I put it under the microscope. No evidence of malaria could I find. It was not surprising that there should be no malarial parasites, seeing the patient had had quinine, but there was no relative increase in the large mononuclear leucocytes, such as one would have certainly expected had the case been one of malaria. Instead of an increase in the large mononuclear leucocytes I found a large increase in the polymorpho nuclear leucocytes; these being increased to 90 per cent. of the white cells. The blood-count worked out as follows; Polymorphonuclear L. = 90 %; large mononuclear L. = 3 %; small mononuclear L. = 7 %. Thus it will be seen that the blood-count definitely pointed to some micro-organismal invasion (except typhoid), and, taken in conjunction with the violent headache and vomiting, was highly suggestive of cerebral abscess, or some form of meningitis. Typhus, with marked nervous symptoms, at first seemed a possibility, but this also we were soon able to eliminate from the diagnosis. As the effects of the morphia wore off, the pain asserted itself with all its former intensity. His agonised yells could be heard all over the hospital. The pain towards evening became most intense in the lumbar region, and at 8.30 p.m. a second injection of morphia, gr. ½, was given. The button-cautery was also applied to the nape of the neck. Enema given.

May 11th.—At 5.30 a.m. it was again necessary to give ½ gr. morphia, and at 9 p.m. it had to be repeated. Patient fed with Horlick’s milk.

May 12th.—Extreme prostration, but vomiting subsided. By the afternoon the patient was semi-comatose and aphasic. It was quite clear that the case was one of acute cerebro-spinal meningitis. There was no history of suppurative middle-ear trouble, or anything to denote the possibility of direct infection of the meninges by septic matter. No tubercular history. It was evidently a sporadic case of the epidemic type of the disease. Another blood count showed the polymorpho nuclear leucocytes had fallen to 46 % and worn out; ragged-looking cells they were. (Question: What is the explanation
of this? The specimen was taken from the peripheral finger-blood. Had the great army of leucocytes marched inwards to attack the enemy, and so only the used-up stragglers could be found in the peripheral circulation?)

May 13.—On May 13 Kernig's sign became well-marked. The pupils were dilating. The head was retracted, but not markedly so. There were peculiar stiff movements of the hands. The facial muscles became fixed in spasm, giving rise to a well-marked "risus sardonicus." There were muscular tremors at times. The breathing became laboured and of an irregular "Cheyne-stokes" variety. Urine and faeces were passed involuntarily. No rash could be discovered.

Ice being unobtainable, cold water was applied to head and spine and KI grs. v, t. i. d. administered. The feeding became difficult, as spoonfuls of milk thrown to the back of the throat would be very slow in exciting any reflex act of swallowing. Had the difficulty in feeding been still greater, I think the best thing would have been to have fed by means of the stomach tube, passed through the nostril.

May 14th.—Signs of improvement and returning consciousness. Pupils contracting again. Breathing more natural, slackening of spasm. Slight strabismus noticed. Blood-count showed that polymorphonuclear leucocytes had risen again to 74 %. The cells looked better, but were still flimsy-looking.

May 15th.—Consciousness returning. Patient opened his eyes and looked round. Less difficulty in feeding.

May 16th.—Patient answered feebly when spoken to. In the afternoon consciousness seemed almost fully restored. No headache, but great weakness.

May 18th.—Though cerebral functions pretty well restored, urine and faeces continue to be passed involuntarily.

May 25th.—Passed motion voluntarily. Urine, still involuntarily.

May 26th.—Passed urine voluntarily. Patient rapidly improving and strength daily increasing. Appetite good. The heart has kept up wonderfully well. Pulse slow, even down to 52 occasionally, usually about 62 per minute; regular, soft, compressible, and dicrotic.

Early in June the patient was getting about and resuming small odd duties. He complains of persistent localised pain to left side of back of head, which, however, is not severe, and is daily improving.

At the height of the disease, the advisability of performing lumbar puncture to draw off some of the cerebro-spinal fluid and so to relieve tension, occurred to me, but was not determined upon. It would have been interesting too to attempt to isolate the diplococcus intracellularis.
A note by Dr. Hume of the new *serum treatment* for this disease appeared in the May number of the *China Medical Journal*, p. 137. The results of the serum treatment appear to be most encouraging; the mortality of this distressing malady being reduced by its means from about 80% to under 30%.

My object in writing these notes of this case is to find out the experience of other medical men in regard to epidemic cerebro-spinal meningitis ("cerebro-spinal fever"—Osler). I have not met with it before in China, but possibly others may have done so frequently. It would be interesting to get the experience of others on the subject.
LOW FEVER.

By P. B. Cousland, M.B., Shanghai.

Among the minor ailments of life in the tropics and sub-tropics low fever plays an not unimportant part, and as it is the cause of a good deal of impaired health, and is not always recognized and properly treated, it has seemed worthy of some detailed notice. And I do so all the more readily from having had a somewhat intimate experience of its effects.

I shall begin by quoting Maison, and as its symptoms are few and simple, I shall proceed to relate some clinical cases as illustrating its chief features.

Low Fever, like simple continued fever, is not an unusual one among Europeans in the tropics. Its characteristics are indefinite duration—weeks or months, a persistent though slight rise of temperature—rarely above 101°.5, but never below 99, anorexia, debility, loss of flesh, and a tendency to bilious diarrhoea. It is unrelieved by quinine or arsenic, but it almost invariably responds to a change of air, especially to a trip at sea.

The first case was a personal one, and occurred on my return to Swatow from furlough a good many years ago. The first symptoms developed after returning from a short country trip. A general ache came on in the afternoon, becoming more marked every day, and suggesting and meeting with anti-rheumatic treatment. A chilly sensation was presently added to the ache, and led to the temperature being taken, when it was found to be about 100°. Quinine was administered, but without effect; the temperature rose every afternoon, and as it rose my spirits went down, and the afternoons were marked with decided fits of the blues. The trouble was considered malarious, and was treated with large doses of quinine, increased to 35 grains in the 24 hours, but as the only effect was a very uncomfortable cinchonism, nature was allowed to have her own way unassisted or unimpeded, and after three weeks' duration the symptoms disappeared. The maximum daily rise was 101°.5, which persisted for a few days and then gradually sank to normal. Apart from the feeling of malaise and depression, while the temperature was up, there was no interference with ability to do one's daily work.

At about the same time a medical confrère who had returned with me, and who was stationed at the country place I had visited, developed a similar train of symptoms, which abruptly disappeared a few hours after he set out to travel to Swatow. I have never had another attack.
**Low Fever.**

*Case 2.* A lady who had been in China for five years and had latterly been living at an inland city. She had been troubled with languor and depression of spirits during the summer, which was spent at a hill station. One day in the autumn the slightly raised temperature of the skin led to the thermometer being used, when it was found to register a degree above normal. The symptoms in her case were: a daily rise of temperature to from 99°.5 to 101°; usually about 99°.8 or 100°, with a fall to normal or nearly normal according to the height of the rise. As the temperature rose the throat and palms felt dry, and there was marked depression of spirits. This condition ran on for six weeks in spite of treatment, when a change to the port was tried. The temperature soon fell to normal and even subnormal, and she returned home, believing that the fever had gone. It almost immediately returned and continued for nearly a month, when it again fell to subnormal. As this coincided with the menstrual period, and the fever appeared again when the period was passed, it became evident that on both occasions its fall was due to this and not to any real improvement. The cool winter weather failed to help, and the patient became progressively debilitated, although there was little or no anorexia or loss of flesh. No treatment tried was of any avail. The morning sickness of pregnancy now began to complicate matters. The pulse became quick and feeble and she was confined to bed. It was evident that nothing short of a radical change of climate would avert disaster, and she was brought down to the port and taken to Hongkong. The motion of the steamer added to the uterine nausea produced an alarming condition. Fortunately a solution of sodium bromide had been prepared to obviate sea-sickness, and this (remembering Dr. McLeod’s use of the drug in large quantities) was administered in double doses. As, through some misunderstanding, the solution had been made up double strength, the patient took 400 grains a day. The effect was remarkable. All nausea disappeared, and she was quite free from it all across the Pacific. The large doses were not, of course, kept up once the full sedative effect was produced. The only complication was cystitis. The bromide was stopped on reaching land, and one week afterwards the morning sickness recommenced. Medical opinions before starting, were emphatic that the fever would soon disappear on the sea. It, however, persisted during the voyage and did not finally disappear until several weeks after arrival in the States.

This lady has had many subsequent attacks while in China. In none of them has the symptoms been so marked or persistent; the temperature hardly ever rising to 100°. Strangely enough the low
temperature curve during menstruation has not again been seen. The most recent attack was last summer, and it had lasted for a month when she sailed for home. The voyage again did not produce any immediate effect; the temperature rising to 100° every afternoon until the weather became really cold, when it commenced to lessen and finally disappeared some weeks after arrival at home.

Case 3. A lady at the same city. The symptoms were the same—temperature, throat, palms and depression of spirits. She was advised that the summer change to the port would break it up, a prognostication that was not fulfilled; the condition lasting till the autumn. This lady also has had repeated subsequent attacks, but never causing any serious inconvenience.

Case 4. A boy aged 5, from the interior, who had been living for a short time at Swatow in a house noted for cases of low fever and malaria. When he came under my notice he was at a seaside sanitarium. His temperature rose daily to 101° or 102° and even 103°, but it did not seem to produce much debility, for he ran about and played with the other children. The fever eventually gradually passed away.

These cases are atypical, in that they did not at once respond to change of air, possibly because it was not tried soon enough. The curative effect of such a change is, however, marked and undoubted. Again and again it has been noticed at Swatow that cases occurring on one side of the harbour have been speedily cured by a change to the other side.

That the affection, while usually slight, can cause serious debility, is shown in case 2, and Dr. Crombie, the authority on Indian fevers, who was the first to draw attention to this type, has told me of men there who have been forced by it to retire permanently from that country.

Dr. Leonard Rogers, in his recent book, refers to it as "Low Fever of European Immigrants in India," and describes it as a low intermittent form of fever occurring in those who have lived for several years without a break in the trying damp climate of Lower Bengal and Assam. The fever temperature rises regularly in the middle of the day or early afternoon, declines in the evening, and is usually normal in the early morning. With the rise there is a feeling of lassitude, disinclination to work and depression of spirits out of all proportion to the degree of pyrexia. The affection usually begins in the hot weather, and may continue through the following cold season. It is extremely persistent, and causes much nervous depression. There are no physical signs. In very long cases there may be some enlargement of the spleen.
Low Fever.

The leucocytes are reduced to from 2,000 to 5,000 per cubic millimetre. Lymphocytes are increased about 40 per cent. at the expense of the polynuclears, which are reduced 50 per cent. There is no marked increase in the large mononuclears.

Dr. Rogers has only seen it in the damp hot provinces of India. He also refers to the remarkable effect, at least in the earlier stages, of a change of climate. He repeatedly found a change to a dry laterite soil, even with a higher air temperature, caused sudden and absolute disappearance of the pyrexia as long as the patient resided there, although it reappeared very soon after returning to a damp alluvial spot. This remarkable effect of change of climate in less firmly established cases will differentiate it from organic diseases with chronic intermittent fever, e.g., early tubercular disease and insidious amoebic hepatitis. Phthisis, however, may become a terminal infection. Rogers suggests that the temperature rising during the hottest part of the day shows some casual connection between the two. Whether or no there is any such connection the rise certainly commonly attains its maximum earlier than is usual in febrile processes, i.e., in the early afternoon. In case 2, however, the maximum was irregular; sometimes retarding and getting later day by day, at others accelerating. Rogers further says all the symptoms and the effects of change point to an enfeeblement of the heat regulating mechanism by prolonged strain as the essential cause of the excessive diurnal variation of the body temperature. On the other hand, the resemblance to the more chronic forms of Kala Azar makes it possible it may be due to some protozoal parasite. The decrease of the polynuclears suggests a leucocytozoan parasite, or it may be a sign of impaired health. I should think that the last is much the more probable and that it is due to local climatic environment, causing a derangement of the heat mechanism. It is a question, however, whether an excessive diurnal rise of the body temperature to the extent of one degree can cause the marked depression of spirits which is so pronounced a feature of the affection. In the speedy cure effected by a change of air, sometimes a very slight change, it resembles beriberi, but the theory of endemic intoxication does not seem a probable one. Case 2, after a year's residence at home, has occasionally a brief recurrence of the trouble. This rapid climatic relief is an argument against infective causation.

In conclusion: I have not observed the anorexia, loss of flesh, and tendency to bilious diarrhoea mentioned by Manson; my cases have included a larger proportion of women than men; I have not noticed it among the Chinese, and treatment by drugs was quite ineffective.
A PLEA FOR THE LATERAL PERINEAL OPERATION FOR VESICAL CALCULUS.

By James L. Maxwell, M.D., Tainan.

Dr. Roys, in his very interesting paper on vesical calculus in the July Journal, dismisses in a single line as unworthy of description the operation of lateral lithotomy. I shall venture to take up the cudgels in favour of this much despised operation.

The ideal operation for stone is the suprapubic operation with immediate suture of the bladder walls. In how many of our stone operations is this practicable and in how many, where it is practised, does it result in primary union? Failing the ideal practice, I venture to maintain that the easiest, speediest and most "surgical" operation is lateral lithotomy for suitable cases.

Speediest.—Our last two operations took respectively 2½ and 2 minutes.

Most "Surgical."—The opening is dependent, drainage is perfect; the patient is much more comfortable if one has to do without nursing than is a patient treated by suprapubic operation, and convalescence is rapid; the patient leaves the hospital in from a fortnight to three weeks after the operation.

Easiest.—The simplicity of the operation is best shown in a brief description of the method we use ourselves.

The patient is anaesthetised, the sound passed, and the patient then placed in the lithotomy position. An assistant holds the sound and pushes its curve down onto the perineum. A sharp knife is entered in the median line 1 inch in front of the anus and the point made to engage at once in the groove of the sound. Having found this the knife is slowly withdrawn, making a cut about 1½ inches long in a line from the point of entrance towards a point half way between the anus and the left ischical tuberosity. The knife is at once re-entered, the point engaged in the groove and the surgeon, taking the sound in his left hand, firmly pushes sound and knife together into the bladder. The knife is withdrawn, the first finger of either hand made to worm its way along the cut into the bladder, enlarging the hole as it enters. The sound is withdrawn. The finger after further stretching the opening is withdrawn. Stone forceps are entered, the stone seized and extracted. A rubber drainage tube is stitched in the wound and a little superficial plugging pushed in.
Note.—There need be no anxiety about haemorrhage; it is one of the bogies of the text-books. Usually it is very slight, and is always easily controlled, if severe, by careful plugging.

The lateral operation is suitable for all stone up to 2 ozs. In the case of large stones the incision in the bladder wall will need to be carefully enlarged with the knife in the direction of the original wound. It is contra-indicated in cases of very large stones (over 2 ozs.) and, in our opinion, in very small children, in whom there is a danger of wounding the seminal vesicals and producing sterility.

Why is the operation neglected? Different men have different reasons, and of course I would not venture to suggest that to any other new comers the reason may be the same that prevented me from operating for months after I began work here, by the lateral method; my reason was funk. I had never seen the operation done, and my fancy conjured up horrible pitfalls in the way. I often smile to myself when I think with what trembling hands I did my first lateral lithotomy. But whatever may be the reason that deters men from using this method, I beg for this simple operation a fair trial before throwing it over in favour of new and more difficult methods.

SOME DISPENSARY OBSERVATIONS.

By Mrs. B. C. Patterson, M.D., Suchien.

EPIGLOTTIS.

For seventeen years I have had charge of a daily clinic in China, and during that time have seen four cases where the epiglottis is visible by forcibly depressing the tongue without using a mirror. This by the native doctors, as well as by the patients, is considered a most serious affliction. Two of the four were almost insane from fright and anxiety. They have no idea what the epiglottis is, but call it a new tongue, and say it "wants the life." One of the cases had been stuck with needles and drawn with hooks until it was very much swollen. I succeeded in convincing them of the fallacy of their fears, and the improvement to their health and expression afterwards was good to see.

DEFECATION PER VAGINA.

A baby eight months old was brought to me because of defecation through vagina, and this was done so perfectly that the mother had not noticed it until the baby was eight months old. Otherwise the
baby was perfectly formed, fat and healthy. The nates were normal, but only skin where the anus should have been; no opening at all.

HÆMATURA PURPURA.

A leading native doctor of our town has sent several patients to me that he did not feel competent to handle, and one of them was a very marked case of purpura. He is a doctor of large practice and had never seen a similar case, and it is the only one I have seen here, so I do not think the trouble can be common. A description of the case would not be profitable, but the appearance of the tongue was somewhat remarkable. It was very swollen, purple until almost black; the mucous membrane elevated in places from hemorrhages under it. The hemorrhages from the tongue were more severe than from the gums. One of the most interesting parts of this case was her splendid recovery.

HEMORRHAGE UNDER SCALP.

A girl, sixteen, had been held by her hair while she was beaten by her father. The entire skin of head and forehead seems to have been pulled loose. The fluctuation of the blood was felt over the entire head, and above eyes and ears it was so pronounced as to have the appearance of a fatty tumour. She had no pain, and was perfectly comfortable, except her head felt heavy. I advised waiting a few days to see what nature would do for her condition, and was amazed to hear that finally it was all absorbed.

GLAND FEVER.

This affection, as described by Ashby and Wright, I have hoped to see mentioned in the Journal. It is common here and especially in the fall. My cases almost all occur in children, and the majority under eight years of age.

The seat of the trouble is in a gland on the right side, midway, nearly between the angle of the jaw and the point of the chin. This gland swells from the size of an egg to that of a tea cup; other glands may also enlarge. There may or may not be fever above 100°. Last September I treated two foreign children for it, just after returning from Kuling. They both had this special gland mentioned to become the size of a small cup. Perfect resolution occurred, though suppuration for a time seemed inevitable. In one child the attack lasted a month, in the other about three weeks. In the Chinese, suppuration often occurs, and after that perfect recovery. Ashby and Wright's advice not to paint enlarged glands with iodine I fully agree with.
MEDICAL SUPERVISION OF STUDENTS
With Some Results Obtained by Systematic Examination.

By J. C. McCracken, M.D., Canton.

We believe that you will all agree with us when we say that some medical supervision of all schools is desirable. You may not all agree that the physical examination of each student as he or she enters school and the constant supervision of water, food, dormitories, campus, and surrounding country are necessities. We missionaries of this great Empire are being entrusted with the lives, the health, and the spiritual welfare of thousands of the country's best blood. It is a great responsibility.

It is not the object of this discussion to consider the spiritual side of the student's life, only in so far as it is influenced by the moral and physical life. We agree that the spiritual is the most important, but we also agree that the three are very closely related and that any one of the three cannot develop normally without a similar development of the other two. It is only necessary to visit some of the mission schools to be convinced that the spiritual life is trying to be developed at a great sacrifice of the physical and we believe also to the moral.

We find students packed into dormitories two, three, or more in one bed; no ventilation; the amount of fresh air admitted to sleeping rooms, per capita, very slight; water and food allowed to remain about as the students are accustomed to in their ignorant home surroundings. Under these conditions the Gospel is taught and the student is expected, sooner or later, to comprehend the pure holy life of the Master. Are we not working against great odds and in most cases unnecessary odds?

Let us enumerate some of the enemies of the student life in China. Probably the first in importance, and the one most common at least in the South, is tuberculosis. What better field for operation could this 'bug' pray for than is found in some of the crowded schools of this country. Not long since I heard a missionary, not a doctor, say that it seemed as though his mission just trained men to die with consumption.

Infectious eye diseases cause much misery among students who are not properly housed and cared for. Trachoma runs rampant in many schools. Little attention and less treatment are prescribed.

Skin diseases of all kinds are found; scabies probably being the most common. No boy or girl can be taught to have respect for his or her body if it is covered with dirt and itch.
Beriberi often breaks out in crowded schools, and we know of no disease harder to cure and stamp out than this one. The result of one attack may stay with the patient for life.

Malaria in the south frequently nearly breaks up a school. The attendance of many students is made very irregular because of frequent attacks. We are glad to learn that some schools have begun to use quinine as a prophylactic to good advantage. We feel that much more should be accomplished along this line.

The plague and cholera are diseases that we can only guard against by keeping everything about the school and student hygienic and sanitary. Such precautions at home prevent the spread of the disease and will, even in this country, accomplish much.

Diphtheria, scarlet fever, measles, mumps, etc., are diseases which are likely to break out at any time. Proper treatment and the prevention of the spread are the only things that can be done in such cases.

Specific infections may appear in schools with direful results. Such cases should, we believe, be removed from school at once, not only because of the dangers of infection, but also in some cases at least because of the evidence of moral laxity.

Bad habits are very real enemies of the student. We believe it is our duty to remind the doctors and inform the laymen and urge on them the fact that a crowded school is a fertile field for the development of such habits. It is bad to allow our students to become infected and die of tuberculosis, but it is far worse for us to allow them to live in our dormitories under such conditions as will make it easy to form such habits as will make them moral degenerates.

At the Canton Christian College and at other schools and colleges medical supervision, more or less extensive, has been in vogue for a number of years. We can only speak with personal experience of our own school—the Canton Christian College. We would like to hear from others.

In this school full authority is given to the college physician in matters pertaining to the health of the faculty, students, servants, and anyone else allowed to live on the campus, in all matters of food, water, hygiene, sanitation, and any phase of the place which has to do with the health of the community he is responsible for. Excuses from work because of physical condition are granted by the doctor. Each student is requested to report to him for physical examination. When those giving the entrance examinations find a student whom they believe will not be able to pass the physical requirements, an examination may be requested before the student is admitted into the school.
For three years past no student with suspected tuberculosis has been allowed to enter or to remain in the school should such symptoms arise after entrance. One exception to this rule was made last year in the case of a boy who was finishing the preparatory course. He showed every evidence of the incipient stage (the tubercle bacillus could not be found). He did not expectorate much, he was very careful with his expectoration, he was quite willing to carry out any treatment in every detail. We decided in this special case that we could make him not a menace to the other students, and so decided to allow him to remain in school. He was put in a room by himself, made to sleep with door and windows wide open, given additional diet of raw eggs and milk, and ordered to be out of doors every minute possible. He gained a little in weight and his cough grew no worse. At the close of school we advised him to go to the mountains, which he did. Three months later he wrote that he was much better and that he wanted to re-enter school. This was, as you see, an exceptional case. We believe that there should be few if any such cases allowed to remain in school.

Students suffering from trachoma are refused entrance to the school, and should any student develop symptoms while in school he is sent home. Some may think this very radical treatment, but when we see the prevalence of this disease among the Chinese in general and among the students of some schools in particular we feel fully justified in doing all within our power to prevent its spread.

Any student who is not able to show at least one good scar is vaccinated. We have been surprised at the large number of students who have been vaccinated when they were small babies. Two years ago one case of small-pox broke out in the school. He was sent home, the room fumigated, and all students who had not been successfully vaccinated within the past five years were treated. No other case followed. This student had a small baby scar. His attack was light.

Any student found to be infected with scabies or any other infective skin disease is given a course of treatment, and should he be negligent in carrying out the treatment; he is sent home until cured. There is practically no itch in the school.

Last year six cases of Beriberi broke out in the school. Exact source unknown. Two of the cases were found to be from adjoining beds. The other cases came from different parts of the dormitories. The first case was an interesting one. He came to us one morning complaining of shortness of breath and weakness, with the following history: On the day before, because of the rain, he had run from the dormitories to the recitation hall, a distance of about four hundred
yards. After getting in out of the rain, he said that he was distressed and very short of breath and that it was half an hour before he regained himself sufficient to go on with his work. We found his card, and he had been passed the year before as physically sound. His legs were slightly swollen, with but very little edema. Urine examined, but no albumen found. No specific history obtainable, and the boy said that he had always been able to run as much as any of the other boys in school. Pulse was rapid, and upon examination of the heart we found it to be evidently much increased in size; no murmur, but the muscular sounds weak. We did not then suspect Beriberi. We told the boy that he would have to take weeks of absolute rest, and since he lived in Hongkong, and since we had no accommodations to enforce such treatment, we would allow him to go home. We advised him most carefully about the care of himself and urged that he go into a hospital in Hongkong. We do not know what treatment he took, but he died three or four days later.

The next four cases reported with slight swelling of the legs, slight edema, increased heart rate, with a history of having had a peculiar sensation in the legs for two or three days. These cases made me diagnosis the cause of the first break down to be Beriberi. These cases were put in the second story of a higher building; diet changed for the most part to foreign food (because of change of cooks), rice and salt fish were prohibited, strychnine and magnesium sulphate given; no more exercise allowed than was necessary to go to and from classes in the same building. All rapidly improved and three allowed to return to the dormitory and regular food at the end of one month. The other case did not fully recover until he went home on his vacation some two months later. Another case developed, but recovered under the above treatment. Might we say here that this disease is quite common in some of our schools in the south and especially so among the soldiers. A splendid field for research work.

Malaria we have with us the year round. We are not at all satisfied with the results so far obtained. Removal of breeding sources in the immediate neighborhood, quinine and nets are the only preventatives that we have used. We have asked for a screened sick room where all infected cases could be moved at once. We hope in this way to remove some of the sources of infection at least. From personal experience, of two and a half years' duration, we most heartily recommend the screening of all residences in South China.

During the rages of bubonic plague we have attempted a quarantine of the campus. Although this has been very imperfect, so far no
Medical Supervision of Students.

One young gardener on the place broke quarantine and went to the house of a relative suffering from plague. He contracted the disease within a week and died.

Last year two other schools had to be closed entirely: several students died.

By summarising the results of seventy examinations made this fall, mostly by my colleague, Dr. Li, the following percentages are obtained:

Some abnormality of shoulders ... ... ... 33 per cent.
" " spine ... ... ... 11
" " skin ... ... ... 4
" " heart ... ... ... 5
" " lungs ... ... ... 4
" " eyes ... ... ... 4
" " eyelid ... ... ... 23
" " teeth ... ... ... 35

Average pulse rate, sitting down, before exercise, 77.7; after, 87.9. Exercise: three dips bending at the knee.

These physical examinations often bring out information which is very valuable, and are most helpful if made during the first few weeks of the term.

We believe that it is the duty of the Christian church, or any one who has under him students, to give to each one of them hygienic sleeping quarters, food prepared under good sanitary conditions, a physical examination, and such medical supervision as will make the school house or the school campus the cleanest and the healthiest, by far, than any place in the city. By so doing we not only save the lives of our students, but we train them in cleanliness and sanitation. We give them a taste for better things so that when they leave school they will go out to raise those about them to better living.

Our schools will then be a pattern for the Chinese schools to follow. We will then train more men for serving and not so many for dying.

We believe our schools will then be more efficient and better able to help in the bringing of the Kingdom of God to this great people.
How Can We Stimulate Scientific Interest in Medical Students?

By James Boyd Neal, M.D., Tsinan.

No one who has taught Chinese medical students for any length of time can fail to have been impressed with the difficulty of exciting in them the interest he himself naturally feels in scientific subjects. It is easy enough to get them to do their daily work, whether in class room or laboratory. Indeed it is remarkable how regular they invariably are in their attendance and how faithful in the performance of their daily duties; it being a rare thing in the writer's experience to have students ask to be excused from their regular recitations or their laboratory work. At the same time it is by no means easy to beget in them any enthusiasm for the studies which they pursue so assiduously, or to persuade them to ask intelligent questions.

As an instance in point, the writer has always been much interested in chemistry and has regularly had laboratory work for the classes under his care in inorganic analysis, seeking to stimulate interest by having the students do original work in the analysis of inorganic drugs to be found in the Chinese shops. In no instance, however, has he been able to excite sufficient interest in students to do more than the required amount of work, though the laboratory and all its resources have been at their disposal, and though they have seemed to be fairly interested and very faithful in the doing of the daily tasks.

Again the same difficulty appears in connection with dispensary and hospital work. When called to examine a case every student comes with the greatest alacrity and listens to the explanation of the case with gratifying attention, but the instant the instructor's back is turned his interest is gone and he does not seem to care, with rare exceptions, to go on and examine for himself what is to be seen. If again a case is sent to them for diagnosis, as the writer has repeatedly done with eye and skin patients, though frequently a correct diagnosis is reported, sometimes a manifestly snap report is sent back and oftentimes sufficient time has not been taken for making a careful examination, showing that they have not been enough interested to give the case the care it has deserved.

Now what can be done to remedy these manifest defects and to stimulate in our students a spirit of careful inquiry and painstaking attention, not only to their daily duties, but to the patients who come under their care; in other words to eradicate from their minds the idea that the study of medicine is merely a matter of learning from books?

In answer I would make the following suggestions:
How Can We Stimulate Scientific Interest?

First.—Give every student thorough training in laboratory methods.

From the very beginning of his course, that is, his medical course, taking for granted a knowledge of chemistry, physics, etc., let the work in laboratory occupy a very prominent place in the daily drill, giving him in his first year thorough work on the bones, requiring him to demonstrate on the skeleton the various points brought out in the text he is studying, requiring a careful study of good Parisian models of the human body, taking him on through histology, taught exclusively in the laboratory, each student being required to prepare his own sections, and giving him laboratory drill in physiological chemistry, and finally requiring him to do at least some work in the dissection of animals, so as to become familiar with the appearance of the various tissues and the general arrangement of things in the body.

In his second year let him have practical work in pharmacy and in the recognition of specimens in materia medica, together with at least demonstrations by an instructor in the physiological laboratory, and practical work in bandaging.

In his third year he will naturally be expected to do some laboratory work in pathological histology, and should be required to take a thorough training in the pathological clinical laboratory in the examination of the urine, blood, etc. and in the study of bacteriology.

During the fourth and fifth years, while not neglecting to still keep up his work in the last mentioned laboratory, his practical work will, no doubt, be directed more especially toward clinical conferences, clinics, and service in the wards of the hospital. This leads naturally to the second suggestion, namely:

Second.—Give each student the care of cases in hospital.

By this I mean not merely requiring him to examine and report on the diagnosis and treatment of patients, but also to assume the whole responsibility of certain occupants of the hospital and thus learn to rely on his own judgment. He should also be expected to perform operations on his own responsibility and have the care of them afterwards. How easy it is for us all to feel that we know so much more than our students and assistants that we cannot afford to allow them to treat important cases? And, too, how much quicker it is to thus do the work ourselves than to take the time and the pains necessary to see them do it under our supervision? Personally I feel more and more my own weakness in thus allowing myself to do what students and assistants should be allowed to do for their
own good and for the best interests of the native medical profession in China.

Such confidence is justified by the results. I have more than once been surprised and gratified to see what excellent work young men have done after leaving school and when thrown on their own resources, men whom I have been afraid to trust during their course, but who have shown the stuff in them when given a fair chance. The Chinese are not lacking in the self-confidence necessary to make good operators and good clinicians, and it would seem to be our business to give them the chance to acquire more practical experience while under our eye rather than expect them to acquire it all after leaving our care.

Third.—Have a medical reading room.

The great difficulty which confronts us in planning for a medical reading room for our students and assistants is the lack of medical journals in Chinese, a lack which we all trust our worthy editorial secretary will soon be in a position to supply, and the fact that nearly or quite all the medical books issued in the new nomenclature are used as text-books during the course, so that they do not bring anything new to the student. There are, however, a number of old medical books which I believe are still for sale, which might perhaps serve as a nucleus for such a library.

Then too we should wish to have the whole set of standard works issued by our Publication Committee placed in the library for reference, even though they do most of them appear in the regular course.

Fourth.—Be enthusiastic scientific men ourselves.

It is idle to expect to develop enthusiasm or scientific interest in our students unless we ourselves show them that it is worth while. It has been said that Dr. Flexner, the great pathologist, introduced a new spirit into the medical department of the University of Pennsylvania by simply exhibiting himself such an interest in scientific work that he infected all who came into contact with him.

We have every reason for enthusiasm, for we have a practically unlimited field before us, not only in a scientific line but also in a humanitarian way, and are in a position to do immense things in the way of developing scientific medicine in this empire. With thousands and tens of thousands coming to us every year for relief and with the opportunity of training for the service of their own people and their Master these young men and women who are in our care, there should be little difficulty in arousing in ourselves and in our students also an
absorbing enthusiasm for and interest in our noble profession. We owe it not only to our profession but to the Master whom we serve in this faraway land to set such standards before ourselves and our students as shall bring credit to the cause we represent, and show people that we not only do good humanitarian work but also first class scientific work.

MEDICAL EDUCATION FOR WOMEN IN NORTH CHINA.

By Anna Gloss, M.D., Peking.

I have been asked to state what we have been doing for the medical education of women in North China. I am obliged to confess that we have been far behind other parts of the Empire in taking up this work. Some twenty years ago Dr. L. H. King, of Tientsin, taught a class of three girls and trained them as dispensary assistants. Some years later Dr. Saville, of the London Mission, Peking, had a class studying nursing and dispensing. In 1905 the Presbyterian and Methodist Missions joined her in organizing a Union Training School for Nurses. This school has grown and is doing good work. The students take their lectures together, but do their practical work in the hospital to which they are assigned. The lectures and practical training cover three years.

In Tientsin in 1907 the Chinese government opened a school to teach nursing and midwifery. It is called a Medical College, after the manner of the Chinese, but it still does not attempt to give a full medical course. With the exception of the Medical College in Canton, there was no place where a woman could acquire a thorough knowledge of Western medicine.

The Mission Boards were continually being importuned to send promising girls to America, where they could obtain a medical degree, but at great expense, great risk to health and always the great danger that the students would return to their native land out of harmony with the life that was before them.

To meet what seemed a future rather than an immediate demand, a medical college for women was included in the plans of the Educational Union of North China, but it did not materialize until 1908, when two young women from two provinces were entered as the first class. A second class entered in February, 1910, which numbered six or more from at least four provinces.
The China Medical Journal.

The location of this school in Peking is fortunate for several reasons. The climate is good. The cold, dry winters leave little to be desired. There are Mission stations at convenient distances, where girls from the south can go to spend their vacations out of the city.

There are two good boarding-schools where a student may go to study Mandarin or to make up anything she may be lacking in the requirements for entrance. The lectures are given in Mandarin, which is almost as popular throughout China to-day as English.

The presence of the Union Medical College for men brings an unusual number of physicians to Peking. The Missions that are interested in both schools furnish the same lectures to the women that have been prepared for the men, thus with the minimum of labor giving most valuable assistance in the teaching at the Woman's College.

The requirements for entrance are high for Chinese girls, but not any too high to give the students a mental training that shall fit them for the long, hard course of study that is before them. Three years of English is required for entrance, and English is continued as a study throughout the course, with the expectation that the students will be able to read medical journals in English and thus be always able to keep in touch with the most advanced medical thought. The course of study as planned covers six years. The first three years are devoted to lectures and laboratory work, the last three to lectures and clinical work in the Woman's Hospitals of the Methodist and Presbyterian Missions.

At present we have to borrow our accommodation for the hospital at the Methodist Mission and our laboratory of the Union Woman's College, but we hope by the time the next class enters to have a college building with all the latest equipment for teaching medicine. Whatever may have been the attitude of other countries toward the advent of the woman physician, China certainly has always given her a hearty welcome. That her work is waiting her is proven by the rapid growth of the college in Canton and the loyal reception given its graduates.

We have only begun in North China, but two years of teaching has convinced us that, if girls are chosen who have an aptitude for the work, good preliminary training, patience and strength of purpose, they can acquire a useful medical education in their own land and in their own language.

As they learn by experience something of the life they have chosen, that it not only means the joy of loving helpfulness and service, but life long study, weariness and anxious care, they are almost turned back. It had looked so easy to be dispensing a little medicine.
The English-speaking Medical School.

The true meaning of it all is dawning on them with a sense of appalling responsibility. We have continually to encourage them and often give them some of Whittier's beautiful lines to brace them up:

The holiest task by Heaven decreed,
An errand all divine,
The burden of our common need
To render less is thine.

The paths of pain are thine. Go forth
With patience, trust and hope:
The suffering of a sin-sick earth
Shall give thee ample scope.

That Good Physician liveth yet
Thy friend and guide to be.
The Healer by Gennesaret
Shall walk the rounds with thee.

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THE ENGLISH-SPEAKING MEDICAL SCHOOL:
Its Place in the Medical Education of China.

By C. S. F. LINCOLN, M.D., Shanghai.

At a meeting of medical missionaries twenty-five, or even twenty years ago, the question of the expediency or utility of an English-speaking medical school for the instruction of Chinese students would hardly have been suggested, as there was, practically speaking, no place for it. To-day there undoubtedly is. Where and what is it? In a country where, strictly speaking, there has been until very recently no educated medical profession, the pioneers in medical education could do as they wished, and they did. They worked primarily for supplying their own immediate and pressing need for trained assistants. If they were facile in acquiring the spoken tongue, they taught in it, and if they had literary inclinations, they translated such books as they most needed, and were happy in their labors. But even among them there were those who had plans for the future of the profession, and some of them are still living to see those plans worked out by their successors.

A little later education began to develop on Western lines. In response to the demand, foreign languages, especially English, were introduced, and with the increased number of English-speaking educated young men, the possibility of training them in medicine in that language became a fact.

These schools were naturally established in the large centers in connection with or near the larger mission colleges where English is taught.
There is little doubt that the Chinese universities and colleges of the future will be those in which some one foreign language, preferably English, will be obligatory and universally understood by the student bodies. This statement may be modified by political conditions, which it is impossible to forecast, but for the sake of discussion, let it pass for the time being.

From the recent interest in, and development of, educational work of all sorts by the Chinese government, we must believe that, though still in its rudimentary stage, modern education in China has come to stay.

The Oxford-Cambridge University movement, the Yale Mission in Hunan, the University of Pennsylvania Medical School in Canton, Peking University, and the amalgamated education work in Shantung, Fukien, Nanking, and in other sections, all indicate that the pioneers of modern education in China intend to build on enduring foundations.

I have no hesitation in saying that at the present time, and for some years to come, the most thorough and enduring work in general and professional education is being and will be done by strictly mission schools, unless the government schools are put absolutely under foreign supervision, unhampered by official interference.

At the present time the government in its intense jealousy of foreign successes in educational lines, is trying to bring its own to the front by imposing legal discrimination upon the graduates of mission colleges and refusing to recognize their degrees. It is to be hoped that wiser counsel will prevail and that this hostility will change to a spirit of friendliness and coöperation, but for the present it is too much to hope for. In the meantime we must go our way building slowly, wisely, thoroughly. With the increase in the number of English-speaking students, there will be an increasing number of those who can and will be able to take professional studies in English and yet cannot afford to go abroad.

Schools of medicine teaching in English, or the most useful foreign language (at present these are synonymous), must be formed in the large center where the facilities in men, hospitals and laboratory equipment are available, and where, as soon as is practicable, dissection of the cadaver and other forms of pathological and physiological research may be conducted; until public sentiment is sufficiently enlightened, this must be in the treaty ports and under foreign protection.

Teaching in English will make possible the development of an efficient faculty in a much shorter time than if it were necessary for the
teaching to be in Chinese, and the students will have much larger advantages in the line of professional literature than they can possibly have for many years in their own language. In this statement I have no intention in any way of depreciating the work of those men who for many years have been laboring to evolve a scientific nomenclature and to translate scientific literature into this most ancient of tongues. They deserve all honor and praise for their labors and for their successes. Their field is wider than ours at present and their readers more numerous, though perhaps, as a class, less intelligent than those who have acquired a foreign language with the general education that it implies.

For the reasons cited, I believe there is a very real place for the English-speaking medical schools. Their equipment must be the best, their standards and curricula the highest; and for many years, I trust, may they be the trainers and guides of a new generation of Chinese medical men in thought, learning, and efficiency.

Traumatic Fistula of the Pancreas.

During the past year's work of the Salem Hospital, a case has been under treatment which has proven to be very interesting, and so far as known at present writing, is without a parallel, a similar case not having been recorded.

On the 30th of August, 1909, C— C—, a man who was at work in the mills at Ipswich, Mass., received injuries which necessitated his removal to the hospital. On his arrival it was found that a piece of shafting weighing about 500 pounds had fallen 3 or 4 feet and struck the patient across the abdomen, the blow injuring the patient internally, as three hours later he had symptoms of concealed hemorrhage.

Laparotomy was performed the same day. Intestines and omentum much contused, peritoneal cavity contained much blood, no bleeding point except from liver discovered. Quite a lot of drainage followed the operation.

The subsequent history taken from notes recorded by the Intern during the time of patient's stay in the hospital, state that up to the sixth day after operation, patient seemed to be doing very well. September 8th and 9th upper part of abdominal cavity much distended and patient suffering much severe pain, distention not from gas. September 10th upper part of abdominal wound had opened and a mass
seemed to be present there. Patient was etherized and wound was pulled together with deep silk sutures. September 11th patient much relieved, discharge from the wound milky in character and very irritating to the skin.

At this time it was positively known that an unusual case was being dealt with and experiments were begun to determine the character of the discharge. It was found that by feeding the patient "per rectum" the discharge nearly stopped. Feeding by mouth the amount of fluid reached about 20 ounces in 24 hours. Methylene blue failed to stain the discharge.

Laboratory Analysis:—Secretion turbid; whitish precipitate which could be filtered out, leaving the liquid clear. Specific gravity of secretion 1.010. Neutral in reaction to litmus paper, but alkaline to phenol phthalein. Secretion coagulated by heat, gives a jelly-like appearance when subjected to cold. Sweet oil readily saponified, and after three hours in the incubator the oil was split up into fatty acids and glycerine carbonates and chlorides were demonstrated. No bile. Albumen and mucin also found to be present.

By these experiments and analyses it was decided that the secretion was from the pancreatic gland, and further developments proved the case.

Since then and to the present time the patient has been excreting through a small opening in the abdomen the entire amount of a normal pancreatic organ. By the use of the commercial Pancreatin, the patient has kept himself in normal condition and by boracic acid ointment the abdominal parietes have been prevented from excoriation, due to the digestive power of the pancreatic secretion.

Different physiologists have availed themselves of the privilege of securing pancreatic juice from a healthy organ for experimental purpose.

The future of this case will depend on whether the amount of pancreatic fluid now coming through the intestines, if any, will increase in amount, if it does, the pancreatic fistula may close.

—From Annual Report of the Salem Hospital, Salem, Mass.
The yearly subscription to the China Medical Missionary Association is $1.50, 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.

Referring again to Dr. Clark’s letter in the May Journal, we desire to make explanation. The Editor on handing over to the Acting Editor the files of manuscripts for the May Journal, included amongst them Dr. Clark’s letter as printed. We are now informed by Dr. Clark that his letter to the Editor was a private and personal one, not intended for publication.

The present Editors were entirely ignorant of that fact. In due time the manuscripts appeared in the Journal, as sent forward by the Editor.

We expressed our regret in the July number that the paragraph in question had been inadvertently printed.

We now further wish to express still deeper regret that through the fortuitous concurrence of circumstances Dr. Clark and others should have been placed in such a painful position.

THE EDITORS.

WORLD MISSIONARY CONFERENCE.

Some influence of this wonderful gathering has reached even these remote corners of the earth.

From the public press and private letters we have been able to catch something of the spirit and inspiration which filled those days, June 14-23.

Our hands are strengthened, our hearts encouraged, and a fresh sense of that oneness and greatness of Christ’s army, which is
fighting His battles in all non-Christian lands, has been born in upon us.

Viewed from afar the outstanding and striking features of the Conference appear to be:

1. That at last the Christian churches are awake to the obligation which rests upon them to carry out our Lord’s final command.

2. That the Christian churches, to some extent, have grasped the magnitude of the work and its unique present-day opportunities.

3. That the fruit of mission work, as exampled by many who took part in the Conference, converts from non-Christian nations, answers forever the question, “Is the work worth doing; do the ends justify the means?”

4. That the unity which, thank God, has been known and enjoyed in the mission field for years, has at last come among the various sections of the home churches. What surprise, and delight, and hope this new relationship between the members of Christ’s body appears to have caused! We trust it will be an abiding unity and an earnest of better things in the future.

5. That in a manner not known before, the place and power of prayer was manifest in the midst of work. We believe prayer has been largely responsible for these marvellous results, and why should we be surprised? For months, all round the world, prayer had been going up, seeking just these divine blessings on the gatherings. Not alone were the well organised commissions and gifted speakers working in and through those sessions day by day. His Blessed Spirit was behind all, and those of us who had the privilege of preparing the way, can now rejoice together in praise for the results. Our prayers should follow the Continuation Committee, which has been formed to carry on the work of the Conference. May it exist as a bond of union bringing strength at home. May it work as the churches’ right arm carrying salvation abroad.

Our one regret is that medical mission work was not directly represented on the official programme. It should have been. As Sir Donald MacAlister, from chair, said: “Our Lord was the first medical missionary, and He was a medical missionary from the first. His method became His follower’s mandate, and it is ours to-day.” Who can estimate what power medical mission work has exerted in His service! No conference is complete without dealing with this branch of His work, and we trust it will never be omitted again.

Three unofficial sessions, attended by 57 delegates, 46 medical missionaries, and 27 medical practitioners, were held during Conference time, and on another page will be found a series of important resolutions passed at these sessions,
Of the 46 medical missionaries present at these sessions some 20 were our colleagues from the Far East.

This memorable World Missionary Conference has thus passed into history! Let us all see that we do our part in fulfilling our share of the work yet undone and carry salvation and healing, for soul and body, to those who as yet know not the Father on His great gifts to the world.

"FINDINGS" OF THE EDINBURGH CONFERENCE.

This sectional meeting of medical delegates, medical missionaries, and other medical practitioners interested in the medical aspects of missionary work, desire to represent to the Commission on 'Carrying the Gospel to all the World' their unanimous opinion:

1. That medical missions should be recognised as an integral and essential part of the missionary work of the Christian church—
   a. Because we are led by the example and command of Christ to make use of the ministry of healing as a means of revealing God to man; and
   b. Because the efficacy and necessity of such work as an evangelistic agency have been proved in many lands again and again, and such work has been sealed by the blessing of God.

2. That medical missions should be continued and extended, and that they should be under the charge of fully qualified medical missionaries, with properly staffed and equipped hospitals, and, where possible, European or American missionary nurses to supervise the native staff of nurses.

And to the Commission on 'The Preparation of Missionaries' their unanimous opinion—

1. That the medical missionary should be in definite charge of the spiritual work of the medical mission, and that this meeting heartily endorses the recommendations in the Report on Commission V. in regard to the spiritual preparation for such work.

2. That the professional preparation of medical missionaries should be as thorough as possible; that no one who has not passed through the complete medical curriculum and obtained a diploma or degree in medicine from a recognised examining body should assume the title of medical missionary.

3. That seeing it is impossible for each denomination to have a medical missionary training institution to itself, such interdenominational institutions as exist, namely, taking them in their chronological order of foundation—
   a. The Edinburgh Medical Missionary Society in Edinburgh;
   b. The London Medical Missionary Association in London;
   c. The American Medical Missionary College at Battle Creek, Michigan;
   d. St. Luke's College (Guild of St. Luke), London; and
   e. The Medical Missionary Institute for Germany and Switzerland at Tubingen, Germany,—
should be encouraged in their work and warmly commended to the sympathy and prayer of all interested in medical missions.
That every medical missionary should, before proceeding to the foreign field, have held (where possible) a resident post at a recognised hospital and post-graduate study in special departments, and in particular eye and tropical diseases.

Nurses Training:—

1. That there is still a great need for qualified nurses in the foreign missionary field.
2. That an adequate training for such nurses is essential.
3. That the training should be:
   a. General—Three years in a properly equipped hospital, or infirmary, with a resident medical officer.
   b. Special—After obtaining their certificate, such nurses should, if possible, receive further training in such subjects as midwifery, dispensing, elementary hygiene, cooking, district work in the slums of a city, and ophthalmic and fever nursing.

The Preparation of Missionaries:—

1. That all the societies should send fully qualified medical missionaries to every district where missionaries are located, when other qualified medical assistance is not available.
2. That all missionaries going abroad should have that knowledge which shall enable them to safeguard their own health and that of their families.
3. That those missionaries who are compelled to live in districts where there are no 'medical missionaries,' and where no qualified medical or surgical assistance is available, should have that knowledge which shall enable them to treat minor ailments and accidents.
4. That inasmuch as there are risks that missionaries should use this knowledge indiscreetly, or assume a position which they are not qualified to take, this training should be given in recognised institutions where the course of training is planned out suitably for the particular need and where they will not be trained together with medical students.
5. That missionary societies should not permit such missionaries to fill responsible medical posts, nor should they allow them, under any circumstances, to take upon themselves the title of 'medical missionary' or assume the position of a qualified practitioner.

The Home Base of Missions:—

1. That there should be a definite medical department in connection with all foreign missionary societies; that this department should deal with all questions relating to the physical fitness and the preservation of the health of missionaries, their wives and families; that it should be under the supervision of an honorary medical board, composed of medical missionaries and other medical practitioners, some of whom at least should have had foreign medical experience; and that there should be a medical officer, preferably salaried, who should deal with all such questions, under the general direction of the medical board.
It is further suggested that in the case of the smaller societies there might possibly be one medical board and medical officer representing several societies.

2. Also that there is urgent need for the collection and systematic recording by the Home Medical Base, or their medical representative, of such statistics as relate to the health of foreign missionaries, including causes of death, or retirement.

That deductions obtained from these and other data will have an important bearing upon such problems as—

1. The frequency and duration of furlough and holidays.
2. The necessity for issuing or revising of health regulations from time to time.
3. The insurance of lives of missionaries against sickness, breakdown, and death.
4. The need for missionaries to receive elementary medical instruction as to preservation of their health abroad.

This latter statement is emphasised by the fact that, as a result of a recent investigation under the aegis of the Association of Medical Officers of Missionary Societies of the causes of death in missionaries who had died since 1890, over sixty per cent. were victims to the so-called preventable diseases against which many safeguards may be taken.

Such information will also bring into prominence the chief diseases in various countries, and risks to health which missionaries have to face, and the best methods for combating such conditions.

Education in Relation to the Christianisation of National Life:—

1. That more and more thoroughly equipped medical schools should be established in suitable mission centres, and that as many natives as possible should be trained for the various branches of medical missionary work for the double reason—
   a. Because the work gathering round mission hospitals and the work of medical evangelisation can never be overtaken by foreign physicians; and
   b. Because the native can reach his fellows in a way in which the foreigner can seldom do; is more easy to secure; is more economical to support; and has proved, in various mission fields, to be capable of becoming an efficient nurse, hospital assistant, physician, surgeon, and medical missionary, and in many cases in China can occupy positions of importance in connection with government and other public service, where Christian medical men could exercise a powerful influence for Christ.

2. The meeting also is of the unanimous opinion that the thoughts of some of the more highly educated natives should be directed in increasing measure towards the medical mission schools and colleges which are springing up in many lands.

Coöperation and Unity:—

That in the Christian medical colleges now being established in increasing numbers in China and elsewhere, the fullest cooperation possible between the missions working in any particular region is eminently desirable, and that not only because of the spiritual gain which is sure to accompany union, but also for the purpose of economy, efficiency, and permanence in the preparation of native workers for the medical missionary field.
This sectional meeting of medical delegates, medical missionaries, and other medical practitioners interested in the medical aspects of missionary work, is of opinion that there is urgent need of some means of communication between the medical missionaries in the field and medical workers at home, whether in the department of medical missions or in the health department, and consider that this can best be done by drawing together the existing organisations in the mission field and in the homelands, and requests the committee which has organised the present medical conference to take this matter into consideration and to take such action as may be required to achieve the desired result.

This sectional meeting of medical delegates, medical missionaries, and other medical practitioners interested in the medical aspects of missionary work, is of opinion that the omission of any specific treatment of medical missions or other medical subjects from the general programme of the World Missionary Conference was a serious mistake, and whilst the Conference acknowledges the generous treatment accorded to the medical delegates in the arrangements made for a special medical conference, yet it is unanimously felt that more than this is needed in any future conference; and it is therefore respectfully suggested to the Business Committee of the World Missionary Conference that on any Continuation Committee which may be formed, or in any other plans for a similar conference, full medical representation should be allowed.

EXECUTIVE COMMITTEE MINUTES.

Meeting held 11th October. Present: Drs. Stuart (chairman), Cole, Venable, and Davenport.

Previous minutes read and signed. Letters from Drs. Venable and Barlow, accepting membership of the Executive Committee, presented. Letter of thanks from Nurses Association re JOURNAL dues read.

Letter from Dr. Jefferys re illustration blocks, in which he had enclosed $10 gold for the use of those which he had taken away. This sum the treasurer had paid into publication funds.

On request of Dr. Stuart, permission was given him to use illustration block of "Native Still" in a book on therapeutics.

Resolution from Hankow re medical journal in Chinese was discussed. The matter was postponed for further date.

The secretary was authorized to engage a stenographer to compile the new list of members. He was further instructed to mail to all members a "statistic" form to collect the statistics of 1910. The form was presented and adopted.

It was resolved, on Dr. Cousland's recommendation, to draw out the fixed deposit when it becomes due and pay it into the general funds.

This concluded the business.
Book Review.

The members of the C. M. M. A. will be glad to learn that Dr. Evans, of McGill University, has recently issued a second edition of his Manual of Obstetrics for Students and Practitioners. The edition will, I feel sure, recommend itself to the medical profession in China.

The subject matter has been thoroughly revised, and the section dealing with implantation of the ovum and development of the placenta and toxæmia has been entirely rewritten. Accouchement force has been freshly discussed and new methods and obstetric operation introduced, while those operations which have fallen into disuse, such as Symphysiotomy, are merely referred to. While the edition is practically the same size as the first edition there are numerous changes and additions introduced, together with several new illustrations. The arrangement of the material in a compact, concise form, under clear headings, makes it easily accessible and therefore a splendid book of reference. One feels, after reading the book, that the subjects have been clearly and skillfully considered without being wordy, and therefore the work is a good one for the use of our Chinese students.

M. E. N.

Branch Reports.

SOUTH CHINA BRANCH.

The annual meeting of the South China Branch was held at Cheungchow, July 28th and 29th. The members present were: Dr. Mary Fulton, Dr. Mary Niles, Dr. J. C. McCracken, Dr. J. G. Meadows, Mrs. J. G. Meadows, M.D., Dr. Kate McBurney, Dr. McBean, Dr. Beddoe, Dr. Frank Oldt, Dr. H. W. Boyd, Dr. E. W. Kirk, and Dr. P. J. Todd. Nurses present: Mrs. John Kirk and Mrs. P. J. Todd. Present by invitation: Rev. E. Z. Simmons, D.D.

At this meeting we had four sessions, covering two days, and many subjects of interest were brought up and discussed; three of the more important being "Union Medical College," "Propaganda against Tuberculosis," and "Plan for Year’s Work."

Dr. McCracken reported very encouraging progress being made on the Union Medical College Scheme—that five out of the six members of the committee were practically agreed on a scheme for union. Rev. E. Z. Simmons, D.D., chairman of the Managing Board of the Canton Hospital, gave a brief history of the scheme for a union medical college from the beginning and expressed his gratitude to the members of the South China Branch for their persistency in
working up the Union Scheme and hoped they would continue.

A committee of seven was appointed to start a propaganda against tuberculosis, looking toward the speedy selection of a permanent location for the reception of tuberculous patients. Emphasis was laid on the committee’s work being educational, through tracts, lectures, etc., as well as the need of a sanitorium.

A committee of three was appointed to plan out a scheme for the year’s work, including the advisability of having a mid-winter special course. In a later session this committee reported as follows:

1st. The committee recommend that the October meeting be left to the committee of seven for "propaganda against tuberculosis;" this committee to arrange programme, time and place of meeting.

2nd. That we have a course in microscope work and that the University Medical School be asked to arrange for such about Chinese New Year; this course to consist of parasitology and microscopical examination of feces and blood. The committee also recommended that at the close of this course there be a general meeting of the Branch for business, clinical papers and discussion.

3rd. The committee will announce the programme for the April meeting at the close of the New Year’s session.

4th. The committee recommend that the next annual meeting be held at Cheungchow in July or August; programme to be announced later. The report was accepted.

At the close of the last session the missionaries spending their vacation in Cheungchow gave a picnic supper, at which about sixty, children and all, were present. It was a delightful ending to a profitable meeting, and the only regret heard was that so few of our members were able to attend.

P. J. TODD, Secretary.
CANTON, August 10th, 1910.

SHANGHAI BRANCH.

The annual report of the Shanghai Branch of the Medical Missionary Society is necessarily a brief one.

The average attendance has been very small, some of the most active members being home on furlough and others not able to attend on account of ill health.

October Meeting.—Dr. Reifsnyder read a short paper reporting three cases as follows:—

Removal of a fourteen-pound lipoma.
Removal of a fibroid polyp. of the uterus.
Removal of an ovarian cyst.

Cases shown:—
Aneurism of the occipital artery.
A parasite vomited by a boy. (Identified by Dr. Jefferys as Fasciolopsis Goddardi.)
Angular deformity leg after fracture.

November Meeting.—Dr. Lincoln read a paper on "The Emmanuel Movement and Kindred Cults."

Cases reported by Dr. Reifsnyder: Placenta previa with twins. Two cases of cornu cutaneum.

January Meeting.—Clinical cases shown by Dr. Davenport: Multiple keloid, which had taken on papillomatous growth.

Dr. Jefferys exhibited a large collection of animal parasites, including many found in man in China.

February Meeting.—Dr. Fullerton read paper on "Infections of the Mouth and Pharynx," giving special attention to tubercular infection.
March Meeting.—Dr. Tucker read a paper entitled "Urethral Stricture with Fistular Complications."

Dr. Lee read a paper on the "Periodicity of Filaria Sanguinis Hominis Nocturnis." A theory.

Treatment of elephantiasis discussed.

Cases shown by Dr. Reifsnyder:
- Lupus of the nose and face.
- Harelip, after operation.
- Malignant tumour of scalp.
- A boy with heart on right side.

Dr. Tucker exhibited a stone removed from bladder. Length, 8.3 cm; width, 6.2 cm; thickness, 4.4 cm; weight, 171.05 grms.

Photograph of keloid lepra, tumor of buttocks and meningicele were shown.

April Meeting.—Clinical cases shown at St. Luke's:
- Femoral hernia.
- A man with chyluria, with specimen of the urine and filaria in the blood.
- Two cases of relapsing fever.
- Microscopical specimens of filaria sanguinis hominis, spiralium obermeieri, ovum of ankylostoma.

Dr. Davenport reported a case of symmetrical necrosis of bone of legs and arms on which he operated.

May Meeting.—Dr. Newell read a paper on "Practical Observations in Obstetrics in the Margaret Williamson Hospital."

Dr. Reifsnyder exhibited a tumor which she had removed from the vulva.

June Meeting.—Election of officer, treasurer's report and other business.

Dr. Fullerton exhibited a tumor of the vulva which she had removed.

Dr. Tucker exhibited the "Popular Pictorial Banner" of the New York department of health, shown in the International Congress on Tuberculosis at Washington, D. C., together with a similar one in Chinese prepared by Dr. Tucker.

M. E. Garner, Secretary.

Forward Work in Shensi.

I need not say we have been busy in the hospital. That is an oft-told tale. We have been taxed to our utmost capacity, and exceeded it, I am afraid. That is to say, we have really had more patients in residence most of the time than we have had accommodation for, but really, what can one do when patients come who really must be taken in if their lives are to be saved? Happily there will be more accommodation in the new hospital that is about to be begun. We have had quite a number of rather trying cases recently which have occupied a good deal of time and attention, so that for a while before Christmas I was living most of the day in the hospital and sleeping at home here.

We had one man come with a bad cancer of the lower jaw, which involved the cheek and other soft parts so much that it was impossible to effect a cure, even by removing the lower jaw. Had he come two or three months earlier he might have been helped, but like so many he put off coming till it was just too late. We did what is sometimes done in such cases, ligatured the large arteries supplying the growth, which treatment is said sometimes to arrest the growth of the tumour. The man went out a little over a week after operation, but I fear he would not derive much benefit from it. Another old man had only one eye, and that had been blind several years from cataract. He was operated on, and went out a few days able to see, to his great delight. He is a distant relative, and lives close to a man who was recently converted.
so though he has left the hospital he will still be where he can hear the Gospel and still have Christian influence brought to bear on him.

Another young fellow came with a stiff elbow, which, as a result of disease of the joint, he had not been able to move for quite a while; indeed it was like a single bone from shoulder to hand. We took a bit off each of the bones at the elbow, and trust that he will recover with a useful, moveable joint.

There was another very intelligent old woman whom I may have mentioned in my last letter, the mother of a student in the Normal College in the city. Her eyes at first seemed almost hopeless, for, not only had she cataract in both eyes, but her eyes were very much inflamed through the lids being turned in and the lashes rubbing on the eyeball. Each eye had to be operated on twice, and the result was certainly much better than we expected. She and her son were both very grateful.

About ten days after Mr. Shorock's arrival we had an important meeting of our Shensi Conference, as the committee for the province is now called to make plans as to the carrying on of the work during the coming year. It was decided that the San-yuan work was to be opened as soon as possible. For the medical part of it, of course, my wife and I are responsible. Mr. Shorock has been asked to go there to take charge of the church work, as more than nine-tenths of our Shensi church members are resident in the district to the north of the Wei River, of which San-yuan is the centre. It is likely, too, that the projected theological school will be there, and, of course, Mr. Shorock will be at the head of it. We shall probably be beginning building work in the spring, and we hope the bulk of it will be finished in the course of the year. We do not anticipate building a very large hospital; probably one to accommodate between thirty and forty patients will be all we will be able to manage, but it is surprising what an amount of planning and building is necessary, even to accommodate such a small number. We will send you a small copy of the plan by-and-by. I told you something of our first visit to the place last letter. It is a place of about 100,000 inhabitants, besides being the centre of a large district. It is a large commercial place, besides being an important educational centre, second only to Si-an-fu in the province.

The roads all around are very good too for Chinese. Mr. Smith has just had a bicycle sent out, and goes round the various out-stations periodically and finds it a great convenience. I don't think one could go very widely round about Si-an unless after a long spell of dry weather. The constant cart traffic wears the soft roads into such deep ruts that cycling is attended with considerable difficulty. On the whole, I prefer horseback as a means of locomotion, and I am getting a horse sent down from the borders of Tibet, where they are harder and more reliable as well as cheaper than those one gets around here.

Will you pray that guidance may be given in all the preliminary arrangements for the beginning of the new work? because a great and effectual door is no doubt opened to us, and we may be sure there are many adversaries. We must also send a list of requirements to the "wants" department in due time. As I said, it is not likely that we shall get into regular working order for about a year from now, so there will be plenty of time.—Dr. Young in The Medical Missionary.
ANNUAL MEETING.

The annual meeting of the Nurses' Association of China was held in Kuling, on Thursday, August eighteenth. In the absence of ranking officers the secretary of the Association was asked to occupy the chair.

The meeting was opened with a brief service conducted by Dr. R. C. Beebe, of Nanking. The hymn "O speak to me" was sung; this was followed by prayer and then the address; a helpful suggestive message. The central thought was of the man or woman as the vehicle of the revelation of Christ and of personal character, or personal expression as a help or hindrance in showing Christ; then of the missionary nurses' opportunity of expressing or revealing Christ in graciousness and gentleness and love.

The business meeting was opened with the reading of the secretary's report and the minutes of the first annual meeting held in Kuling in September, 1909, together with the list of charter members. This was followed by the report of the work done and the general progress of Association affairs during the winter. The main feature of the report will be seen in the report of business brought before the Association.

A letter from Mrs. Caroline Maddock Hart was read, and it was, with great regret, that we learned, that she must resign her position as president of the Association.

The first matter of business laid before the meeting was the enrollment of new members who had been declared eligible by the Executive Committee.

The motion made last year in regard to an amendment of the constitution was next considered and the amended form of Article VIII was unanimously adopted. All those who have copies of the constitution will see the new Article VIII printed in foot note.

The following amendment was proposed, to be laid before the meeting next year. In Article III, Section 2, the addition of the words "and have passed the examination of the Medical Association."

Miss Booth offered the following resolution:

That the Executive Committee be instructed that it is the opinion of this meeting that it is in harmony with the spirit of the constitution that any Chinese nurse who prior to the establishment of the Union Examining Board having fulfilled the conditions relating to residence, conduct, and ability, shall have received a certificate signed by one or more qualified medical practitioners, shall be eligible for membership in the Nurses' Association, subject to the approval of the Executive Committee. And that the Registration Committee be authorized to act on this instruction.

Unanimously adopted.

The Executive Committee laid before the meeting the application of a foreign male nurse, trained in America. The spirit of the Association was in favor of the admission of men nurses into the Association; but that they should form a branch association with special meetings and constituted in some such manner as is suggested in Article V for local organizations. No definite action was taken, but the Executive Committee was instructed to advise with the Medical Missionary Association.

The following letter from Dr. C. J. Davenport, on behalf of the M. M. A, was then read:

You will see from the published minutes of our Executive Committee that it has been decided to let the members of the Nursing Association have the
China Medical Journal for $3.00 per annum instead of $4.00. Kindly bring this matter before your meeting at Kuling.

A vote of thanks was offered to the Medical Association and their offer accepted.

The secretary took this opportunity to urge on every member her share in the responsibility of making a success of our "Department" in the Medical Journal.

Mrs. Caroline Maddock Hart's resignation was accepted with great regret.

The following suggestions, made by Mrs. Hart, were then discussed:

First. Development of some means of contact with every nurse in China, and if possible increasing to the same extent our membership.

In response to this suggestion it was unanimously resolved that the secretary be instructed to send a circular letter to all medical workers in the Empire, and as there are many nurses engaged in various forms of philanthropic work, a copy of the letter should also be sent to the central organization of every mission at work in China, asking for a list of all nurses, married or single, in their mission, also asking them to take steps to interest these nurses in the Association. To ask for a report of the number of nurses at present needed in the mission; such report to be laid before the Central Nursing Organizations in the home lands.

Second. A movement to provide a magazine devoted to our interests and having both English and Chinese departments.

While heartily in sympathy with this suggestion after discussion the decision was reached that the time was not yet ripe to take this step.

Third. That representatives of different nationalities interested in the association should immediately take measures to induce the editors of their respective nursing journals to devote space to the subject of nursing in Mission stations, and then supply them with available material from China. Also to request that an exchange of the journals mentioned be sent to the editorial secretary.

This suggestion was unanimously adopted in the form of a resolution, and it is hoped that much may be accomplished. In the discussion of the matter of bringing the subject of missions before hospitals, graduates and nurses in training the fact was brought out that there is at present much more organized effort in England than in America.

The following letter from the Vigilance Committee was read:

The Vigilance Committee propose to send out a note book for collecting cases which should be written out in fullest detail possible; the cases collected being those of slave girls, of girls in brothels, of unmarried girls suffering from venereal diseases, of secondary wives and concubines.

Cases recorded without histories and details will be of no value.

The object of the case book is to bring into prominence the misery caused by these conditions in China.

Statistics concerning brothels or slave girls, or any other evil with which the Vigilance Committee is concerned, would also be welcomed and should be entered in the case-book.

One of these case-books will be supplied to any worker who will take one, and should be returned to our secretary, Miss Ogborn, of Wuhu, by the middle of May, 1911.

Kate L. Ogborn, Sec'y, Vig. Com.

A vote of sympathy was adopted, and it is hoped that the nurses will do all they can to further the work of this committee.

The following motion was offered:

The Nurses' Association of China wish to express, through the American Journal of Nursing, their sincere sorrow at the death of Mrs. Hampton Robb. By her death the profession has lost a leader as well as a most loyal friend.

Adopted.

A motion was made instructing the secretary to write to Dr. Stone, of Kukkiang, and to Dr. Cornaby and thank them for their assistance in putting into Chinese the con-
stition of the Nurses' Association. Adopted.

It was moved that Dr. Stone be asked to write an article on hospital dietetics and to prepare a dietetic list to be printed in the nurses' department.

Letters from India and Korea and America were read, all welcoming the new association.

The following officers were elected:

**President.** Miss Mary C. Ogden, Anking.
**Vice-President.** Miss Norah Booth, Hankow.
**Secretary.** Miss Maud T. Henderson, Shanghai.
**Treasurer.** Miss Emmadette Hawley, Kuling.

**Registration Committee:**
Mrs. C. J. Davenport, Shanghai.
Miss E. Halley, Shanghai.
Miss Margaret Murdock, Hwaiyuan.
Miss Alsough, Soochow.
Mrs. Ts'en, Wuchang.

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**Medical and Surgical Progress.**

**Skin Diseases.**

Adrian S. Taylor, M.D., Department Editor.

**ULCERS OF THE LEG.**

In the department of therapeutics of the *Jour. A. M. A.*, June 11th, 1910, a good article gives a summary of the methods at present in vogue for treating the ever present leg ulcer.

Attention is drawn to the frequency of syphilis as a cause of intractable ulcers of the leg. This is especially likely to be so when the ulcers are multiple and affect both legs somewhat symmetrically. When syphilis is suspected, the advice is to give yellow iodid of mercury for several weeks, followed by iodid of potash.

The conditions apart from the local lesion which tend to perpetuate it, are varicose veins, best treated by rest in bed and by laxatives; valvular disease of the heart, or weak action of the heart not dependent on muscular degeneration, treated by tincture of digitalis in 15 to 20 drop doses t. i. d.; weakness and dilation of peripheral vessels to be treated by fluid extract of ergot in doses of 15 to 30 minims after meals; arterial sclerosis, to be treated by iodid of potassium.

The local treatment.—The ulcer is made anesthetic with 2 per cent. cocaine. The floor of the ulcer is to be curetted so that all the granulations are removed when the margins are deep, the floor of the ulcer is to be scarified, as well as the margins. Tardy granulations are livened up with 50 per cent. silver nitrate or pure carbolic acid, to be worked off with alcohol. After the treatment for exuberant or tardy granulations the ulcer area was treated with warm 1-2000 to 1-5000 bichlorid dressings. All patients were instructed about the importance of rest, elevation, and aeration. After 48 to 72 hours the dressings were changed and fluid extract of ergot was administered, 7 to 15 minims, t. i. d., and this remedy was to be continued indefinitely. After the ulcer is covered with healthy granulations, a dusting powder is substituted. A simple, efficient and antiseptic powder is as follows:

- Acidi salicyli .......... Grs. 1
- Acidi borici ............. ,, 49
- Talci purificati .......... ,, 50

After the granulations are covered with an "opalescent film" at from the fourth to the sixth week,
ointments may be substituted for the dusting powder.

Adhesive plaster strips are not employed as frequently as formerly.

Where an obstinate ulcer is dependent on large varicose veins, operative treatment may be demanded. The operations chiefly performed are those of Trendelenburg, Schede or Mayo. Trendelenburg's operation is the ligation and extirpation of the internal raphenous vein at the upper and middle thirds of the thigh. The operation, however, is not without danger of embolism.

Schede's operation consists of a circular incision at the junction of the upper and middle third of the leg, encircling the limb and removing all the veins to the deep fascia.

Mayo's operation is by the subcutaneous method of dissection with an instrument devised by himself.

Three weeks' rest should follow an operation for varicose veins. A supporting bandage should also be worn for at least six months after an operation.

The chief complication of varicose ulcers is phlebitis. Rest, with elevation of the limb and a wet dressing, must be insisted on; however, if the case is seen early enough, an operation can be performed with excision of the thrombus.

When the ulcer is healed, the circulation of the leg should be improved by daily cold bathing and gentle massage.

Gynecological Notes.

Kate C. Woodhull, M.D., Department Editor.


The term eclampsia is derived from a Greek word meaning to shine or suddenly appear. It is characterized by convulsive seizures, in which the patient becomes unconscious. It varies in intensity from a very mild attack, in which there is only some mild fibrillary twitching of the facial muscles, to one in which marked opisthotonos, apnea, and deep cyanosis, with widely dilated pupils and bloody froth from the mouth, bear witness that the end is near. To the unobservant the attack appears to have come on suddenly and without warning. Hence the name eclampsia. The true physician, however, will rarely be surprised in this manner. He will notice a slight edema of the eyelids; a puffiness of the ankles; will know the significance of the complaint of headache or dizziness, a tendency to vomit in the latter half of pregnancy, and above all will examine the patient's urine and find the almost never failing sign of nephritis—albumen, and perhaps casts.

I say almost never failing signs of nephritis in the urine, because some authors claim that it is possible for eclampsia to appear without changes in the urine. Personally I have never seen such a case and have always doubted its occurrence.

The Clinical Picture.—The woman, usually young, very likely a primipara in the second half of her pregnancy, is in convulsion. It is only with difficulty that the nurse can restrain her in bed. Any set of muscles or apparently all the muscles may be the subject of tonic and clonic convulsions. She may be grinding her teeth and biting her tongue, throwing her arms and legs about, stiffening her
back and neck, or the muscles of inspiration may remain in a state of tonic spasm, preventing the act of breathing, until deep cyanosis supervenes, the muscles relax, and with a deep sigh she begins to breathe again.

The etiology of eclampsia has not been satisfactorily determined. The following theories have the greatest number of adherents. Freichs states that it is caused by decomposition of urea in the blood, liberating ammonium carbonate. The latter, if injected into the blood of animals, is known to cause convulsions. As against this view, it may be said that the blood of eclamptics does not contain an excessive amount of ammonium carbonate. Lately the ammonia coefficient has been determined by investigators, but nothing of definite value has accrued therefrom.

Traube believes that brain enemia due to edema causes the convulsions because the edema compresses the brain vessels. This theory has been abandoned. Spiegelberg believed that a reflex contraction of the kidney vessel which lowered secretion from the kidneys or suppressed it entirely, was the cause of eclampsia. Thus the poisons which were to be eliminated by the kidneys were retained in the blood and poisoned the system.

Bouchard claims that eclampsia is a form of uremia due to auto-intoxication and that poisonous matter that should be excreted in the urine is retained in the circulation. He went a step further and sought to prove his theory by means of animal experimentation. He injected the urine of human beings into the veins of animals. His experiments led him to think that pregnant women show a tendency to retention of poisons in their system. The observations of Bouchard and his disciples Riviere, Laulanie, and Chamberlant revealed the important fact that the blood-serum of eclamptics is very much more toxic than the blood-serum of normal women.

Finally came Schumacher, a pupil of Fehling, with proofs that all the previous findings were wrong and showed conclusively that the toxicity of the urine and blood serum of eclamptics does not depend upon some special poison, but is dependent upon its concentration. If the concentration of the injected urine was remedied by dilution, so that it approximated the normal specific gravity of urine, it made no difference whether the urine injected was taken from a healthy person, a pregnant woman, or one with eclampsia, the degree of toxicity of each was about the same. He came to the same conclusion as regards the poisonous quality of the blood-serum of eclamptics.

The writer is of opinion that uremia, or eclampsia, is caused by the retention in the blood of the salts (principally sodium chloride) which the damaged kidneys are unable to throw out, in sufficient quantity, with the urine.

That it is principally this retention of salts which causes the symptoms of eclampsia by raising the molecular concentration of the blood and at the same time its specific gravity.

That when by some means—dilution of the blood, increase of urinary secretion, increased perspiration—by throwing off the excess of salts, the molecular concentration of the blood is reduced to (somewhere) normal, the patient will, at least temporarily, recover. For reducing the molecular concentration of the blood in the patient only two methods seem to be available:

1. Starving the patient.
2. Diluting the patient's blood with water.

It has been the invariable practice of the writer to withhold food
from eclamptics for three days and to permit nothing to be taken by mouth except water, plain or carbonated.

To dilute the patient's blood, water by the mouth was inadequate, because comatose patients cannot drink, and when awake they may refuse it. In any case water is not absorbed by the stomach, and to do good large quantities of water must be administered. After considering all the routes, the bowel was chosen as the best absorbing surface.

It seemed to the author that pure water caused irritation of the bowel. The usual physiological saline solution was rejected as dangerous and illogical. If the patients is dying from a retention of salts in the blood it would be worse than folly to administer more salt in solution. After going over the field carefully the writer decided that a solution of sugar would meet all indications. The reasoning which led to this conclusion was as follows:

The desideratum was to find a substance which, mixed with the water to be administered, shall be harmless and will not increase the molecular concentration and specific gravity of the blood, which is already too high.

Sugar was decided upon because of its high molecular weight. The weight of a molecule of sugar is stated to be 342, while that of salt is 58. It is clear that many more of the lighter or smaller salt molecules will go into a given quantity of water than the many times heavier or larger sugar molecules of sugar. So that the molecular concentration of the blood would be speedily reduced by diluting it with sugar water, whereas it would remain the same or be increased by administering salt solution.

This seemed rational and was done in several cases. Under the sugar water instillation it was found that remarkable improvement took place in the condition of the patient. Murphy's method was used, continuous rectal administration of sugar water drop by drop. The specific gravity of the blood fell to 1052 from 1060. The cases made a good recovery. In addition to the sugar water instillation only water was given by mouth for three days and the usual treatment in these cases carried out, namely, veratrum viride hypodermically, patient wrapped in blankets surrounded by hot water bottles to induce perspiration, catharsis, and for some time after salt free diet. It was astonishing to see the large quantities of water that were absorbed by these patients and how the quantity of urine and perspiration increased, bringing about improvement in the patients' condition from the start.

The following are the main points of interest in two cases:

**Case 1.**—Mrs. S. K. Second child. Had complained of headache and dizziness for a few weeks. Was asked to return to hospital on following day and bring specimen of urine. She did not return. Was sent for afterward in a hurry to find her in a convulsion soon after delivery, which was spontaneous. She was treated in the usual way by hypodermic injection of tr. veratrum viride, gtt. x. every two to four hours, compound jalap powder, nitroglycerin, gr. 1-100 every three hours, hot pack and a copious venesection followed by the usual intravenous saline infusion. This was varied by administration of potassium acetate and compound spirits of ether.

October 30 (next day).—Convulsions at 8, at 12.15, and at 3, lasting about ten minutes. The pulse was between 120 and 150 from 1 to 5 o'clock. Hot saline rectal
irrigation. Morphine gr. ½ hypodermically and chloral hydrate grs. xx. by mouth.

October 31.—Hot packs and same treatment continued. No convulsions, but patient very restless and pulse still rapid and of high tension. Tendency to delirium. Respiration, 30. Modified Murphy drip started. This consists of a rubber douche bag holding four quarts of sugar water, namely, granulated sugar one teaspoonful to each quart of water, kept at a temperature of 115 F°, and the tube constricted so that the solution will pass only drop by drop into the rectum. Tr. veratrum viride gtt. x. hypodermically every four hours or oftener till pulse drops below 80. Patient to be wrapped in blankets surrounded by hot water bottles to promote diaphoresis. If restless codeine gr. ½ hypodermically. Nothing by mouth except water or seltzer. Withhold salt in any form. Specific gravity of blood 1058. This was practically the only treatment for the next three days.

She absorbed several quarts of sugar solution each twenty-four hours, perspired freely, and regained consciousness gradually; the specific gravity of the blood rose within a few days to 1056, and it remained there till her discharge on November 14, 1909.

The urine on admission contained albumen and large and small granular casts. These gradually disappeared until her discharge thirteen days later, when there was only a minute trace of albumen and no casts could be found.

She was discharged with her baby on November 14 and warned to abstain from the use of salt for at least six months.

Case 2.—Mrs. B. F. Age sixteen and one-half years. Pregnant for the first time. On examination patient presented the typical picture of a nephritic. She was pregnant toward the end of the ninth month with twins. Was advised to come into hospital and have labor induced.

About nine hours of labor the first stage was practically ended, when the patient had a convulsion lasting about a minute. Dr. Scadron applied forceps and delivered a girl baby weighing four pounds and eleven ounces, then performed version and delivered the other girl, weighing four pounds and three ounces; both living. An hour later the patient had another convulsion.

The writer did venesection, drawing off six ounces of blood.

The constant rectal instillation of sugar water was started after the second convulsion, and she never had another convulsion. Diaphoresis became profuse.

The urine showed remarkable increase in quantity the first three days under the sugar water instillation. First twenty-four hours some was lost while defecating and only one ounce was obtained by catheter for examination. This boiled solid. Second twenty-four hours, under constant administration of hot sugar water rectally, amount of urine passed thirty-seven ounces. Third twenty-four, 115 ounces. On April 7, the eleventh day post partum, the patient was convalescent, the urine normal without a trace of albumen or casts. She was discharged with her babies on April 11 and cautiously advised to avoid salt for a number of months.

While these few cases are not sufficiently strong from a numerical standpoint to establish the claims of a new procedure in medicine, nevertheless the results of the treatment were so striking as to compel attention.


DEAR SIR: It has not been our custom in the CHINA MEDICAL JOURNAL to criticise one another’s articles, and yet I think there are times when a further expression of opinion is of value, especially so in such cases where statements left unchallenged may lead to erroneous diagnosis and treatment on the part of others relying upon such statements.

The article to which I should like to refer is one on Ankylostomiasis, and it appears in the September issue of the JOURNAL. As truth is what we are all seeking after, and as accurate diagnosis and treatment which shall benefit our patients are our daily aim, I am sure that the writer of the article in question will be the last to resent my making mention of several points on which I feel compelled to disagree with him.

At the outset of his paper the author refers to profound anaemia and the passage of blood at stool as though these were the cardinal symptoms of ankylostomiasis. A profound anaemia of course we do get, but only in advanced cases. As to the passing of blood in the stools I can only say that, though I have seen a good deal of the disease in Hunan, this symptom has been absent in my cases, nor can I persuade myself that in uncomplicated cases it really occurs. I see that this is borne out by the standard descriptions of the trouble. "Pure blood is rarely seen, for, though escaping, perhaps in considerable quantity, from the wounds made by the parasites in the upper part of the intestine, it is so mixed with the chyme, and so altered by the intestinal juices, that it is not recognisable in the stools." (Man-son.)

I must confess, too, that I found the notes of cases, given by the writer, somewhat puzzling. The outstanding symptoms given in these notes are not, to my mind, even suggestive of ankylostomiasis. I do not mean to imply that this disease was not present (for I assume that the ova were found in the stools of all these patients), but I think it highly improbable that the main symptoms recounted again and again in the series were due to ankylostome infection. Because we find a few ankylostome eggs in a patient’s stool, we are not therefore warranted in assuming that all that patient’s symptoms are due to that parasite. Many cases infected by the worm present no evident symptoms whatever, and, judging by the author’s own notes of the numbers of ova and worms encountered, I should say quite 10 out of the 16 cases were only slight infections.

From this consideration, and from a study of the main symptoms enumerated by the writer, it is difficult to avoid the conclusion that these were not uncomplicated cases.

Towards the close of his article the writer summarizes the symptomatology of ankylostomiasis. Among the leading symptoms given are anaemia (on which I have already remarked) and "blood in the stools, with or without tenesmus." Six of the cases all passed blood with the motions. Again, reference is frequently made to an evening rise of temperature, a condition which, I would submit, is unusual.
Correspondence.

In advanced cases the temperature may rise at times in an irregular and fitful manner, but it is, I believe, usually subnormal. In the notes before us, however, mention is made of an evening elevation of temperature in nearly one-half of the cases; indeed the writer himself remarks that "nearly every case showed a slight rise in the evening temperature." Lastly, we are told that "emaciation is usually marked." This has certainly not been our experience. It is indeed quite remarkable how the body-weight is maintained, in spite of the progressive anaemia.

From a consideration of the foregoing it appears to me evident that some at least of the cases described by the author as cases of ankylostomiasis were seriously complicated cases, and that the symptoms which he records were due more to the complications, or, let us say, co-existent diseases, than to the ankylostome infection; the latter being merely implanted on some other trouble of a much more serious nature. It would be presumptuous on the part of anyone to pretend to diagnose the cases described without even having seen them, but I cannot refrain from saying that to my mind the symptomatology as given by the writer is, on the whole, far more suggestive of schistosomiasis than of ankylostomiasis. A case may be one of infection with schistosomum even though the ova of this parasite are not found. Uncomplicated cases of ankylostomiasis there may have been, but take the series as a whole, and I must confess that the insistence upon evening temperature, blood in the stools (with or without tenesmus) and emaciation, as predominant symptoms, and also the mention in certain cases of such points as dysenteric history, ascites, and enlarged liver and spleen are irresistibly suggestive of Schistosomum japonicum. Take case 6 for example. "Illness had lasted 4 or 5 years. Started with ague for 1½ years; then large spleen. Enlarged abdomen and epigastric distress. Evening temperature slightly raised. Treated with eucalyptus on four successive mornings, fasting. No parasites found. Later treated with thymol. Still no worms found." The italics are ours. It is obvious the worms could not have been numerous, when, after such persistent dosing with anthelmintics not one could be discovered in the stools. Case 9.—"Boatman. Aged 40. Passes blood per rectum. Very emaciated. Liver a handsbreadth below the ribs, abdomen enlarged; contains fluid. High evening temperature. The patient was treated with the eucalyptus mixture on three successive mornings, but with what result is not stated.

In Case 12, however, with a very similar combination of symptoms, we at last get mention of Schistosomum japonicum; ova of this worm being encountered. Strange to say, even then, the characteristic symptoms caused by this fluke are apparently still ascribed to the evidently small infection by ankylostomes. Case 15 is similar.

Now a word in regard to Treatment. In Case 16 (unless it is a misprint) surely the dose of eucalyptus oil was unnecessarily large, although the writer says that "small doses were expressly chosen on account of the weak condition of the patient." 3½ in all was given (in spts. chloroformi and ol. ricini), more than one-half of which was administered on the first day; the remainder being taken on the morning of the second day. The patient showed signs of syncope about 6 hours after the last dose of medicine had been taken, from
The China Medical Journal.

which he never fully rallied, and died at 8 o'clock on the morning of the third day. The eucalyptus mixture recommended by Sir Patrick Manson contains ol. eucalypti min. xxx, chloroform (not spts. chloroformi) min. xlv, ol. ricini 5x. Half of this is given in the morning, fasting, the other half thirty minutes later. The drugging may be repeated every other day, or as long as eggs are found in the stools. The patient should be kept lying down during the treatment.

The author rightly states that during treatment with thymol all solvents of this drug (such as alcohol, chloroform, oils, glycerine, etc.) should be withheld, otherwise toxic symptoms are very liable to supervene from its too rapid absorption. Strange to say in Osier's Practice of Medicine (sixth edition), page 47, the recommendation is made of giving thymol in brandy or whisky. On seeing that, many months ago, I wrote to Dr. Sandwith, who is represented as recommending this practice. I have heard from Sandwith that a mistake was made, and that he will see that the error is not perpetuated in future editions of Osier. I merely mention this now because Osier is so widely read, and some may be misled by that statement, perhaps even with disastrous results.

Sincerely yours,

Ernest C. Peake.

To the Editor of "The China Medical Journal."

Dear Sir: As I have seen nothing recently in the Journal in reference to Spinal Therapy, I should like to call your attention to the work being done in that line by Mr. Fred Erdman, of Germantown, especially in view of the benefit conferred in this way on a number of missionaries of China and other lands.

It would be impossible in a paragraph to give an accurate account of this form of treatment, but a short outline might be attempted.

The method itself was originated by Dr. Arnold, of Philadelphia, and consists in a simple manipulation along the spine,—over the erector spineae mass on either side, and the principal theories involved are, first, that the circulation of the spinal cord itself is in close connection with—compensated, as it were, by that of the erector spineae mass, so that vaso-motor dilatation of the latter is followed by vaso-motor constriction of the former and vice versa. For instance, steady pressure over a given area of these muscles will produce local dilatation here and corresponding internal constriction. The practical value of this lies in the working out of the other theory,—that most of the simple inflammations and nervous diseases are controlled by controlling the circulation of the affected part through the vaso-motor centres or points of exit in the spine. An acute inflammatory condition such as a colic is controlled by steady pressure over the corresponding area in the spine or by a hot water bag placed in the same position; while a chronic condition such as paralysis is affected and many times has been completely cured by regular treatments of interrupted pressure.

Abnormal conditions of almost any part of the body are followed shortly by partial or general increase of tension along the corresponding segments of the erector spineae mass, and frequently with tenderness, and it is by observing these changes that the spinal therapist has the key to diagnosis universally ignored by the regular practitioner.
Correspondence.

The few cases cited below will suffice to give a suggestion only of the scope and possibilities of this treatment. Chronic affections, the bane of the general practitioner, are a most promising field for this work. The method is being used by a number of physicians who studied under Dr. Arnold in New York and elsewhere, but by none, so far as we know, has it been brought to the same degree of scientific perfection and success as by Mr. Erdman. He, however, on account of his health, has been prevented from taking a regular medical course, and suffers this disadvantage in introducing the treatment among the members of the profession.

The charge of "psychic influence" brought by some is answered by the effects produced in mere infants, as in Case No. 3 below. I have myself been able to bring a temperature from 96.5 to 98.6 and a pulse from 93 to 78 in a mild treatment of about five minutes, and from the little we have seen Dr. Tooker and I are convinced of the value of the method, and hope to be able to use it to some extent on our return to China.

Case 1.—A young man, aged 25, for two months after an attack of grippe had had diarrhoea, usually seven or eight movements a day. One treatment of the affected lumbar and sacral spinal segments stopped the trouble; the bowels not moving for twenty-four hours, the abdominal soreness and tension also being relieved. A series of twelve treatments was given to bring the blood pressure of the cord up to normal and reduce the pulse, and the case was completely cured, as has been the result with every uncomplicated attack of diarrhoea presented.

Case 2.—A foreign missionary had given up his work eight years previously, had rarely slept more than two hours at a time, and had occasional epileptiform attacks with high blood-pressure. He had consulted doctors "from Shanghai to New York city," and none of them had even suggested a cause. The trouble was found, on examination, to lie in two or three lower dorsal segments on one side; any increase of flatulence, by affecting this area, caused rise of blood-pressure, slowing of the pulse and increase of cerebral symptoms. After a few days' treatment all cerebral symptoms disappeared, and as a result of three months' treatment he has been able to do his full pastoral work for three years.

Case 3.—An infant of fifteen months, said by the specialist to have a clot on the brain. Since birth its arms and legs were apparently paralysed; it had never noticed its parents, never cried or laughed, and could not at present digest milk. It also had convulsions, which were occurring every hour when Mr. Erdman began treatment. After three treatments it waved arms and legs, noticed its parents, laughed and cried. After the fifth treatment it held a rattle for a half hour; after the sixth they gave it milk. The spasms at this stage were only slight twitches and only four or five times a day.

[Mr. Erdman objected somewhat to the use of this case, as treatment had not been completed.]

Case 4.—A woman with severe hyperæmic headaches of several years' standing was cured in seven treatments. Two years previously a surgeon had performed a laparotomy for this condition, entirely without result. If he had made an intelligent examination of the spinal segments involved he would not have undertaken this operation.

MARY FITCH TOOKER.
Dear Sir: I see a letter from Dr. Wills in the July Journal reporting a method he has used in preparing catgut ligatures. I wish to report a simple and reliable technique we have used for the past half year. A pressure sterilizer is necessary.

The gut is freed from fat by soaking in ether, and is cut into convenient lengths and is coiled and dropped into a sterile Mellin's food bottle two-thirds full of absolute alcohol. The fibre ring coming with the bottle makes a steam tight joint when the cap is screwed on tightly, and it is easily sterilized before using by boiling in ordinary alcohol.

The bottle containing the alcohol and ligatures is wrapped in a heavy towel, and is placed in the sterilizer with the dressings, etc. A half hour's sterilization after fifteen pounds pressure is attained, gives reliable results.

Before important operations we re-sterilize our supply, and as a rule, open the sterilizer just before the operation and take the bottle wrapped in the sterile towel into the operating room, where the clean bottle is placed on the instrument table. The ligatures are removed with clean forceps and the bottle closed at once. Successive sterilizations seem to have very little deleterious effect on the gut.

We use Merck's absolute alcohol quoted in his last catalogue at 4½ d. per lb. German duty free.

A. S. Taylor.


Dear Mr. Editor: I have just had the pleasure of filling in the questions about albinism which I found in the last number of the Journal. I am always glad to answer such questions to the best of my ability and experience. It is true that I have seldom much information to impart, but I feel that probably negative answers are of more use to the investigators than no replies at all. However, the arrival of this last sheet of questions has emboldened me to ask whether this same privilege is accorded to all members of the C. M. M. A. alike?

For instance I should be extremely thankful for as much information as possible (even when of the negative variety!) from my colleagues in China as to the incidence and etiology of cancer in the districts where they work, as I have been working upon the subject for some time, but feel that my work will be of no value if based upon the experience of this particular locality alone. I shall be very much obliged if you will kindly let me know whether I may have permission to frame a set of questions to be sent out with the January issue of the Journal, as I am going home early in the year and want to get my information collected before hand.

Yours very truly,

E. Margaret Phillips.

Hankow, July 1st, 1910.

Dear Sir: As I am leaving for furlough in September the Rev. G. A. Clayton, of the Wesleyan Mission, Hankow, has kindly undertaken my work in connection with the above league during my absence, to whom all communications should be addressed.

So far our efforts have succeeded beyond our most sanguine expectations. During the four months of the league's existence 4,555 copies of the "Private Letter to
Boys’ have been applied for.
Letters from both natives and foreigners reveal the appalling need of such a work amongst the youth of China.

May I again plead for the cooperation of all who have a desire for the moral, physical and spiritual salvation of the youth of China.

Faithfully yours,

W. Arthur Tatchell.

Changsha, August 16, 1910.

Dear Doctor: Will you allow me to make a correction in a statement that appeared in a “Report from Customs Surgeons” sent in by me with regard to the health of Changsha and published in the Journal on page 214, May number, 1910? It is with regard to the prevalence of malarial fevers in Hunan. I have been informed since the publication of the report that the absence of malarial fevers in the city and vicinity of Yung-chow is as striking a fact in the incidence of disease there as it is in Changsha. Of Changteh, and also of Shenchow it is true, I learn, that malarial fevers abound there. I am sure we rejoice with Dr. Hadden in the immunity of his station.

Yours very truly,

Edward H. Hume.

Chemulpo, Korea.

Dear Doctor: I also must give you some notifications about the Korea branch. I cannot find that the members elected last year have ever been reported in the Journal, and as we have just held our annual meeting and elected some more I had best notify you both sets together.

Elected September, 1909:

2. A. G. Fletcher, M.d., Univ. of Ills., A. P. M., Taiku.

Elected September, 1910:

2. J. B. Patterson, M.D., Washington Univ., St. Louis, A. P. M. S., Kunsan.

Hugh H. Ward.

Yangchow, Sept. 7th, 1910.

Dear Mr. Editor: I have found a place where what seems to one to be good quinine can be bought very cheaply. I refer to Van der Loo’s importation direct from Java, which they sell for 38 cents per ounce in fifty ounce tins. We have bought two hundred ounces recently, and while no analysis or test of the quinine has been made, it seems to be quite pure. The price is the best we have secured anywhere.

I am, Sir, Yours, etc.,

A. S. Taylor.

Brumley, Kent.

Dear Doctor: In the published account of the statistics of intestinal parasites from Yung-chun, South Fukien, it was stated that the only ankylostome present was Ankylostomum Duodenale. Examination of a number of specimens from many individuals proves that I was mistaken, and that Necator Americanus, though not so common as Ankylostomum Duodenale, is present and far from rare.

With kind regards, I am, Yours sincerely,

J. Preston Maxwell.
Personal Record.

BIRTH.

At Taiyuanfu, June 2nd, to Dr. and Mrs. B. C. Broomhall, a son (Paul John).

ARRIVALS.

September 5th, at Shanghai, Dr. and Mrs. MacWillie and two sons, of the A. C. M., Wuchang, returning from Canada.

September 11th, Dr. M. H. Bynon, A. P. M., Weihsei, Shantung (returning).

October 17th, at Shanghai, Dr. and Mrs. W. H. Park and daughter, M. E. M. S., Soochow (returning); Dr. and Mrs. S. O. McMurty, C. P. M., Weihwei (returning); Miss E. P. Bingle, M.D., for Irish Pres. M.

October 18th, at Shanghai, Miss M. Poulter, M.D., C. M. S., Hokchien (returning).

October 31st, Dr. and Mrs. M. D. Eubank and family, A. B. M. U., Huchow (returning from America).

WANT DEPARTMENT.

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

Helminthes, blood sucking diptera, venomous snakes.—Dr. G. Olpp, for the "Deutches Institut für ärztliche Mission," Tübingen, Germany.

Medical Journals.—To complete volumes, one copy each of January, 1902, and January, March and May, 1906, required. Advise by post card Dr. A. Graham, Ichang.

Hospital Plans.—"I shall be greatly obliged if readers of the Medical Journal who have hospital plans, especially those on the pavilion style, could send me copies of the same. I will gladly pay all expense incurred in copying and postage." W. Henry Davidson, Chengtu, Szechuan.