ABOUT THE TRACHOMA PROBLEM IN CHINA

A. PILLAT, M.D.

So much has been written about trachoma, its therapy, etiology, and about the general hygienic control of this disease, that very little, indeed, remains to be added. To be sure most papers deal with conditions in the Western hemisphere where trachoma is rare as compared with in China.

The Western Countries of the world which have recognized the high economical significance of this disease are busy with the work of eradicating this evil. Indeed, some European states, such as England, France, and first of all Switzerland and the Tyrol, can already nowadays be regarded as practically free of trachoma. In the West naturally the last refinement of diagnosis and therapy is aimed at, in order that a total extermination of this scourge may be attained.

Things are entirely different in the East. There is hardly another country, except Egypt, where trachoma plays such an important role as a menace to public health as in China. The fact that trachoma in China actually is a "menace to the population" is almost the daily experience of every physician, and especially that of the ophthalmologist. As far as reliable information can be obtained, trachoma is met with all over the country throughout its entire length and breadth to an appalling degree. The numbers so far ascertained are rather too low than too high. Howard's estimate places trachoma as 20% for South and West China, 40% for North China. It will be the task of the younger generations of doctors in China to obtain more facts in this direction, to study the geographical distribution of this disease all over China in order with statistics and facts to arouse public interest as regards this pest, more than has been hitherto done, in short to start the anti-trachoma campaign.
In present-day China there is still a sharp distinction between the scientific and the economic side of the problem of trachoma. Undoubtedly the latter is at present of much greater importance.

By this, however, I do not mean to say that the scientific side of this problem should be neglected, as just in this respect there are endless problems awaiting solution. We still are not entirely sure about the nature of the excitor of trachoma. Although Halberstaedter and Prowazek found (1905) in Java inclusions in the epithelial cells of the conjunctiva which they claimed to be the carrier of the infection; Lindner found (1909) in the secretion of trachoma patients the free “initial bodies”; Noguchi, whose untimely death we all lament, spent a great part of his research activities on the problem of the infectious agent of trachoma, yet we are still far from a consistent and uniform theory of specific virus, as we are still unable to obtain pure cultures of inclusion-bodies or initial bodies, the last results of the experiments by Noguchi, who considered bacilli growing on culture media which contain hemoglobin as the true agent of infections, having so far remained unconfirmed. Many authorities are still of the opinion that all these findings may have something to do with trachoma, but that the true agent is an invisible filtrable virus, which at best may be linked with these bodies or germs in the way of symbiosis. Even given, however, that the results of Noguchi’s researches should be admitted as correct, there still remain many problems unsolved. The following questions may serve as a guide for future research:

1. Why do the germs disappear so rapidly from the conjunctiva in spite of the fact that the disease continues to take its course?

2. Why does the pathological process proceed to the deeper strata notwithstanding the fact that the inclusion bodies disappear from the surface?

3. What is the cause of the relapses seen so often in cases with negative bacteriological findings which so often seemed apparently cured?

4. If trachoma is so infectious, how can we explain the unilateral cases?

5. Why is trachoma transferable not only with but also at later stages without inclusion bodies?
6. Why has trachoma so wide a varying appearance clinically?

These questions would increase in number when we take two other diseases into consideration; viz., the “inclusions blennorrhea of the newborn” and the Swimmer’s conjunctivitis.” These two have morphologically the same inclusions in the epithelial cells of the conjunctiva as trachoma. All these problems are still unsolved and scientific medicine will have enough to work on for a long time to come!

One should, however, not expect too much for therapy even with the solution of these questions. It is one of the most fundamental mistakes of modern medicine to consider the detection of a germ to mean the cure of the patient, although every thoughtful physician should by daily experience know better. We are perfectly acquainted, for instance, with the excitors of gonorrhea, lues or tuberculosis, but we are far from being able to cure the respective diseases with unquestionable certainty. This alone suffices as the reason that the practical aspect of trachoma is a thing apart from its scientific side. At present what I am concerned with is the former only, and then I only exclusively treat of the conditions prevailing in China. China’s main problem in this respect at present is whether or not trachoma can be stamped out as a “public menace,” and if so, which ways are the best?

These questions as well as other matters have already been dealt with by two able physicians of the Peking Union Medical College. T. M. Li in 1922 (Nation. Med. Jour. 8) gave a detailed description of trachoma and briefly hinted at its therapy. The therapy has been extensively dealt with by H. J. Howard in several publications. He advocated the creation of a special hospital for trachoma and of a school for public health, and was the first to treat the social side of this problem from a modern point of view. Mention should also be made of Ling (Nation. Med. Jour. of China, 9, 1923) who called attention to the importance of trachoma as a cause of blindness.

It is the writer’s intention here only to point out a few psychological instances connected with the combat against trachoma in China, and to investigate in which way the best results could be achieved at a minimum of resources. The present financial situation of the country as well as of individuals
calls for the greatest possible economy in medical treatment. A discussion of the various therapeutical methods will lead up to a few suggestions which will be given herein.

Traits in native mentality, which cannot be disregarded and which demand careful consideration, render an antitrachoma campaign in China especially difficult. There exists an ingrained distrust against anything foreign including, needless to say, foreign medicine. For all his ailments the Chinese is accustomed to use old Chinese methods and medicines, mostly old household remedies. These are also applied for external diseases, including those of the eyes, very often far from the diseased organ. Underlying this practice in itself may be the correct theory that all the organs of the body mutually influence one another—although the Chinese are scarcely aware of this fact. We owe to H. T. Pi a valuable paper analyzing old Chinese medical systems and native practice in ophthalmology. The relationship between eye and other organs is conceived in a way different from the western science of medicine, but "the Chinese doctors of today are still adhering to the old theories in treating the diseases of the eye." This must not be lost sight of when treating Chinese patients; we must not forget that the great change from humoral to organic pathology, from the mediaeval to the modern period is taking place in China only now, and only very gradually. A further complication in fighting against trachoma is the equanimity with which the Chinese will regard any disease that may befall him. This almost heroic indifference which has its cause deeply rooted in his history and education has also to be taken into account. Blindness—one of the worst penalties for men of a different mental attitude towards the outside world—will be endured with admirable composure by the Chinese. It is a matter of absolute indifference to him that his blindness is usually caused by his own fault. The wonderful organization of the Chinese family will always help its members to bear any disease or consequent unemployment. Although aware of this equanimity we must not desist in our campaign against trachoma. For I am nevertheless convinced that the Chinese as all mankind, will be the happier for healthy organs rather than diseased, and that also for him eyesight is of more importance than everlasting darkness.

It is also of great importance to remark that the Chinese patient hates to be irritated or troubled by his treatment. He will not understand the seriousness of an ailment such as
trachoma and he has no intention on account of it of quitting his job even for a few hours or days. Nowhere else than in China does it happen so often that the patient leaves the hospital only half cured or against medical advice in order that he may earn his livelihood and not miss any chance which he imagines of the utmost importance in money-making. This forces us physicians to adhere to the good old rules: to choose "one" of two remedies, which while having the same result will cause the lesser irritation.

This brings us to consider our therapeutical methods for trachoma from the point of view of their results and of the amount of irritation caused by them.

There are hundreds of methods, but they all are founded on the use of the two principles: an efficient antisepsis by different remedies or the removal of diseased tissue by operation.

I would like to avail myself of this opportunity to point to a basic error in the treatment of trachoma. Just as the follicle is a very important, if not to a certain degree a main symptom, so it is the main object for the therapeutical energy of many practitioners. But this is erroneous, for neither can a follicle in itself determine the diagnosis trachoma nor is its disappearance equivalent to cure. Being composed of lymphadenoid tissue, it is no more than the usual response of the human conjunctiva to any chronic irritation. Thus the spring-catarrh and conjunctivitis follicularis, both of which have nothing whatever to do with trachoma, have as their main symptom follicles. We even know that a "folliculosis conjunctivae," follicles appearing on a perfectly normal conjunctiva, a condition especially found in children, for years during certain seasons of the year, preferably during spring and autumn, disappear at last after years without leaving any traces or scars. Every acute conjunctivitis which lasts for a greater length of time, e.g., gonoblenorrhrea may towards the end of its course be associated with follicles in the fornix (conjunctival fold), and especially a chronic catarrh caused by diplobacilli will very often lead to numerous follicles—a symptom of chronic irritation. Even chemical agents can produce clinical symptoms very similar to those of trachoma. Let me merely call your attention to "atropin catarrh" in which the conjunctiva may completely be covered by follicles after continuous use of atropin. Similar symptoms as signs of a chronic irritation have been described as a sequel of other poisons, such as pilocarpin.
Our argument receives additional strength from the fact that the trachomatous follicle shows no clinical or histological differences—except for some minor external phases—from follicles caused by other agencies and that further, the follicle as such, as far as we know nowadays, has only a secondary significance in the transmission of trachoma. Nobody has ever succeeded in producing trachoma by instilling or injecting the contents of its follicles alone into a normal conjunctiva (S. Axenfeld, *die Aetiologie des Trachom*. S.95 ff). Furthermore every careful observer has seen cases of evident trachoma with scars without ever having witnessed follicles.

In short, it is a wrong therapy to aim mainly at making the follicles disappear, for trachoma will continue even if all follicles have disappeared. It is, therefore, not necessary to attack these follicles, a minor symptom of the disease, by operation. I call it unnecessary in the first place, i.e., strapping down on the operating table a patient who happens to have a few follicles, a practice still in use by many practitioners and even by some hospitals. This remark applies also to the method of puncturing the follicles. Moreover the latter is a very lengthy process although it is the least irritating of all operative procedures. To use Kuhnt's expressor or to squeeze out the conjunctiva with Knapp's roller forceps, as a routine measure, means, with rare exceptions, a superfluous annoyance to the patient. Moreover in China it will undoubtedly increase the mistrust of Western methods of treatment. If this operation is to be painless the patient has to be given cocain, the operation itself, if thoroughly performed, always causes considerable bleeding, post-operative pains are often severe, accompanied by severe irritation which continues for several days.

One might, however, be willing to endure all these disagreeable consequences of the operation if one only were sure to have once for all put to an end the formation of follicles and to have brought the disease finally on the road towards permanent cure. But this is far from being the case. If the usual treatment (copper, alum, lapis, etc.) is not continued, the disease will take its course and new follicles will reappear within a short time. Moreover, it should not be forgotten that these methods are incapable of curing the papillary hypertrophy of the palpebral conjunctiva—a far more important symptom of the disease.
If the usual methods with copper stick or rubbing-down with sublimate (oxycyanata) are carried out in the proper way, the follicles will disappear in a short time. The epithelial layer covering them grows thinner until it ruptures and the contents are discharged and the rest resorbed. Those who believe that they are in duty-bound to attack the follicles are best advised to follow Elschnig’s suggestion: He expresses them between a glass rod introduced into the conjunctival sac and his fingers. Every skilful practitioner may obtain the same result from this method of expression by doing a gentle massage over the conjunctiva at the same time when the blue-stone treatment is being applied. This can be performed very easily without alarming the patient by telling him anything about it beforehand.

What has been said so far applies equally to the operative treatment of papillary hypertrophy. Every ophthalmologist knows very well how stubborn this most important symptom can be and to cure it radically may take months or, in severe cases, even years, if the usual treatment is employed. We can therefore readily understand the wish of both doctor and patient to employ operative methods. The method most frequently used is abrasio conjunctivae which in some cases may possibly lead to an earlier formation of scar and therefore to a quicker cure of trachoma, than can be achieved by conservative treatment. This method, however, should in China only be applied in those cases in which very severe outgrowths of the conjunctiva and concomitant severe pannus call for speedy cure of this papillary hypertrophy and in which non-operative methods have been without avail. We must remember that the abrasio in whichever way it is performed is no slight operation. An exact anesthetisation of the whole upper fornix and of the tarsus superior is necessary; a considerable swelling of the whole upper eyelid follows such an operation which lasts for two to six days or even longer and which has to be treated with cold compresses. If it is to be done at all, then the abrasio has to be undertaken very thoroughly and extensively. Even then one must not believe that one abrasio will be sufficient for a lasting cure of papillary hypertrophy. These patients have to be treated with special care by means of copper stick and often a second or even a third abrasio may be necessary to destroy any new growths which will rapidly reappear. Without wishing to say too much on the fact that the abrasio, contrary to the elementary
principles of medicine, effects an opening of all the lymph slits of the conjunctiva, I would like to draw attention to two consequences which at least require to be mentioned in passing, i.e., that a tarsitis may not so rarely occur after this operation, or we may observe an uncommonly extensive formation of scars in some cases with all their after-effects.

The same points hold good for excision of the diseased conjunctiva which only means a complete cure of trachoma in a very few cases which on the contrary is now generally recognized to be inefficient. Also partial excisions of conjunctival parts cannot be considered as having better effects. A still more serious operation is the extirpation of the tarsus. Whereas many experienced physicians will reserve this operation as an ultima ratio for the severest distortions of the tarsus which lead to constantly recurring entropion, trichiasis and corneal complications, there are, on the other hand, physicians who advocate this treatment as the method of choice for all cases with pannus trachomatosis corneae. It is quite obvious that in a country like China these procedures of doubtful value as they are, will more readily scare the patient away than attract him. For the same reason all operations intended for curing of pannus corneae performed on the bulbar conjunctiva, such as peritomy, excision of pieces of the bulbar conjunctiva, or transplantation from the mucous membranes from the mouth or elsewhere, should not at least for the time being be employed in China. All these experiments are very interesting from a scientific point of view, and they may lead to an improvement in a certain number of cases, but they cannot be part of a routine treatment nor can they be taken as a means to gain the confidence of mistrusting patients.

What has been said about the treatment of follicles applies equally well to the papillary hypertrophy. The best method for their cure is the conservative treatment with the usual causticity with cuprum sulfuricum in the form of stick or ointment by preference. If done properly it is not only the least painful or irritating way but it gives the impression of the resulting conjunctival scars—so far as they can be influenced at all—remaining softer and less prone to contract later on as is the case with postoperative scars. At any rate, as to trachoma, the old medical principle is best carried out by adhering to
conservative methods; and the principle, "best cure with the least possible amount of irritation" cannot be emphasized too strongly.

A few words as to the copper treatment may be added. Cuprum is the strongest caustic to be adopted for continuous treatment, for those still stronger caustics which have been advocated from time to time such as silver nitrate stick, trichloracetic acid, lactic acid, carbolic acid, carbon dioxide snow, steam, etc., can only be applied once or a few times at best. Although the treatment with copper is easy enough it has to be adapted to the degree of severity and to the stage in which the disease happens to be. A papillary hypertrophical trachoma is the most resistant and a cicatricial trachoma the most sensitive form. Pressure exerted by the copper sulphate stick and the time it remains in contact with the conjunctiva allow an endless gradation of the treatment. It should also never be forgotten to dab up carefully the conjunctiva after every treatment with a cotton swab soaked in water or physiological saline solution; as copper, especially when much of it is dissolved in the lachrymal fluid tends unnecessarily to irritate the cornea. The remedy causes a slight unavoidable irritation which however is reduced to a minimum if one insists on the patient keeping his eyes wide open directly after the treatment. The regular use of cocaine before treatment is decidedly to be refrained from. It not only gives very little relief from pain due to copper treatment to the patient, after the effect of the anesthesia has disappeared, but it also seriously reduces the power of resistance of the epithelial cells of the conjunctiva and of the cornea if regularly applied. From a clinical point of view cocaine is one of the strongest poisonous substances for epithelial cells, a fact which has been repeatedly pointed out by Elschnig. If proper attention is paid to all these details which really should be self-evident, cocainization of the conjunctiva is perfectly superfluous. I remember having seen two cases of severe chalcosis of conjunctiva and cornea among the clinical material, both appeared at such an early stage owing to the fact that the conjunctiva had been cocainized before each copper sulphate treatment. In case the copper sulphate treatment is entrusted to laymen, the careful dabbing of the conjunctiva and a rigid observance to keep the eyes open immediately after the treatment require special and emphatic instructions.

About the Trachoma Problem in China
Trachoma still leads to an abundance of pathological conditions, such as entropion, ectropion, trichiasis, severe ulcers of the cornea with infection of the anterior chamber, severe cases of symblepharon, atrophy of ocular conjunctiva and cornea, etc., so that there still remains a wide field for surgical treatment.

When, however, trachoma occurs as a "menace to the population" as it actually is the case in China, then another very important point has to be taken into consideration, namely, whether or not the medicine is too expensive for the poor. Most trachomatous patients belong to the lower classes and their restricted financial circumstances make a simple treatment essential. A small jar of copper ointment which may be sufficient for half a year or even a copper sulphate stick will be within the reach of most people. The 1% cuprum sulfuricum ointment made up with white vaseline or the 5 to 10% cuprum citricum ointment are just as good as the different preparations such as those with which we are provided by the chemical industry. As they are on the other hand much cheaper, they should be preferred at least in the "praxis pauperum."

It is just here where private and public care and public assistance undertakings can do very much with comparatively little money for the eradication of trachoma. Ointments or copper sulphate sticks could be distributed free of charge or against payment of net prices among the patients as is frequently managed in other countries through organisations for treatment of the poorest. The quantities of ointment needed for one year are comparatively so small, that the sum to defray their expenses could be no burden to any budget of public or private hospitals or clinics even in China. A clinic with an average number of 10,000 trachoma patients in one year would need 100 kg. vaseline, 1 kg. cuprum sulfuricum in order to be able to provide each patient with 10 gm. ointment which would last for a considerable length of time. The number of the poor is really, comparatively speaking, of such a low percentage that the distribution of ointment can really not be regarded as an impossibility. Individual cities and communities could of course also undertake such a distribution, and with a relatively small expense the most needed medicaments could be secured for the treatment of trachoma. Almost the same facilities are offered when purchasing copper sulphate sticks which easily can be produced by the country concerned, of which the expenses are partly or totally defrayed by contributions from public funds,
There is yet another advantage to be found in this simple method of treatment which is of special importance in such a country as China with her insufficient means of communications. This method is simple and to a certain extent without danger so that we can fully entrust the treatment of trachoma to the families,—to the layman,—and by doing this we would not only act in accordance with the wishes of most of the patients, but would save them additional time and expense incurred in coming to the hospital. I must admit, that I am not at all in favour of non-professional treatment in medicine, but, on the other hand, any means available in the prevention and eradication of trachoma as a "menace to the population" should be welcomed.

In this respect one of the most important points is the self-treatment of the patient, as the treatment also of the members of a family or of individuals belonging to small communities, by somebody of their own class, in other words by a skilful layman. The application of the necessary amount of ointment with a glass rod or even with a smooth wooden rod can easily be learned by every patient. Even the blue-stone treatment is most skilfully carried out by many patients as our experience has shown us during the great war among the civil population of Poland and Russia. How much easier, it is, therefore, for the skilful layman if he has been taught how to apply the blue-stone on his fellowman if he is carefully instructed as to the necessary precautions and made to understand that every touch of the copper stick on the cornea is to be avoided. Many will doubt my suggestions, but they will soon change their opinion once they have given these a fair trial. We are all aware of the fact that by allowing such self-treatment as suggested above to be put into practice, much time may be saved for the patient. Nurses and other employees of our Institution infected with trachoma are treated daily or as often as necessary by their fellow-workers. The same practice has been introduced to carpet factories where this treatment is easily adopted. Such a treatment which requires only a few minutes in no way interferes with the patient's work and hundreds can be cared for in a few minutes.

The confidence of the larger mass of the population will be gained once it recognizes the simplicity of the method and the satisfactory results achieved thereby. For the time being, hospitals can only be regarded as the stations for severe cases and the place where enlightenment and instructions are given.
Circumstances in China especially make the trachoma treatment easy on account of the comparatively speaking benign nature of trachoma and the great number of mild cases. On the other hand we have no right to believe that such mild cases do not require any treatment, though they sometimes recover of themselves without ever having received treatment. The disease may here and there be of no consequence to the carrier but it remains as the further existing source of new infections and often the cause of severe cases among his fellowmen.

Many other factors remain for consideration in the fight against trachoma in China, though they may seem at first sight to be out of our reach and perhaps also too expensive. They have already been extensively discussed by others. What I am interested in is primarily to ascertain in detail that part which only depends on us practitioners and which requires very little financial aid. As for the solution of this problem it is of importance that one authority does not rely on or wait for the other. It is to be borne in mind that numerous measures, especially those which require capital, can only be put into effect when public funds are obtainable. On the whole, it may be of very little practical value to promote the establishment of a Council on Health Education and to hope for Schools of Public Hygiene in China. One should not for a moment believe that with the creation of such institutions much is accomplished towards the eradication of trachoma. Experience has shown that it may require years and years before such measures will really affect the great mass of the population. Altogether the case is not as complicated as it may seem. Every Western trained physician in China can be considered to be a source from which public hygiene and preventive measures are passed on to this great mass through his patients. We possess three thousand such living sources and it would be bad testimony for our Western teaching methods should every medical student not receive so much training in preventive and personal hygiene as to enable him to care for those around him. There are approximately four hundred mission hospitals with about one thousand physicians constituting the stations where treatment and instructions are given in the prevention of infectious diseases and also where general hygiene is taught. Every physician who is neither a slave to his general practice, nor purely a laboratory specialist, is hygienist in the first place and can always act as enlightener for his patients and also for his
About the Trachoma Problem in China

students. Please do not misunderstand my suggestions by assuming that I am not in favour of schools of public health and hygiene; but the value of such institutions should in my opinion never be over-estimated. Very little hope is to be set on the possibilities of eradication of trachoma in the present-day China. The few preventive measures such as—doing away with the "common towel," the use of separate washing basins and towels, personal cleanliness, the condemnation of the custom of washing infected eyes with urine, etc.—are naturally borne in mind by every physician with Western training. We are thus left with only one goal, that is, to begin the actual work, the treatment of trachoma.

Physicians will of course be forced to utilize many other aiding factors, the most important of these being an enlightenment of the widest mass of the population by all possible means. Such a measure will attract the patient's attention in regard to his sufferings and all the possible complications when treatment is neglected, as well as to the possibilities of curableness. It has been repeatedly pointed out that the daily papers, and especially the provincial papers can do much in arousing this public interest. Of course, the distribution of a well organized effort regarding general hygiene and elucidation on the subject of "trachoma" should really be a concern of the government. But for the time being, even in this case the daily papers are dependent upon the personal interest of physicians undertaking such work to support by means of publication the anti-trachoma campaign until a central station for propaganda has been organized to take over this part of the work. Waiting until then, would, however, mean shoving off the responsibility to another, to an unknown.

Howard and others have pointed out the possibilities of cooperation among the various schools in the prevention of trachoma, doubtless a very important factor and perhaps the most readily fulfilled part of the whole problem. Of course this presupposes a regular attendance by school physicians or much responsibility borne by the principal of the school who would insist upon a regular professional examination of the children and also upon a simple treatment. And here also the private practice and influence of the physician will achieve better results than mere orders which are never carried out.
That the government could—and really should—render valuable aid has been emphasized frequently. Again I wish to refer to Howard's suggestion of establishing a central station for the eradication of trachoma in China. This suggestion really is well worth the consideration and support of the government and private means but as yet nothing has been accomplished. It again confirms the statement that physicians in China, especially those of the coming generation, should neither depend upon the assistance of the government nor on any outside cooperation. It will take a long time yet before the government is able to make financial contributions to the establishment of such an institution. But what could be carried out by the smallest city and even by the smallest community is the establishment of very simply equipped public out-patient clinics for trachoma. A crucible with 5% cuprum citricum salve (ointment), a sufficient number of smooth wooden rods to be thrown away after use, one attendant, that is, an assistant or a policeman who performs the treatment with the salve on the trachoma patient, is all that is needed. Workers leaving their factory could be cared for with this most simple method of treatment without losing time, should the factory not be willing to establish such a dispensary of its own. The vast number of coolies and beggars could in this way also receive this simple treatment free of charge. It may be possible to combine the dispensaries with the police-stations in town or to transfer these to one big station, where in villages the district leader could be put in charge, or else in the neighbourhood of a temple. Such dispensaries will gradually become known and at the same time will serve as an unofficial control. The expenses for the whole year of treatment will probably not exceed those incurred in connection with the salary and the purchase of crucibles. Now the objection may be raised—what about the treatment of other eye diseases? Once the people know that such stations treat trachoma patients only, those, with other diseases and serious complications, will soon of their own accord find the way to other stations, physicians, or hospitals. And in case a patient with a harmless inflammation of the conjunctiva or with a non-trachomatous corneal ulcer should come for treatment, the application of copper salve will certainly do no harm. That slight errors, in connection with this form of treatment, will occasionally occur, is certain. But one should keep in mind the whole problem and the benefit done will surely exceed
About the Trachoma Problem in China

the injury when the two are compared. And as it already has been possible to introduce vaccination to the widest mass of the population in China, the understanding of the necessity of treatment of trachoma will soon also become more general. With the treatment of trachoma performed by a layman, we will surely meet the approval of the great mass and especially of those patients who have an unconquerable antipathy for hospital regulations. I am far from considering this method of treatment to be an ideal one but I am convinced that it will be able to prevent many consequences resulting from serious cases and cure those of a milder nature. Especially in cities where public and private health stations exist with efficient staffs of nurses, this most simple method of all trachoma treatments could easily be performed by them, or on the other hand the public health stations could supervise the various outpatient clinics and much good would be achieved along this line. My suggestions result from the desire to start the campaign with the minimum expense and to extend the trachoma treatment as widely as possible and also to succeed in every way possible. Any better proposals may rightly dispose of my suggestions. The services of one physician only, will suffice even in a large town to establish these "out-patient clinics" and to supervise and control them. The same applies to country districts.

These preliminary measures should of course be replaced, the sooner the better, by trachoma out-patient clinics, organized and supported by the government. It is certain that a uniform supervision over the trachoma stations in its widest sense would also be the only proper arrangement for China. The establishment of the "flying hospitals" such as are met with in Egypt, which travel all over the country and give instructions to the public health stations as well as to the population and render professional aid to all patients, will of course be able to accomplish much more than those self-dependent out patient clinics. Nevertheless I have no doubt that the coming generation of physicians in China who are not only familiar with the needs of this country but also much closer related to the masses of the population than in the Western states—to the advantage of both sides—and inspired with the desire to help and advise where necessary, will achieve good results in their own working field. And I believe that this generation already feels its own responsibility towards the solution of these problems.
All reformations large or small are self-generated, every educational accomplishment on the part of another ultimately depends upon self-education. From this point of view it may be permitted to suggest another measure concerning physicians only and which again requires no funds. I would like to bring this proposition before the government, and before all medical schools in China, that is, that one should not issue a license to any physician in China who is unable to prove that he can diagnose and treat trachoma. This exceptional rule should govern China for decades in order to afford some kind of guarantee that all physicians in China, disregarding their position, will be able to take part in the treatment of trachoma. If in addition a strong control power would take upon itself to oversee the discharge of each physician’s responsibilities for the control and treatment of trachoma cases in his neighbourhood, then we could also in this way expedite the eradication of trachoma. This suggestion does not propose to make eye specialists of all the doctors in China but merely intimates that they should qualify to do their share in the treatment of trachoma. This is really a matter to be considered by all medical schools of China in seeing that such a resolution is passed and actually put into force in the most simple manner and controlled until the central power enforces it as a general rule.

If in conclusion we answer the main question, is the eradication of trachoma at all possible in China under present conditions, and has the treatment any chance of achieving good results? I do believe the answer may be given in a positive form basing the optimistic view on the following:

Trachoma is on the whole of a relatively mild nature in China as much as I have seen from my experience in the North. This is confirmed by the not infrequent spontaneous cure of cases, where trachoma has been observed accidentally and of which the carrier has had no knowledge whatsoever. This statement is also confirmed by the fact that trachoma reacts to the copper treatment much better for instance than in Europe and also heals in a much shorter time. Another reason is the frequent occurrence of follicles or follicular trachoma, a form which reacts much easier to any method of treatment than the papillary form.

Furthermore, there is already a considerable staff of Western-trained Chinese physicians who are in position to apply the simple modern methods of trachoma treatment and therefore able to contribute towards the prevention of trachoma.

The treatment and prevention of trachoma can be carried out with comparatively very little money if we physicians would only keep to the most simple methods of which the copper treatment is considered
About the Trachoma Problem in China

The ingrained distrust of the Chinese patient against Western medicine calls for the greatest possible restriction in methods of treatment and operation.

It is also essential that physicians do not wait for instructions or depend upon government cooperation, but should begin the campaign of their own accord. Further it is of great importance that every practising physician in China should be well qualified for the diagnosis and treatment of trachoma.

The establishment of simple out-patient clinics, as has been mentioned above without incurring any great expenditure, can be undertaken by private residents, physicians, hospitals, and communities and this would be an effective measure towards the eradication of trachoma which would also contribute towards the reduction of the high percentage of blindness.

Private and public undertakings of enlightenment will be important factors in the anti-trachoma campaign.

Bibliography

NOTES ON DISEASES OF THE HAKKAS

DANIEL G. LAI, B.S., M.D.,
Hopo, Kwangtung,
YUAN KAI HUANG, M.B.,
Kaying, Kwangtung

The Chinese, known as Hakkas (客入) or "guest people," inhabit a wide area of inland and mountainous territory embracing many districts of Kwangtung, parts of Kwangsi, Tingchow and part of Changchow in Fukien, the southern portion of Kiangsi and the south west corner of Hunan. As found in their traditions, in their clan registers, and especially in their language, which is quite akin to Mandarin, they owe their origin to North and Central China; since the Sung (宋) and Yuan (元) dynasties, they came to South China at various times. Their name was probably given by the Cantonese who had arrived at an earlier date, and therefore had had a better opportunity to occupy the wide fertile plains near the sea.

In spite of their isolation, as a whole the Hakkas are very progressive people and emigrate in large numbers to other parts of the world. They are found in Hainan, Hongkong, Formosa, Singapore, Penang, the Federated Malay States, Java, Sumatra and adjacent islands. Houses in their native villages (see the accompanying picture) are comparatively well built; but owing to their strong solidarity and family ties, at times several hundred people may live together under one roof, thus creating a serious problem during epidemics. As a rule, the Hakka women are strong physically, and do not have the custom of foot-binding.

For the last few years, we have been privileged to serve two of the leading hospitals in the Hakka land, the Basel Mission Hospital at Kaying (嘉應), and the Hopo General Hospital at Hopo (河婆). The City of Kaying, known as the Hakka Center in Kwangtung, is located at the head of the Mei River (梅江), a main tributary of the Han River (韓江) which flows to Swatow Bay. Because of its numerous schools and high percentage of literacy, it has the reputation of being called "Athens of South China." Hopo, an important market town, is situated under the district of Kityang (揭陽) on the border of Waichow (惠州) at a quarter distance between Swatow and Canton in a straight line. It draws many people from the surrounding rural areas. With our limited experience
A Hakka Village at Kaying
and equipment in our hospitals, and the widely scattered areas of Hakkadom, we venture much when we make a review of the diseases commonly met with in our regions, and we hope our work may stimulate further and more careful research on this subject.

Parasitic Diseases. In working here, one is greatly impressed by the frequency of parasitic diseases. Blood smears often reveal high percentages of eosinophilia.

Ascariasis, known locally as Kan-Chi (肝寄) is universal and nearly every stool examination shows the presence of more or less ascaris lumbricoides eggs. The Hakkas readily attribute many troubles such as malnutrition, abdominal distension, severe eye cases, to this disease. In Hopo, last week, under Dr. Chen’s care, a child passed more than one hundred round worms after a course of santonin treatment; but being in a very feeble state, he died shortly afterwards. A few days ago, we started periodic health examinations on our school students at Hopo, and as far as we have been able to examine their stools, about 90% of them got Ascariasis.

Ancylostomiasis is commonly seen here, especially among women. It is due to the fact that most of them are barefooted, and work in fields, thus exposing themselves a great deal to the hookworm infection. On account of the lemon-tinged appearance of the sufferers, the Hakkas call this disease “Yellow Sickness” (黄疸).

Malaria is endemic in Kaying and Hopo. In Hakka villages (see the accompanying picture), everywhere there are plenty of ponds of stagnant water, and cesspools, where the anopheline mosquitos breed abundantly. Of three forms of the disease, the Tertian is most common and the Subtertian or Malignant stands next while the Quartan is comparatively rare. Chronic enlargement of spleen is frequently found in our patients. Quinine is the most favored drug in medical practice here; and as a matter of fact many half-trained doctors make their living by giving injections of this drug to their patients. In out-call cases with continuous fever, differential diagnosis between Malignant Malaria and Typhoid is often a puzzle, and one tends to give a therapeutic test with quinine even when symptoms and physical signs point to Typhoid. Owing to damp weather in South China, Wright’s stain is easily spoiled and blood smear
examinations are often unsatisfactory. Whilst we admit that many conditions are caused by Malaria, it, however, seems to us that the medical profession here as a whole makes its diagnosis too hastily without ruling out other possibilities. We have seen more than once that platelets and dirt on blood smears are thought to be plasmodia.

*Amoebiasis* occurs frequently in our regions, and is widespread during the summer months. In Kaying, cases of Amebic liver abscess have been occasionally seen.

Generally speaking, the Hakkas unlike the Cantonese and Swatow people do not eat raw fish, and consequently *Clonorchiasis* is not so common here.

*Filariasis* and its associated condition, *Elephantiasis*, have been met with.

**Bacterial Diseases**

*Typhoid Fever* is one of the scourges of this section of China. Due to the prevalence of cesspools, many wells become contaminated. In the summer months, without proper protection from flies, the sale of cold drinks in streets adds another source of infection. The disease is easily confused with Malignant Malaria, and rose spots are often mistaken for mosquito bites. Its diagnosis is frequently delayed without the aid of bacteriological examinations. In Hopo, we have given this year free inoculations of Triple Typhoid Vaccine to our school children and members of our staffs.

*Tuberculosis* is not less severe among the Hakkas than the other Chinese. However, it is our impression that more men are affected than women, because the latter have a more outdoor life by working in fields. Pulmonary hemorrhage is a very common complication of the disease. Tuberculous cervical adenitis is universal among children.

*Syphilis*. Through the introduction of the Kahn precipitation test to our medical work, we begin to discover more and more cases of syphilis. At present it is estimated that about 10% of our patients have specific infection. Many of them have been in foreign parts, and have histories of venereal exposures there. As a result of the recent movements of troops, the incidence of syphilis tends to be high.
Diseases of the Hakkas

Leprosy is a very prevalent disease among the Hakkas. At times, one sees two or three cases in a week in the Outpatient Department, all three forms, Anaesthetic, Nodular and Mixed, are present. The local Chinese are rather afraid of the disease, and call many other cutaneous conditions leprosy. Two years ago, a prominent Hopo lady got some sort of skin disease; and as her village people saw it and suspected her to be a leper, they almost decided to deport her. One of us examined her and identified the trouble as Psoriasis. It happened that one of the American missionaries residing in this section had the same trouble and his case was demonstrated before a crowd. In this way, she was saved from deportation.

Plague. A few years ago, Bubonic Plague was epidemic in Kaying and the death toll was quite heavy. Two summers ago, when we saw many dead rats in certain villages in Hopo, we became rather alarmed. Through prophylactic injections and prompt measures against the spreading of the disease, only a few lives were lost.

Tetanus. Just two days ago, we lost a case of tetanus; a farmer, 29 years of age. He had received a small wound on the left great toe seven days before symptoms of lockjaw set in. Dr. Chen states that he has seen ten cases of tetanus in Hopo within a period of four years. Tetanus Neonatorum is one of the common causes of infant mortality, and it will always remain so if midwifery is not improved in the Hakka land. The local Chinese believe some “wind” may get into the abdomen through the navel, leading to serious troubles later on. Therefore it is their custom to seal the umbilical cord with some dusting powder or other material. According to a newspaper report from Hongkong, B. tetani has been isolated from this kind of powder sold in Chinese drug stores there.

Diphtheria. In a period of two years, we have met three or four severe cases of diphtheria in Hopo, but they were too late for the antitoxin treatment. Keeping enough fresh serums and vaccines in hand to meet emergency cases is always a problem in our Hakka medical work as we are located in the mountainous inland regions, and hot weather spoils things very quickly.

Pneumonia. Broncho-pneumonia is more frequently seen than Lobar Pneumonia.
The China Medical Journal

CONTAGIOUS DISEASES

Small Pox. In Kaying, due to the popularity of vaccination the disease is getting rare; but in Hopo, four years ago, there was an epidemic resulting in 70 deaths. Since then, our Hopo Hospital has conducted an annual free vaccination campaign in the market.

Measles, German Measles and Mumps are common diseases among children.

Scarlet Fever has not been reported.

DISEASES OF INTERNAL ORGANS

Bronchial Asthma. There are many sufferers from this disease. Ephedrine has a marvellous palliative effect, but on account of its expense, its use is rather limited.

Peptic Ulcer, described by the Hakkas, as “Heart Gas Pain” (心气痛) is a very familiar trouble with our patients. Without an X-ray equipment in our hospitals, we make our diagnosis chiefly on symptoms and therapeutic tests with alkalies.

Cirrhosis of Liver has often come under our observation. An injection of novasurol reduces ascites in a dramatic way, but the fluid accumulates again rather quickly in the abdomen.

Cardiac Diseases. As seen in our districts, they are usually secondary to Rheumatism or Parasitic Diseases such as Ancylostomiasis and Malaria.

Surgical Conditions. The Hakkas have more faith in modern surgery than in modern medicine; consequently we have treated more surgical cases in our hospitals. In Hopo, about 70% of our admissions belonged to surgery (including eye cases).

Pyogenic Infections of the Extremities stands highest in the number of our cases. Being ignorant of what asepsis is, the local Chinese do not know how to take care of small cuts. Every day we are busy in opening up abscesses and dressing them.
Wounds. In this decade, both Kaying and Hopo have witnessed many big battles between rival armies, and as a result numerous cases of gun-shot wounds have come to our hospitals. Among the soldiers there were many Hakkas. Just four years ago in Hopo we treated nearly 400 wounded soldiers; when passing through this place, General Chiang Kai Sheh and his associates contributed more than 2,000 dollars to our hospital.

In Hopo, there are four big clans, each with more than 10,000 members and well equipped with modern ammunition. Very often, when they can not settle disputes in a peaceful way, they have feuds among themselves, resulting in many cases of bullet wounds. The Kaying clans are more or less mixed and therefore do not have these feuds.

Goring by buffaloes is another cause of wounds frequently treated in our hospitals.

Ulcers of the leg are extremely common here. They may be pyogenic, tuberculous, syphilitic or varicose. Many of them resist treatment.

Hemorrhoids, and Prolapse of the Rectum are two of the chief affections of our surgical patients. Many Hakkas suffer from constipation which seems to be a big factor in producing the above-mentioned conditions.

Appendicitis is a comparatively rare disease in Hopo and Kaying. More than once, it is simulated by Ascariasis.

Hernias. Both ventral and inguinal hernias have been encountered on many occasions. In one week's time, one of us saw three cases in our Out-patient Department at Hopo.

Neoplasms

Benign Tumors. Lipoma is most frequently met with in our clinics, and it is usually located at the neck or the shoulder. Adenoma of the Thyroid is endemic in Hopo and many women there have "big necks." Whether or not water has something
to do with the disease remains to be proven. But very few of the sufferers, if any, develop symptoms and signs of Exophthalmic Goiter.

**Malignant Tumors.** As we look over our hospital records, the incidence of this dreadful disease among the Hakkas is by no means low. We have seen case after case of Carcinoma of the Breast, Cervix, Esophagus, Stomach, Epithelioma of the Penis, Sarcoma of the Uterus, Orbit and Cheeks.

**Diseases of the Eye.** When one sees so many eye cases in the Hakka areas, one does not wonder at all why the first mission hospital in China should have been an ophthalmic hospital (founded by Dr. Peter Parker in 1838 at Canton). Approximately 40% of our Hakka patients treated in our hospitals have more or less eye trouble. Therefore it is highly advisable to take some special training in Ophthalmology before one intends to practise the art of healing in South China.

**Trachoma.** In view of the wide spread, bad sequelae and complications of the disease, the problem of trachoma is a serious one in our sections. Pannus, Entropion and Corneal Opacities are often associated with the disease.

**Cataract.** In frequency, Cataract is second only to Trachoma. Not long ago, we extracted a senile cataract on a man who had been "blind" for 17 years. During the operation, his wife was with him; when the cataractous lens was removed, he exclaimed to her, "My, I did not know you look so old." Numerous cases of the different types of cataract, senile, congenital, juvenile and traumatic, have come to us for treatment.

**Gonorrheal Ophthalmia.** It is frequently seen among babies and it indicates poor obstetrical work in our cities.

The foregoing is a very brief and incomplete review of the diseases of the Hakkas. Dr. C. H. Chen, who has been practising in Hopo for five years, contributes much toward our report.
While spending a few weeks at Johns Hopkins Hospital, Baltimore, U.S.A. I learned the use and the preparation of Zinc Oxide Jelly which is a modification of Unna's Paste so long used by many physicians but now largely discarded because of certain drawbacks, the chief of which is that it becomes dry and crumbly. Furthermore it is not cleanly as it is not porous, nor is it antiseptic. Dr. Sooy of the above mentioned hospital has for several years been experimenting with modifications of Unna's Paste and has at last found something which he believes very satisfactory and not at all disappointing if properly made and applied.

Satisfactory treatment of ulcers has long been a problem, and at the best has always required prolonged "rest" as an essential. Ulcers are obstinate, usually dirty and offensive, cause considerable incapacity for work, and are found in all lands, but particularly in the Orient and other backward countries where poverty is extreme, ulcers huge and exceedingly filthy and treatment very unsatisfactory. Therefore anything that offers prospects of better results for the countless victims of leg ulcers will be a great boon to the human race.

I myself have not yet had the opportunity to use this jelly but I had the privilege of seeing Dr. Sooy's patients, some of whom had enormous sloughing ulcers which showed very definite signs of healing. I also heard him present this subject and saw him exhibit some patients before the Medical Society of the State of Maryland. I was so impressed with the evident great value of this treatment that I asked Dr. Sooy numerous questions as I observed him at work in his clinic. He also favored me by taking me to the hospital Dispensary where I saw the whole process of preparation and made detailed notes of every step. Both the doctor and the pharmacist repeatedly emphasized the great importance of accuracy in making the jelly, otherwise the results will surely be disappointing. In this article I am therefore giving in detail the several steps in the process of preparation so that those who wish to try this treatment may give it a fair trial.
A Comparison of the Old and the New Formulae

Old

| 1900 grams | Glycerine |
| 400 grams | Gelatin |
| 1900 c.c. | Water |
| 400 grams | Zinc Oxide |

New

| 1900 grams (equals 1425 c.c.) |
| 625 grams |
| 1900 c.c. |
| 250 grams |

Another way of writing the NEW FORMULA is as follows:

Glycerin (by weight) 16 ounces (12 ounces equal one pound)
Gelatin 5 ounces
Water 16 ounces
Zinc Oxide 2 ounces
Phenol 1.25%

Remarks on the Ingredients and the Utensils used in Preparation

Glycerine: One pound is equal to four ounces. Three cc. are approximately equal to four grams. It is very important to have just the right quantity of glycerine.

Gelatin: Any good grade of edible gelatin will do. The lighter in color, the purer it is. Flake gelatin in sheets is pure, but takes a little longer to melt to a paste. “Silver Label” brand is good.

Zinc Oxide: Any good brand of pure Zinc Oxide will do. It should not be gritty. It should not be exposed to the air too much, that is it should be kept in a tight container. Hubbick’s Zinc Oxide made in England is best, but is more expensive.

Water: Any kind of clean water may be used—hard or soft—not necessarily distilled.

Phenol: Use about 1.25%. Five minims to the ounce makes 1%.

Enamel Wash Basins are used. A smaller one is placed inside a very large one. Thus a water bath is secured. The larger one contains cold water which is gradually heated as it is very essential not to burn or scorch the mixture.

A Wedgewood Mortar is much better than a glass mortar for these reasons.

1. It has a good grinding surface and therefore it is easier to rub the paste absolutely smooth.
Treatment of Leg Ulcers

2. It can be warmed by placing it in warm water (unlike a glass mortar.

A Glass Stirring Rod or a Wooden Spoon should be used. Avoid using a copper spoon.

For Straining one may use open texture muslin, or two layers of gauze. Perhaps best of all is a single layer of sugar-bag cloth.

A Pathological Specimen Jar with a rubber ring is excellent in which to store the jelly. If kept carefully shut up from air the jelly will keep almost indefinitely.

Preparation of Zinc Oxide Jelly

It is essential to be meticulously careful in the preparation. It is not difficult to make, nor does it take much time. But there are several very important small details necessary to get a good result. These points were emphasized by the pharmacist at Johns Hopkins Hospital who very kindly made a special “batch” to be sure that I might observe every detail. Below I venture to give the exact procedure because of a most certain failure to secure a first class jelly if these special points are not observed.

The pharmacist writes thus” We have found it necessary to follow practically the same procedure with the same utensils, weights of materials and amount of heat used on each batch to assure having a paste of about the same texture at all times. The amount of heat used is regulated by using a boiling water bath and timing each batch to produce about the same evaporation of water in each lot. A little experimenting with utensils used will serve to determine the length of time necessary to dissolve the brand of gelatin used.

A. 1. Heat the wedgewood mortar in a basin of hot water. It is very important to keep all utensils warm while mixing.

2. Pour into the mortar four ounces of glycerine and also two ounces of water to thin the glycerine somewhat.

3. Weigh the Zinc Oxide carefully, that is 250 grams (two ounces) (the total amount). Then add a small excess of Zinc, the idea being to have sufficient in the finished produce after rubbing it up with the glycerine in the wedgewood mortar so as to compensate for the small
quantity which adheres to the mortar and pestle. As a matter of fact a little more or less of the Zinc Oxide will make practically no difference in the action of the jelly, but any considerable variation of quantity would make some difference in the consistency of the finished jelly.

4. Add the Zinc Oxide slowly, stirring and rubbing as it is added. Rub it against the side of the mortar until absolutely soft, smooth and without lumps. There must be no lumps, hence also the necessity of a first rate grade of Zinc. Keep on the water bath until all the Zinc is dissolved. This requires a little time.

5. It is best to start with the preparation of this mixture, but as it needs stirring and rubbing only occasionally, one can proceed with the preparation of the gelatin mixture as follows.

B. 1. Partly fill the large enamel wash basin with cold water. Set the smaller enamel basin in this water.

2. Into the smaller basin pour twelve ounces of glycerine (equals one pound), and fourteen ounces of water. This water must be cold so as to avoid congealing the gelatin.

3. Be exact in weighing the gelatin. Weigh 625 grams (equal five ounces).

4. Add the pulverized gelatin, or if necessary the sheet gelatin cut into small pieces, very slowly and gradually to the glycerine and cold water in the smaller basin. Continuously stir while adding so as to avoid lumping. This mixture also must be smooth. It looks like applesauce at this stage.

5. Then start the fire under the large basin and thus gradually heat this gelatin mixture, stirring it frequently and slowly until it is clear, smooth and quite hot.

C. 1. Now slowly add the Zinc mixture to the Gelatin mixture. Scrape out the mortar while it is warm as thoroughly as possible.

2. Add about 1.25% of Phenol, that is about seven or eight minims to the ounce.
3. The whole is now ready to be strained. Preferably use a single layer of sugar-bag cloth. Wet this cloth and tie it around the top of the container. Pour the mixture in gradually while it is hot. Stir it on the cloth with a wooden spoon to 'help' it through. It is important to leave a margin around the circumference of the cloth free from the mixture so as to allow escape of air from the jar.

4. Strain it into a pathological specimen jar with a rubber top, stirring occasionally until it begins to harden in order that the Zinc may remain suspended. Do not stir air into it.

5. Allow it to stand until cool. Then cover the jar and keep it well covered, using from this stock as required, by heating in a pitcher or double boiler.

Sundry Remarks About Zinc Oxide Jelly

1. It will keep for a long time if well covered.

2. There is practically no danger of it molding, unless it is too thin.

3. It must be made properly to be efficacious.

4. For use ladle out about the amount required for the patient or patients. In heating it for application do not heat it too long thus avoiding excessive evaporation of water which affects the jelly.

5. It is better not to re-heat it too often. It is best to heat just about sufficient for immediate use.

6. Use an ordinary soft round paint brush. It is not necessary to sterilize the brush between cases because the mixture is antiseptic. Moreover the leg and ulcer have already been washed.

Some Advantages of this Jelly

1. It is porous and therefore can be applied over sloughs etc. as the secretions will gradually exude to the surface.

2. It is antiseptic because of the Phenol. This also relieves the itching.

3. It is soothing.
4. It is elastic and makes a good substitute for an elastic stocking.
5. It is easily made.
6. It is easily applied.
7. It is not costly.
8. It is easily removed with bandage scissors.
9. There is said to be no odor if the outside of the bandage is kept clean.
10. It permits ambulatory treatment as the patient can, if necessary, keep on with his usual work.
11. It is a good plan to have a special ulcer out-patient-dispensary day. This facilitates application and economizes time. There is also less waste of the jelly.

**Clinical Indications for Use of the Jelly**

1. Any ulcer may be treated by this jelly, whether large or small, clean or dirty, acute or chronic. This includes luetic ulcers.
2. It may also be used for varicose veins.
3. Even the worst of ulcers seem to improve and most of them completely heal in three or four months. The cure seems permanent in nearly all cases.
4. It is also suggested that it might be used in the treatment of postoperative Thrombo-Phlebitis in this way (1) Apply a one and a half inch strip of adhesive plaster, not too tightly, around the upper part of the thigh. (2) Then apply the jelly as usual.

**Method of Application of the Jelly**

1. Cleanse the ulcer and the entire leg below the knee with green soap.
2. It is not necessary to remove sloughs, scabs, etc.
3. Melt the required amount of jelly in an enamel pitcher or in a double boiler.
4. Paint on a layer of jelly from the toes to the knee, covering ulcer, scabs, sloughs etc.
5. Then apply a thin gauze bandage, beginning just above the toes. Make a figure-of-eight around the heel, that is, leave the heel uncovered to allow movement of the ankle. Continue up the leg almost to the knee without reversing the bandage, overlapping a little.

6. Then paint on another layer of jelly.

7. Continue thus alternately with jelly and bandage until there are altogether four layers of jelly and three of bandage.

8. The jelly hardens in about twenty minutes.

9. If desired it may be covered with an ordinary bandage to catch any ooze that may come through, thus protecting the clothing, as well as avoiding odor.

Cleansing the Bandage

1. Sloughs etc. underneath the bandage gradually dissolve so that pus and other discharges ooze through the porous jelly bandage.

2. The patient himself may wipe off the outside of the bandage with plain water but as the jelly is easily affected by water this should immediately be followed by wiping off with 5% Formalin in 95% Alcohol to dehydrate the jelly.

Re-application of the Jelly

1. In the case of varicose veins and the simpler ulcers it is not necessary to remove the first bandage at all until it is thought the condition is cured.

2. In many cases it is best to remove the bandage at the end of one week in order to examine the ulcer to see if progress is made in healing. It doing well it may not be necessary to remove it again until the final removal.

3. Sometimes it is wise to remove the bandage three or four times at weekly intervals to assure oneself that satisfactory progress is being made. This is especially true in the case of large and dirty ulcers. In these cases after several removals it is generally possible to leave it on for a period of four to six weeks.

4. After each removal cleanse and re-apply as at the first.
SOME OBSERVATIONS MADE DURING AN OUTBREAK OF EPIDEMIC JAUNDICE*

Lintsing, Shantung, 1928.

HUGH L. ROBINSON, A.B., M.D.

In the last three and a half months there has been an extensive epidemic of jaundice in Lintsing, Shantung, largely among the military population, but spreading to the civilian inhabitants in the town and countryside. Patients were first seen with this condition at the Lintsing Memorial Hospital on September 19, 1928, and now, January 1, 1929, new cases are still being frequently encountered. There have been 225 military cases seen at the hospital, and a dozen or so civilians, but the total number of cases must enter the thousands.

The disease was generally of so mild a character that it was treated in the out-patient department. Patients rarely presented themselves until they had reached the stage of jaundice, but we had the opportunity of seeing a very few from the very first symptoms. C. L. T., a male attendant in the hospital, 23 years old, spoke to the physician one evening, saying that he was feeling feverish, with chilliness, headache, and general malaise, and his nose was partially obstructed. The physician thought he was coming down with a cold, and prescribed aspirin. The man was not so ill but that he insisted on going on night duty. The next day he slept restlessly and developed anorexia, nausea and occasional vomiting, with increased malaise, but the chilliness and nasal symptoms disappeared. Twenty-four hours after onset he was willing to go to bed and his temperature was taken for the first time, 98.0°. He was given Sodium Bicarbonate 4 Gm. three times daily, and Magnesium Sulphate, 15 Gm. twice daily, on the suspicion that the condition was epidemic jaundice. He stayed in the hospital for five days, at no time having any temperature above 98.6°. For the first two days he continued to have nausea, and on the third developed very slight jaundice, clearing up in three days, so that he went back to work. K. T. Y., the accountant, a diabetic, had a similar illness, somewhat less severe, without nausea, treated in the same way from the very first, developing barely detectable jaundice,

*This paper appears in response to the appeal for further information in the December 1928, Journal.—Editor.
recovering in four days. C. S. T. the hospital tinsmith, complained one afternoon that he was coming down with a cold, was feverish and chilly and that his nose was stuffed up. His temperature was 100.8°. The next day he felt better, and the third day had no temperature, but showed jaundice for the first time. Magnesium Sulphate and Sodium Bicarbonate was now given, and relieved malaise and jaundice promptly. L. J. L., a woman school-teacher of 28, entered the hospital early in the epidemic with a history of four days malaise and probable fever. Her symptoms and temperature suggested typhoid fever or influenza. Her temperature was lower each day, dropping from 103° at 4 p.m. on the day of admission, to 101.8° the same time the next day, and 98.6° on the third, but her prostration and weakness persisted even when her temperature was below 98.6° and pulse below 90. On the seventh day she developed jaundice, and routine medication was begun, with rapid recovery of strength and loss of jaundice. C. L., a civilian of 63, had been in the hospital for fourteen days for amoebic dysentery of two months duration. When his stools had become practically normal, and his symptoms had disappeared, he showed a temperature from 100° to 102.6° on several successive days without any physical signs. On the fifth day he was jaundiced. Out of the many patients whom we saw during nearly three months these were the only ones whom we had a chance to observe in the period of invasion, before jaundice developed.

The patients who came to outpatient department presented themselves at various later stages in the disease. Their complaints, in approximately the order of frequency, were, a feeling of fulness or distension in the epigastrium, no appetite, dull pain across the lower chest, generalized malaise and weakness, dark urine, jaundice, nausea and vomiting, generalized and muscular pain, headache. A few were seen just as jaundice was developing, many came on the fourth to seventh day of the disease as they reckoned, generally counting from the onset of abdominal distress or lower thoracic pain. Few seemed to remember or connect any initial fever with the later localized symptoms. Some were seen, still deeply jaundiced, as late as the twentieth day from onset. Unless jaundice was striking, they had not noticed it themselves. Diarrhoea was not encountered, nor itching, hemorrhage, herpes, purpura or myositis. The symptoms and mortality were in accordance with Osler's description of *Epidemic Catarrhal Jaundice*, rather than with
his account of *spirochaetosis ictero-haemorrhagica*, which he considers of different aetiology, although Cecil's more recent book classifies them as the same disease. We saw a number of cases, usually of ten to fourteen days duration, more often deeply jaundiced than lightly, who showed a rapid, very weak pulse, and great prostration, but no fever. These cleared up in only a very few days with rest in bed, Magnesium Sulphate, and Sodium Bicarbonate.

Another still more severe type was encountered. These cases had been sick for ten days or so with severe systemic symptoms from the first with more or less dehydration consequent on their vomiting, and were brought to the hospital in an irrational or unconscious condition. Their pulse was rapid, small, thready, or even uncountable. Jaundice was not particularly deep in this class, and there was no fever in any of our four cases. None showed signs of acute nephritis in the urine. They were treated by intravenous and subpectoral salt and dextrose solution, but all died within two days of admission except one, who, after five days of unconsciousness, made an almost sudden recovery. We suspected acute yellow atrophy, but feel that probably these cases show a reaction similar to those just mentioned, differing only in degree. There were a few male civilians seen and women, none of them pregnant, and still fewer children.

For this condition we gave 15 grams of Magnesium Sulphate crystals, twice daily, or smaller doses every three hours, and generally added 4 grams of Sodium Bicarbonate three times daily. These measures gave prompt relief in all cases. One man was given, on the 4th day of jaundice, enough of the medication for five days. He returned over two weeks later, slightly jaundiced. He said that four days of the medicine we had given him had made him free of symptoms, and so he had stopped taking it, but that he had suffered a relapse the last two or three days, with the same symptoms he had had at first, to a less degree. Another patient felt so much better after two days of medication that he stopped it. After a couple more days his jaundice and the color of his urine became deeper again, and he came back to report to us that he needed more Magnesium
Sulphate. A few other cases returned to us after four or five days medication to report relief, but to get more medicine. We gave five days medicine to the cases of light or average symptoms and jaundice, and six or seven days medicine to the more severe cases, but insisted on hospitalization for those with a weak pulse.

The epidemic spread rapidly through the military units, reaching its maximum in about a month from the time the first cases were seen. At the request of the commanding general for advice, we recommended isolation in separate barracks for those afflicted. We felt that the epidemic was too widely and rapidly disseminated to have been spread by rodents only, and suspect that it was insect borne or spread by droplets in the breath.

We regret to have to admit that the tremendous pressure of work made it impossible for us to do any scientific laboratory investigation of this interesting epidemic disease. We report our experiences with the hope that clinical observations alone may be of value, in confirming and extending the knowledge of the symptomatology and course of epidemic jaundice.

Epidemic Jaundice
Singyangchow, Ho.,
Jan. 2, 1929,
Editor C. M. J.,
Shanghai.

Dear Editor,

In the fall of 1926 we had an epidemic of Infectious Jaundice. (Weil's Disease). We treated then nearly 150 cases. All among soldiers.

We used Calc. chloride intravenous and it seemed in most cases to give considerable relief. The fever went down, jaundice became lighter and patients felt better. The lighter cases were treated in dispensary and they would return asking for another injection because they felt much better. I do not know what action the drug would have. But because we felt it gave at least some relief we gave it. It would be worth while while trying where cases occur.

Respectfully
Casper C. Skinsnes, M.D.
Editor C. M. J.,
Shanghai.

Dear Sir,

With reference to yours of December 15th, in answer to mine of December 3rd. Enquiries of missionaries to our North where the epidemic was heaviest show that pregnant women were attacked and, in every case heard of, with a fatal result.

I have myself seen some purpura in one case.

Yours sincerely
H. G. Wyatt.

***We have inserted these letters here rather than in the Correspondence Column as they bear so closely on the foregoing paper. Still further information especially with urinary findings is desirable.—Editor.

---

THE APPLICATION OF DIATHERMY TO MALIGNANT DISEASE IN CHINA


It was with considerable reluctance that I agreed to introduce this subject for discussion, as my colleague Dr. Fu and I have only been working on diathermy in Hangchow since 1925, and the greater part of our work has been devoted to medical or non-malignant surgical conditions. We have, however, lost no opportunity of studying such malignant cases as have passed through our department, and we believe that so far comparatively few Hospitals in China have been able to take up this branch of work for any length of time.

The small number of cases passing through our hands and the difficulty of following them up, especially during the period of civil war, precludes us from giving any statistics, and limits us to a brief indication of the methods which we consider may be advantageously used.
For the benefit of those who have not studied the subject of diathermy it may be well to give a few notes on its history, the physical nature of the current, its method of generation and its action on living tissues.

The diathermy currents used in medicine and surgery to-day are the direct descendants of the high frequency currents, and it is of interest to note that Nikola Tesla first pointed out in 1891 that heat was perceived if the body was traversed by high tension currents of high frequency.

D'Arsonval commenced the study of high frequency currents in relation to disease in 1898. Further work was carried out by Von Zeyneck and Nagelschmidt. Diathermy was first used in England by Lewis Jones late M.O. to the Electrical Dept. at St. Bartholomew's Hospital in 1909. Nagelschmidt first used diathermy on three surgical cases in the same department in 1910.

For an electrical current to generate a perceptible degree of heat in the tissues it must be much stronger than any living organism could stand if an ordinary direct or alternating current were used.

If, however, the number of alternations of a current were increased to over 500,000 per second, no ionisation occurs in the path of the current through the body, and the ordinary sensation of electrical stimulation is lost at the same time. The only sensation produced by the passage of such a current through the tissues is one of heat due to the temperature of the tissues being raised by their resistance to the passage of such a current.

The high frequency currents generated in D'Arsonval's apparatus were produced by the simple device of connecting the two poles of a powerful induction coil to the rods of two Leyden jars with a spark gap between them, the outer coats of the two jars being connected with each other by a solenoid.

The rapid charging and discharging of the Leyden jars caused a current of high frequency oscillations to pass through the solenoid. A human being linked up in parallel with the solenoid would experience the passage of a high frequency current but no electrical shocks.
The various types of apparatus used for the production of the special high frequency currents known as diathermy currents are built up on the same principle as D'Arsonval's apparatus, but with certain modifications, viz:—

a. The condenser is built up of a number of sheets of metal, having a much larger capacity than Leyden jars.

b. The spark gap is very narrow and placed between broad electrodes instead of points or spheres. In some machines the sparks pass in a special medium. We use alcohol vapour at Hangchow.

c. A rectangular transformer is substituted for the induction coil.

d. A flat spiral is substituted for the solenoid. This is known as the "oscillator."

A similar spiral, known as the "resonator" is placed near the first spiral, and it is from this that the diathermy currents are obtained.

It will be obvious that the degree of heat produced in the human body by the passage of the diathermy current will vary with

1. The output of the apparatus.

2. The resistance of the part through which the current is passed.

This latter factor must again be sub-divided as different types of tissue vary in the resistance which they offer to the current, and also a wide strip of tissue offers much less resistance than a narrow strip.

For medical purposes, such as the treatment of a chronic inflammatory condition, it is usually required to raise the temperature of the part by 4° or 5° Fahrenheit, but for surgical purposes, such as the destruction of a malignant growth the temperature must be raised sufficiently high to coagulate the tissues.

For the removal of either malignant or non-malignant growths three methods are commonly used:—
Diathermy in Malignant Disease in China

a. Excision of the growth by a knife attached to the diathermy apparatus, which coagulates a fine strip of tissue along its path at each cut.

b. Wholesale coagulation of the growth by electrodes of various shapes.

c. A combination of the above two methods.

For the destruction of tissue by diathermy it is necessary to anaesthetise the patient as for an ordinary surgical operation, local anaesthesia being suitable for minor work only.

Where a general anaesthetic is required we use chloroform in preference to ether if the operation is on the upper part of the body owing to a slight risk of sparks igniting the ether vapour. I have once used rectal ether for an operation on the mouth, but do not intend to repeat this procedure. Whichever of the above methods of operation is used for the removal of a growth it is necessary to use two electrodes, attached to the two poles of the diathermy apparatus, known as the active and inactive electrodes respectively.

The active electrode varies in form according to the procedure to be adopted, but the inactive electrode should be a sheet of lead foil about $3\frac{1}{2}'' \times 5''$. This may be applied to any large area of skin such as the surface of the abdomen, or thorax, and bandaged tightly in position. Some workers shave the skin, cleanse with spirit soap, and apply the metal direct, but we always use a pad of lint or absorbent wool slightly larger than the electrode, soaked in 10% saline solution. The electrode is covered with a piece of oiled silk to prevent saline leaking into the bandage and making other paths for the current.

If method (a) is to be employed the active electrode is a small blunt knife blade on an insulated handle. Excision of malignant growths with a diathermy knife is often preferable to excision with an ordinary knife, in that the diathermy knife seals all the small blood vessels and lymphatics in its path. This minimises the risk of haemorrhage, but perhaps what is even more important is that it prevents the dissemination of the growth. This method has been greatly favoured for excision of growths of the tongue, but so far we have not had an opportunity of using it in that situation.
If method (b) is to be employed, there is a wide range of active electrodes, varying from a cautery point to a flat metal button, a knob, or a multi-pronged fork. We usually employ a metal disc or a fork. I have been asked at times how this method differs from ordinary cauterisation and the answer is that in any ordinary form of cautery it is the metal which is hot and therefore only the tissue in immediate contact with it can be coagulated, but that in diathermy there is no intrinsic heat in the metal, the heat being generated in the tissues below it, and therefore penetrating to a much greater depth.

The depth of the coagulation depends on various factors, e.g.

1. The shape of the electrode.
2. The size of the electrode.
3. The rate at which the intensity of the current is increased.
4. The nature of the tissue to be coagulated.

In the case of flat disc electrodes if the current is started at zero and worked up slowly on an ordinarily moist tissue the coagulation will proceed to a depth approximately equal to the diameter of the electrode, and the diameter of the cylinder of tissue thus coagulated may be up to about 3 millimetres outside the rim of the disc. This holds good for discs up to 15 mm. in diameter. Discs of greater diameter than this tend to cause coagulation to a depth rather less than their diameter.

The depth of coagulation may be increased by using discs with prongs attached to their lower surface.

Dry tissues are destroyed more rapidly than moist ones, and the proximity of large blood vessels may increase the coagulation time as the circulating blood tends to cool the tissues.

Tissue being coagulated by diathermy first turns white, then emits small bubbles of steam, then becomes charred, and finally catches fire. For ordinary purposes the stage of whiteness should be the aim in removing a malignant growth, as charring of the tissues diminishes the depth of penetration, and sparking causes a severe stimulus to any nerves in the neighbourhood.
I have also found from personal experience that it tends to overheat the electrode and causes great inconvenience by the adhesion of pieces of tissue.

In removal of a large growth, which is inoperable from the surgical standpoint, method (c) is often useful.

It may readily be carried out by coagulating the surface of the growth with a disc or fork type of electrode, paring off the coagulated layer with a diathermy knife, and then repeating the process.

In removing a growth it is desirable to carry the coagulation a short distance into the surrounding healthy tissues, so as to ensure complete removal.

In my short experience two methods of healing have been apparent on the sites of malignant growths removed by diathermy:—

- Early sloughing and granulation.
- Immediate formation of a dry scab.

We have noticed that (a) occurs chiefly on mucous surfaces such as the palate or vaginal wall and (b) in the case of skin lesions.

In one case of epithelioma of the roof of the mouth of a soldier the coagulated growth sloughed off on the fourth day after treatment, leaving a granulating surface with a little pus, and the patient left Hospital on the tenth day apparently well.

We have noted that surgical diathermy usually leaves very flexible white scars.

In the case of mucous surfaces oedema is an early and marked sign after treatment. The patients usually complain very little of pain during convalescence.

I have nothing more to add to this inadequate paper on a subject which I feel certain holds great promise for the future, but to urge my colleagues to investigate the subject further, and to invite immediate discussion.

For those in search of a text book I can warmly recommend "Diathermy—its productions and uses in medicine and surgery" by Dr. E. P. Cumberbatch.
DECALCIFICATION OF SKULL BONES OF PROBABLE DISPITUITARY ORIGIN

S. H. Martin, M.D., C.M.

Department of International Medicine

The patient—a Korean man named Lee Sun Poo, aged 44.

Family History: Of no interest, except that father died at 71, had a tubercular spine, and was treated at this Hospital.

Previous History: At the age of 13 he had a rash following an attack of fever, probably measles. His voice began to change, due to the roof of his mouth changing in shape, and at the same time the nose bridge began to soften and sink backwards and downwards. At 20 years of age he noticed a large depression in his left forehead. (This is seen in the photograph). During the last 20 years there has not been any change, as far as he can notice. From 13 years until 20 years had marked polyuria, sometimes with frequency of twenty times daily.

Physical Examination: Shows a thin man, fairly nourished. With marked deformity of face and head. The skull shows a marked depression on the left frontal area which yields to firm pressure by the thumb. The skull feels rough and uneven to the touch along the vertex. The sagittal suture does not show bony union. Several of the larger depressions yield to pressure.

X-Ray: Antero-posterior and lateral views show the above quite clearly. The antero-posterior view gives one the impression seen on viewing the full moon through a three-inch telescope, the decalcified areas representing the lunar seas in their geographic distribution. The pelvic and thigh bones did not show any signs of decalcification. The eye fields did not show signs of contraction. There was more or less continuous headache.
Decalcification of Skull Bones.
Decalcification of Skull Bones.
The Urine Examination did not show any abnormality at this stage. A sugar tolerance test was not done.

Wasserman and Kahn tests were negative.

The syphilitic history was carefully gone into and proved to be negative both for himself and his wife.

Examined from an Endocrine standpoint, he showed: weight 140 pounds; height 64 inches; span 66 inches; pulse 86; blood pressure 115/70; hair distribution normal; there was marked exophthalmos, no nystagmus; teeth—all upper ones missing and all lower ones missing, except the seven front teeth and these are inclined at a marked angle to each other, four on one side and three on the other. The palate is highly arched and deformed.

To date there have been reported eight cases similar to this, viz. 1919 by Christian; 1915-1916, Schuller; 1921, Hand, (3 cases); 1923, Grosh and Stifel; 1925, Thompson, Keegan and Dunn. The points in common with some of the above cases are (1) the beginning with an infectious fever; (2) the polyuria which ceased with apparent cessation of deformity at the age of 20; (3) the lack of normal calcification of the skull, due probably to pituitary defect.

RELATION OF SPRUE TO PERNICIOUS ANAEMIA

(Preliminary Report)

S. H. Martin, M.D., E.M.
Medical Dept., Severance Hospital,

Because of many symptoms common to both sprue and pernicious anaemia, and the possibility of sprue being a deficiency disease I wish to mention the following:

In a study of 12 cases of pseudo-sprue amongst foreign patients in Korea, including two from China, we have had uniform good results in every case in the use of liver extract (Lilly), and the free use of vitamin rich food, especially tomatoes.

One case, a young lady from China, with typical sprue tongue and marked diarrhoea of the sprue variety, was without symptoms in five days with the use of weak hydrochloric acid, liver extract and tomatoes, three times daily.
A male missionary, aged 54, who has been treated for nine years for sprue—in London, Scotland, Battle Creek, U.S., and other centres where sprue is understood—without success, was put on the liver and vitamine treatment. His diarrhoea ceased in three days and his weight improved rapidly, so that he is quite normal for his age. He gained nine pounds in the first week.

NOTES OF CASES FROM TAIYUENFU

H. G. Wyatt, M.B., B.S.

A CASE OF TYPHOID PRESENTING AS ARTERITIS

Osler mentions in his cases two with thrombus formation in the femorals. But I must confess that when I admitted a sick patient, whose presenting symptom was pain in the calves, it took me a few days to think of typhoid fever.

An otherwise fit young man arrived in town after a journey of several days, partly coming on foot and partly by rickshaw. Two days before arrival in town, and four days before applying to the hospital he became ill. On admission he had a yellow tinge of the skin with a malar flush and dry lips. There was loss of appetite, and pain in the pit of the stomach. There was no spleen palpable, and no abdominal tenderness. There was no diarrhoea. Both calves were very tender to palpation, and also continually painful. There was purpuric mottling of the lower part of the legs; the feet were cold; the toes bluish grey. The dorsal artery of the foot could be felt pulsating on the right side, but that on the left was a pulseless cord. He had no fever until two days after admission (the sixth day of the illness), when a temperature of 100 was recorded. He gradually became worse. The ninth day of the illness he had a temperature of 102, and a pulse of 120. Then the Widal test was done and found to be positive for B. typhosus up to 1/100 dilution. The condition of the patient and his feet became progressively worse, and sinking into a typhoid state, he died on the fourteenth day.

ARTERIAL BLEEDING FROM A PENILE SORE

A man who had a coronal sore of the soft variety for two weeks, was at work, when he was suddenly surprised to find his trousers wet. Investigation showed a quantity of fresh
blood was coming from the sore. He came to hospital at once, bleeding freely. The case was dealt with at once, anaesthetic being used. The coronal sulcus had been opened up by a large ulcer, which had finally separated the upper part of the glans from the corpora cavernosa, opening up a small artery. The bleeding point was tied, antiseptics and Ferri perchlor being applied; and recovery was slow but sure from that time.

**Compound Fracture of Tibia and Fibula: Bipp.**

The following is only of interest as being another case where conservative treatment with 'Bipp' was successful.

A man of 34, run over, and admitted day of accident. The right tibia was fractured in the lower third; the upper fragment projecting through a large skin wound. The upper fragment was bare of all but the most intimate layer of periosteum for at least three inches of the shaft. The fibula was also fractured, but not exposed to the light of day. Amputation being firmly refused by the patient, he was put under an anaesthetic, and the injured and dirty wound edges carefully removed. The depths of the wound were swabbed out with spirit, and rubbed over with Bipp. The wound was then stitched up, with one drainage tube reaching down to the muscular layer. The leg was put into some 'papier-mache' splints which happened to make a perfect fit, and there it remained with a minimum of disturbance.

The wound made an uninterrupted recovery, the skin wound completely healing, but the patient discharged himself in disgust after five weeks because there was then no definite union of bone.

I add certain points which I believe made for success, in imitation of Reader's article in B.M.J. May 29, 1928 (Spirit and Bipp Treatment).

1. The wound was never out of the man's trousers, which were not torn at the time of the accident.
2. Early excision of all dirty and crushed tissue.
3. The cleansing with spirit; and the small film of Bipp used.
4. The closure of the wound without tension.
5. A splint that fitted perfectly, and complete absence of movement of the fragments subsequently.
SHARPENING EDGED TOOLS

The little problem of edged tools is always with us,—a nuisance, and an expense. Yet there is no good reason why it should be so. We live in the midst of a race of fine-edge users; and there are artisans all round us who can put an edge on a tool with the best. But why trouble them? A fine-grained “oil-stone,” a little practice, and some knack will enable us to do it for ourselves.

The first secret of sharpening an edge is to recognize the appearance of a blunt one, which is always thick enough to reflect light, and will show itself clearly as a thin white line if examined in a good light. A perfectly sharp edge has no thickness, and cannot reflect anything. Any carpenter will demonstrate how to examine the edge at various angles seeking for this light reflex.

In sharpening a scalpel, we do not, as in razor-honing, lay the blade flat on the stone; the resulting edge would be useless. Rather we raise the back of the blade, so as to grind a slightly bevelled, or chisel edge,—first on one side of the blade, and then on the other. The knack of the thing is to keep the blade always at the same angle to the stone, and to grind both sides equally. Also we give special attention to every part of the curve as the edge sweeps round towards the tip,—the most important cutting section of the blade in dissecting. Examine the edge frequently for remains of the “white line” which betrays blunt patches. When they disappear the blade is sharp. The beginner is nearly sure to develop “wire edges” from oversharpening,—a fringe of flimsy steel along the edge, too weak any longer to accept the grind of the stone. We recognize it by a return of a modified and irregular light-reflex along the edge. It can be removed by rubbing the blade—edge on—on wood.
Wafer blades for patent scalpels can also be sharpened in the same way; but cataract knives are a job for a specialist, and should be sent home.

Scissors can be sharpened locally by any scissors maker. They are not honed on the flat of the blade, but across the flat-bevelled edge; and it is important to maintain the original angle of the bevel.

Every hospital should train some one man to sharpen knives. A friendly carpenter will quickly learn the knack, and he, in turn, will train any light-handed nurse, or even coolie. Doubtless the same man could learn to sharpen scissors; but scissors require comparatively infrequent attention, and for them it may always be worth while to use local professional skill. In reconditioning scissors, the hinge is almost as important as the edges. Commonly it is worn and loose, so that the cutting edges grind one upon the other in use. The appropriate treatment is a moderately heavy hammering of the hinge-pin on a solid anvil,—this not the less though the pin be originally a "screw." A little experience will beget confidence in treatment!

E. G. B.

The substance of this article appeared some time ago in our Inquiry Service. It is reproduced in order to make reprints of it available in the I. H. T. series.
THE XIXTH BIENNIAL CONFERENCE

The Conference just over has been one of the most successful that the Association has ever had. This was acknowledged on all sides for both in numbers present and in the standard of the papers that were given to the Sections the meetings were exceptionally good.

Little can be said about them here, for the issue of the February Journal has already been delayed in order to get the minutes and the general account of the proceedings and as many of the reports as possible published at the earliest possible moment. These are given in full in the Section of the Journal devoted to Association News and further comment on them must be held over to another issue. All we can do here is to congratulate the Association on its splendid vitality, and the Members on the excellent contribution to the furtherance of medical science that their papers provided.

The numbers attending were large, yet not more than a third of our Members on the field were present. As compared with some past meetings this was excellent, as compared with what might be if the Members would plan their arrangements to be present if in any way possible it is disappointing. We urge very strongly that at our next Conference a still greater effort be made for a record attendance. The stimulus of these gatherings is wonderful and it is truly a pity that any have to miss them.

THE INSTITUTE OF HOSPITAL TECHNOLOGY

The Institute of Hospital Technology is to some of us the most important of the recent projects in the field of medicine in China. It has grown out of a real and crying need, and we believe, that the turning point of its career has been reached and the most difficult corner that it has had to negotiate has been successfully passed at this Conference.

The Institute is out to meet the needs of the hospitals especially the smaller hospitals in China, and in face of the crisis from the lack of a sufficiently large staff of fully qualified
doctors in most of these hospitals it has an exceptionally wide field and a very needy one. The Institute is to supply and will supply a technical training to, as far as possible, any bright young man or woman sent to it by a hospital in China for training in the technical work of laboratory, dispensary, record keeping, hospital management and other branches of medical institutional work. This can and will relieve many hospital doctors from mechanical work that now occupies time they ought to have free for professional duties and will do it without involving the engagement of expensively educated men who for one thing are not obtainable and for another could not be financed by many of the hospitals if they were.

The Institute, as most of our readers will remember, was started in Anking with the generous help of the staff of the A. C. M. hospital there. It was driven out when that hospital was seized and has been unable to return there.

A home has now again been found for it in the new Union Hospital at Hankow; but in a new hospital with a limited budget, made more limited by these difficult times, it seemed impossible to get the Institute adequately started for lack of equipment and very limited accommodation for students, despite the fact that one Mission had generously provided the Director's salary, another the site for any essential buildings and a third the possibility of a foreign technician.

The late Executive Committee requested the Conference to appeal to other Missions for the necessary support to make the Institute immediately available for meeting the needs of the Hospitals. To this the Conference at once assented. In the nature of things however the process of getting such help, however urgent the object, must be a somewhat slow one and in addition to this something more than words was necessary to convince the Boards at home of the great importance of this work. That "something" has been most generously supplied at the Conference, just about $1200. The Executive Committee appealed to the Conference to raise a fund among the Members of the Association with two objects in view. First to set the Institute on its legs and enable it to begin work at once and carry on until the appeal home could become effective and second to demonstrate to those at home that the doctors were themselves willing to go to no little sacrifice to establish the Institute and as an incontestable proof to the Boards of the importance with which this work was regarded.
The response to this appeal has been a noble one. Writing as we are on the last day of the Conference about $1200 has already been raised among the doctors themselves and, as an appeal is also to be made to those Members who had not the privilege of being present, a substantial increase of this generous sum should still be possible. An appeal to the members will be going round soon and we would remind them that no amount is too small and none certainly too large to be welcomed with sincere thanks.

The result of all these splendid gifts is that the teaching of students will be begun right away, even before an appeal for support reaches home.

SCLEREMA NEONATORUM

There are certain medical problems of great importance to China whose elucidation is to be sought not by intensive study in isolated laboratories but by the compilation of numerous individually unimportant facts coming from many observers in different parts of the country. Those who contribute to the collection of such data are performing a service to China in helping to define the particular problems concerning which a dissemination of knowledge is desirable and for a satisfactory understanding of which special investigations may be indicated.

It has come to our attention that in certain parts of the country a peculiar malady of new-born infants is fairly frequent. This affection, rare in other parts of the world, has received the name "sclerema neonatorum." In China it is sometimes referred to by its proper scientific name, sometimes merely by the expression "going hard." The condition affects apparently normal infants anywhere from several hours to ten days or more after birth. The nurse or medical attendant first notices a small area, often over one of the buttocks, where the skin is altered either in color or consistency. Within a short time the tissue becomes progressively more firm and resistant to the touch and finally comes to feel like wax. New areas appear and undergo induration until the skin and subcutaneous tissue of all the extremities and most of the body is similarly affected. Finally the face is involved where solidification of the buccal pads of fat renders the expression peculiarly immobile. The color of the affected areas
is variable. "Ivory pallor," "dirty yellow" or "waxen appearance" and different tints of bluish, purplish or livid color have been mentioned.

By the time the condition has fully developed the entire body is extremely rigid. Such an infant may sometimes be maintained in an upright standing position by supporting his head or hands only. There is often, but not always, extreme difficulty in maintaining the normal body temperature and subnormal temperatures of surprisingly low values have been recorded. Once the malady has appeared its import is ominous. Death usually occurs within a matter of days or a few weeks although a few cases ending in recovery have been reported.

The editor of the China Medical Journal would greatly appreciate it if physicians in different parts of the country would notify Dr. Weech as to whether they have or have not observed this disease in new-born infants. Additional details concerning the course in individual cases, concerning the frequency of the affection and therapeutic suggestions may prove valuable. It has been suggested that the malady may be a nutritional disorder dependant on the diet taken by the mother during pregnancy. Any available data on this point may help in providing a better understanding and perhaps a cure of the condition. It is hoped that enough replies to this appeal will be received to enable those interested to prepare maps marking out the geographic distribution of the affection and that from these maps significant information may be obtained.

All information may be sent to Dr. A. A. Weech, Department of Pediatrics, Peking Union Medical College, who will correlate the replies and give us later on a statement on the matter.

J. P. M.

POST-VACCINAL ENCEPHALITIS

We have received from the League of Nations Health Organisation the report of the Commission on Smallpox and Vaccination. The most interesting part of this document is the Report of the Subcommission on Post-vaccinal Encephalitis.

This subject has already been dealt with in the Journal in a valuable paper by Dr. de Vries. (C. M. J. xlii, 353).
It is however of so much importance that we reprint some of the findings of the Commission here, even though they reduplicate much of the information already given in the paper referred to. They are as follows:

In the Netherlands, 139 cases of disease of the central nervous system following vaccination were described during 1923 to 1927, of which 41 died. In England and Wales, taking the arbitrary periods dealt with respectively by the Andrewes and Rolleston Committees, 62 cases with 36 deaths occurred between November 14th, 1922, and November 1st, 1923, while a further group of 40 cases occurred between January 1st, 1926, and September 30th, 1927. Of these 40 cases, however, 15 were excluded by the Rolleston Committee on account of their doubtful nature, leaving for consideration 25 cases, of which 12 died, in the second period. The two combined, on this basis, gave a total of 87, of which 48 were fatal, for England and Wales during the two periods under investigation by these Committees.

The clinical characteristics of the "post-vaccinal encephalitis," as met with in both countries, are usually as follows—we quote from the Rolleston Committee report, p. 157.

"The clinical picture is that of a disorder of the nervous system in which the initial symptoms are headache, vomiting, drowsiness and pyrexia, occurring usually about the tenth to the twelfth day after successful vaccination or re-vaccination. The onset is commonly sudden. Some of the cases in their subsequent course appear to be indistinguishable clinically from encephalitis lethargica. Some are mild and apparently recover completely in about a week, whereas others develop extensive spastic paralysis and pass rapidly into coma and death; the paralysis is almost invariably of the upper neurone type. Between these two extremes, the severity and duration of the disease vary greatly; a paralytic case may live for weeks and ultimately die from septicemia. Nearly one-half of the cases terminate fatally and most of the deaths occur within a week of the onset of the illness. The cardinal symptoms—headache, vomiting, drowsiness and pyrexia—are very constantly present in severe and rarely absent in mild cases; they may be the only symptoms present, even in fatal cases. Paralysis when it occurs, is at first general spastic in type; later it may be flaccid.

"It is uncertain whether the flaccidity is due to an associated spinal lesion or to the lack of tone dependent upon a cerebral lesion. The paralysis may be extensive, but more commonly it is localised and may be transient; the occurrence of trismus has occasionally led to a diagnosis of tetanus. Incontinence or retention of urine is common. Convulsions, general or localised, athetosis, tremor and choreic movements have been observed. Irritability, photophobia and delirium may occur, and in some cases severe pain, especially in the legs, arms and shoulders, has been noted. The cerebro-spinal fluid is commonly under pressure but is sterile; its constitution is variable. The knee jerks and superficial reflexes, together with Kernig's sign, are variable. The fundus oculi is usually normal, but transient optic neuritis has been observed.
There is not any distinctive rash. The vaccinal process has usually proceeded normally and it has not been possible to trace any influence to a particular lymph.

"As already observed, recovery, when it occurs, is usually rapid and generally complete—thus differing from severe cases of encephalitis lethargica—although in a few cases some mental deterioration and residual paralysis have been reported. Most of the cases occur in children of school age rather than in infants, but adults are not exempt. There does not appear to be any relationship between the incidence of the condition and the known incidence of infectious disease of the nervous system. From analogy and from the occurrence of mild cases, it appears probable that the transient form may occur and that the incidence is in reality higher than the number of cases brought to our notice indicates.

"The cerebro-spinal fluid of several cases has been examined during life and in many of them no abnormality was detected, but two of them showed an increase in the chloride content in both cases similar to that observed occasionally in encephalitis lethargica. The hyperglycorrachia was, however, in one case nearly six times the normal and is much greater than that recorded in encephalitis lethargica or any other affections of the central nervous system."

Pathologically, the fatal cases have shown diffuse encephalomyelitis, the inflammation being mainly perivascular in type and often accompanied by oedema.

Here it is only necessary to mention that the pathological changes in some instances resemble those found in acute disseminated sclerosis, and that differ in essential respects from those met with in fatal epidemic encephalitis.

The period which usually elapses between vaccination and the onset of symptoms of encephalitis (the "incubation period") is from nine to thirteen days. The Rolleston Committee found that, out of 125 cases collected from the British and Continental sources, the onset was between the ninth and thirteenth day after vaccination in 94, and the most favoured day was the eleventh.

In both countries post-vaccinal encephalitis has occurred more rarely in infants under the age of 2 years than in older children and in adults. From a table supplied to us by Dr. Jitta regarding the four years 1924 to 1927, we find that, in the Netherlands 4 cases of postvaccinal encephalitis occurred among 126,124 vaccinations under the age of 2 years, as against 130 cases of post-vaccinal encephalitis among 462,212, vaccinations between the ages of 3 and 12; in other words 1 case to every 31,531 vaccinations at ages 0 to 2, and 1 case to every 3,555 vaccinations at ages 3 to 12. The vaccination figures are based on the doses of lymph issued and not on the actual vaccinations performed; they are therefore an over-rather than an under-statement.

In England and Wales, the predilection of the disease for older children has been equally notable, though figures comparable to the Dutch of vaccinations at ages are not obtainable.
Conclusions: The facts and considerations which have been before the Smallpox and Vaccination Commission at its present session seem to permit the following conclusions:

(a) The foremost of these is the rarity of cases of post-vaccinal encephalitis, even in the countries specially affected, by contrast with the number of vaccinations. We are in fact concerned with a minimal proportion of them.

(b) Apparently the matter is not one in which mere coincidence between vaccination and encephalitis can be invoked; in other words, we are not dealing with a merely fortuitous occurrence.

(c) In our present state of knowledge we must conclude that post-vaccinal encephalitis is a different disease from encephalitis lethargica. The conditions under which post-vaccinal encephalitis has manifested itself in the Netherlands and in England and Wales tend to show that children between 3 and 13 years of age are particularly susceptible, whilst infancy and adult ages are almost wholly exempt. All observations point to the conclusion that the appearance of encephalitis is not connected either with particular strains of lymph or with particular accidents of lymph preparation.

(d) Passing to the aetiologico-pathological side of the problem, it would appear in our present state of knowledge that the virus of vaccinia of itself cannot be considered responsible for the supervention of encephalitis. Rather it has to be supposed that some unknown factor exists—perhaps bacterial or a filter-passing virus, or a latent virus—which, by means of a reciprocal reaction, determines the occurrence of the accidents in question.

While the importance of these findings must not be minimized certain points in connection with them must be clearly borne in mind so that over-exaggeration of their seriousness may not result.

1. The number of cases of post-vaccinal encephalitis to the gross number of persons vaccinated is minute.

2. In infants below the age of two, the number of cases is negligible.

3. Cases do not appear to occur in connection with revaccination.

Moral:—Vaccination at the proper age, i.e. shortly after birth and subsequent revaccination as required is practically without risk as regards this disease.
The proceedings of Conference were opened by a reception in the Lounge of the Foreign Y.M.C.A. on the evening of Wednesday February 6th. The guests, to the number of about 200, Members of the Association, Delegates to the Conference, and distinguished visitors were received by the President and the members of the Executive Committee and their wives.

A pleasant re-union of many friends from different parts of China occupied the early part of the proceedings, after which the President welcomed the delegates to the Conference. Dr. Noel Davis, Commissioner of Public Health, Shanghai, addressed the members welcoming them to Shanghai while brief speeches were made by Dr. R. K. S. Lim, President of the National Medical Association, Dr. Wu Lien Tch and Miss Lillian Wu, R. N. Dr. Way Sung New read a telegram of greeting from General Chiang Kai Shek.

The proceedings were concluded with refreshments.

The work of the Conference was begun on Thursday February 7th at 9 a.m. when the President called the Members to order.

A devotional service preceded each day’s meetings at which the Rev. Borst-Smith, the Very Rev. Dean Trivett, the Rev. Dr. Hawkes Pott and members of the Conference officiated. These services were greatly appreciated though the early hour of gathering told against a large attendance.

The business of the Association occupied the first session in the morning followed by a special general meeting on five mornings, each session being conducted by one of the Sections...
on a subject of general interest connected with that particular Section. This was an innovation at the present Conference and proved very successful.

The regular sectional meetings were held in the afternoons and on the whole were very well attended. The Missionary Division held its Conference on the morning of Saturday February 9th and an adjourned meeting on the afternoon of Wednesday February 13th. The meetings of the Physiological Section were held at the National Central University, Woosung, under the auspices of the Chinese Physiological Society.

Evening public lectures were given in the Union Church and were much appreciated by a rather disappointingly small audience. On February 7th Dr. K. C. Wong spoke on China's Contribution to the Science of Medicine, a most interesting address which we hope to be able to publish later. On February 11th Dr. H. Gordon Thompson gave a lantern lecture on A Doctor's Wanderings in China's Far West, giving a most interesting description of his trip with General Pereira through the borderland country between China and Tibet. Excellent lantern slides from photographs taken by the lecturer greatly enhanced the value of an enthralling lecture. On February 13th Dr. J. Preston Maxwell addressed a meeting of the Shanghai Missionary Association in Community Church on The Contribution which the Medical Missionary Body can give to China in her Renaissance. The meeting was very fully attended and the audience greatly appreciated a very convincing paper.

During the course of the meeting telegrams of greeting were received from the Ministry of Health of the National Government, Nanking, and from Dr. Hume on behalf of the staff of the Post-Graduate School, New York.

The time of the members was fully taken up after the sectional meetings by visits to hospitals in and around Shanghai where they were generously entertained. Visits were thus paid to the Margaret Williamson Hospital, the Shanghai Sanitarium and Hospital on Rubicon Road, the Orthopedic Hospital on Siccawei Road and the Red Cross Hospital, Avenue Haig.

On the afternoon of Saturday, February 9th, the members were entertained by the National Central University at its pre-clinical school at Woosung, visiting the new Chinese water-works on the way down.
Finally on the evening of Tuesday, February 12th, the Conference was entertained at dinner by the National Medical Association and its local branch. A delightful evening was spent with several short speeches emphasizing the intimate relations between the two Associations.

One unique feature of the Conference deserves mention—the weather. For once, and it must have been many years since this occurred before, the sun shone on the Conference and not a drop of rain fell during the whole of the week. Such an experience at Chinese New Year time is, we believe, unheard of in the history of previous conferences in Shanghai.

The meeting was responsible for at least one amusing incident. The President lost his hat—someone had annexed it and left a battered substitute in its place. To see our honoured President in such a position was more than the Conference could stand, and the members on the suggestion of one of the officials, as one man threw a twenty cent piece into the hat passed round by a humourist. Great was the disappointment of the Conference when the presidential headgear reappeared and the opportunity for a formal presentation of a new hat vanished. The Conference made up for it however by presenting the President with the last thing in hypodermic outfits.

MINUTES OF XIXTH BIENNIAL CONFERENCE,
BUSINESS SESSIONS

The C. M. A. Conference was opened in the Union Church, Shanghai, on February 7th at 9 a.m.

Dr. Arthur Woo gave his Presidential Address and Drs. Goddard and Sturton were elected Secretaries to the Conference.

The following Committees were appointed:—

Nominations Committee
Dr. R. T. Shields
Dr. J. C. Lawney
Dr. W. S. New
Dr. J. L. H. Paterson
Dr. J. L. Maxwell
Dr. Owen Chapman

Business Committee
Dr. A. W. Tucker
Dr. H. H. Morris
Dr. H. Gordon Thompson
Dr. Mary L. James
Dr. U. K. Koo
Dr. J. L. Maxwell

It was moved, seconded, and passed that:—

"The Resolutions Committee is to be appointed by the Nominations Committee."
The Secretary called attention to the losses that the Association has sustained during the past Biennium. At the request of the President the Members rose to express a vote of sympathy while the Secretary read the following names:

Dr. R. C. Beebe  
Dr. Titus Chen  
Dr. H. Lovett Cumming  
Dr. Jean I. Dow  
Dr. Mary Fulton  
Dr. Anna J. Gloss  
Dr. J. S. Grant  
Dr. Whitfield Guinness

Dr. J. H. McCartney  
Dr. G. E. King  
Dr. W. H. Park  
Dr. W. F. Seymour  
Dr. Mary Sloan  
Dr. Mary G. Terrell  
Dr. J. C. Thomson  
Dr. Charles W. Young

After this business the Secretary gave his report, which was adopted. The Treasurer gave his report, which was adopted with applause.

The session was adjourned.

The 2nd session of the C. M. A. Conference was opened in the Union Church at 9 a.m. on February 8th, with the Vice-President, Dr. H. H. Morris in the chair. Dr. Sturton read the minutes of the 1st session, which were confirmed.

The Business Committee then presented its report for the business of the day.

The Nominations Committee then presented its report, appointing the following as the Resolutions Committee:—Dr. J. Preston Maxwell, H. W. Miller, E. C. Fullerton, H. G. Barrie and Wu Lien-teh.

The Editor of the China Medical Journal presented his report, which was adopted after some discussion on the title of the Journal.

Dr. Shields presented the report of the Council on Medical Education, which was adopted after a discussion as to whether it was advisable to continue the existence of such a Council.

Dr. Ingle presented the report of the Council on Publication, which was adopted.

It was moved, seconded and passed that the report of the Joint Committee on Midwifery be delayed until Dr. F. C. Yen's arrival.

It was stated that the report on the Institute of Hospital Technology was not yet ready.
It was moved, seconded and passed that the general meeting under the charge of the Surgical Section begin at 10.00 instead of 10.30.

The session was adjourned.

The 3rd. Session of the C. M. A. Conference was held in the Union Church on February 9th, 1929 at 9 a.m. This session was devoted to the Missionary Division of the Association, and there are therefore no further minutes.

The 4th. Session of the C. M. A. Conference was held in the Union Church on February 11th 1929 at 9 a.m. with Dr. H. H. Morris, the Vice-President, in the chair.

The Minutes of the 2nd and 3rd sessions were read by Dr. Sturton and confirmed.

Telegram of greeting were read from the Ministry of Health, Nanking, and the Post-graduate Medical School, New York. It was moved, seconded and passed that these telegrams be referred to the Resolutions Committee for suitable replies. The Business Committee presented its report for the business of the day.

Dr. Earle presented the Report of the Council on Research. It was moved, seconded and passed after considerable discussion "That the Executive Committee be given authority to make grants from the funds of the Association for research, and that the Council for Research be authorised to make recommendations for grants for research from outside bodies."

Dr. Shields presented the report of the Nominations Committee. Members were elected to the various Councils as follows:—

**Council on Publication**
- Dr. McAll
- Dr. L. M. Ingle
- Dr. P. B. Cousland
- Dr. L. T. Heimburger
- Dr. P. C. Hou
- Dr. J. L. H. Paterson, with power to co-opt

**Council on Medical Education**
- Dr. K. H. Digby
- Dr. S. A. Ellerbek
- Dr. A. M. Dunlap
- Dr. J. C. Lawney
- Dr. F. C. Yen
- Dr. J. C. McCracken
- Dr. J. A. Hofmann
- Dr. R. T. Shields
- Dr. W. R. Morse, corresponding Member
Council on Research


Dr. G. Hadden presented the report of the Institute of Hospital Technology, which was received with applause. Dr. J. L. Maxwell brought forward the Minutes of the Executive Committee on the subject of the I. H. T.

The following resolutions, were seconded and passed:

1. That the time has now arrived for the formation of an independent Board of Control for the I.H.T. The functions of the Board of Control are to advise the Director, to administer the funds and generally manage the affairs of the Institute.

2. That Local Governing Bodies of the Wesleyan Methodist Missionary Society, the London Missionary Society and the American Church Mission be each asked to nominate a representative on the Board of Control and that three members of the China Medical Association be also nominated to go on the Board.

3. That representatives of other bodies assisting materially in the establishment or work of the Institute, may be co-opted on to the Board of Control as considered advisable.

4. That the Executive Committee of the China Medical Association sanction an appeal being made to the forthcoming Conference for funds to assist in the establishment of the I.H.T. at Hankow, it being made clear that such funds as may become available will be handed over to the Board of Control for administration.

5. That, until such time as the Board of Control be formed, the Association will continue to manage the affairs of the Institute.

The following proposals from the Executive Committee were also approved by the Conference:

The Executive Committee has carefully considered the estimates for the I. H. T. in consultation with Dr. Hadden, and recommends for your approval the following:

1. Annual Expenditure

   2 Chinese workers, about $1000 a year
   2 Chinese servants, about $400 a year
   General expenses, about $1000 a year.

   The salary of the Director, supplied by the W. M. M. S.

   The salary of a foreign technician, offered (subject to confirmation) by an American Society.

   The rent of a house for the Director, if not otherwise provided for.
2. **Capital Expenditure**

**Plant**

Dormitories for students with accommodation for foreign technician, $14,000.

Site for plant and Director’s residence, offered by the London Mission.

**Equipment**

Students’ furnishings, $1000.

Laboratory equipment, $5000.

Should it be possible to secure the necessary sum, it might be preferable to build a Director’s residence on a site near the students’ dormitories rather than incur an annual expenditure for rent for his house. The probable cost of such a house would be about $13,000.

The Executive Committee appeals to the members of the Association to show their practical appreciation of the work of the Institute and to express their conviction of the urgent need for such an Institute to render much required help to the many under-staffed hospitals in providing practical assistants.

The Executive believes that this may best be done by raising a fund amongst the members themselves to allow of the immediate recommencing of the work and that such a fund raised among the doctors themselves will constitute the strongest possible challenge to Mission Boards to supply the needs for a permanent Institute of Hospital Technology.

The Executive Committee asks the Conference to approve a strong appeal from the Association to those Mission Boards on the field and at home who are not already assisting in this work for grants for this purpose either by annual contributions for the support of the Institute or by undertaking to provide a part or the whole of one or more of the items of capital expenditure.

The following amendment brought forward by Dr. Snell was also seconded and passed:—“That Dr. Maxwell be requested to make special appeal to the Home Boards on his coming visit to the homeland on behalf of the I. H. T.”

---

**The 5th Session** of the C. M. A. Conference was held in the Union Church, Shanghai at 9 a.m. on February 12th 1929, with Dr. Arthur Woo, the President, in the chair.

The minutes of the 4th Session were read by Dr. Sturton and confirmed.

The Business Committee presented its Report for the business of the day.
Dr. Shields presented a further report from the Nominations Committee, apologising that Dr. B. E. Read's name had accidentally been omitted from the Council on Publication. It was moved, seconded, and passed "That Dr. B. E. Read's name be added to the list of members of the Council on Publication."

Dr. Owen Chapman read a paper on "A Country Hospital Annual Report."

Dr. F. C. Yen presented a statement from the Joint Committee on Midwifery.

Dr. Owen Chapman presented the report of the C. M. A. Committee for co-operation with the Nurses Association of China, dealing largely with questions of midwifery.

The Session was adjourned.

The 6th Session of the C. M. A. Conference was held in the Union Church, Shanghai, at 9 a.m. on February 13th, 1929, with Dr. H. H. Morris, the Vice-President, in the chair.

The minutes of the 5th session were read by Dr. Sturton and confirmed.

The Business Committee presented its report for the business of the day.

Dr. G. Hadden on behalf of the Committee on Records drew the attention of members to the C. M. A. charts, and to some simple hand-washers.

Dr. Shields presented the report of the Nominations Committee.

The following officers were nominated, seconded, and elected:

President: Dr. H. H. Morris.
Vice-President: Dr. J. L. H. Paterson.
Executive Secretary: Referred to Executive Committee.
Executive Committee—elected members:


It was moved, seconded and passed "That the appointment of the C. M. A. members of the Joint C. M. A. and N. A. C. Committee be remitted to the incoming Executive Committee:

A discussion was held on the question of the training of midwives.

The report of the Joint Committee of the C. M. A. and N. A. C. on midwifery was adopted.

The session was adjourned for a short interval.

The session was resumed after the interval. Dr. H. H. Morris read the minute of the Executive Committee on Dr. J. L. Maxwell's resignation from the Secretarship of the C. M. A., which was passed with applause as a resolution of the C. M. A. Conference, as follows:—

"That this Executive Committee having received an intimation from Dr. J. L. Maxwell that he intends to accept the offer of a post in the new Henry Lester Institute for Medical Research and therefore will be resigning his position as Secretary to the China Medical Association in the autumn of 1929, desires to place on record its appreciation of the excellent work he has done.

Since his arrival in China, Dr. Maxwell has taken a keen interest in the advancement of medical science and in the various efforts that have been made to bind together the medical profession in China into a corporate unity.

During the political storm which has been raging during the years 1927-28, Dr. Maxwell has served the China Medical Association so well both as Secretary and as Editor of the Journal that now that the clouds are beginning to lift the position is one full of promise for the future.

The Executive Committee is glad that Dr. Maxwell will continue to reside in Shanghai and trusts that he may continue to act as Editor of the Journal and that it may still have the benefit of his lengthy experience and wise counsel."

It was announced that Dr. H. Gordon Thompson had kindly promised to act as Editor of the Journal during the furlough of Dr. J. L. Maxwell.

A discussion was held on the paper read by Dr. H. Owen Chapman at the 5th session. It was moved, seconded and passed:

"That Dr. J. L. Maxwell be appointed as official adviser to the Association in preparation of hospital reports and statistics."

Dr. Brown read a paper on "The Operation of a Modern Mechanical Plant in an Up-country Hospital."
Dr. J. Preston Maxwell presented the report of the Resolutions Committee.

The Resolutions Committee reports that in accordance with the instructions of the Conference it dealt with the two telegrams from the Ministry of Health and from Dr. Hume in the following way:

1) A telegram was sent to the Minister of Health acknowledging his good wishes and reciprocating the same.

2) A letter was written by the Chairman of the Resolutions Committee to Dr. Hume acknowledging the greetings of the officers of the Post-graduate Medical School, New York, and returning the thanks of the Conference for the same.

The following resolutions were adopted:

**Dental Section**

The Conference, having heard the resolutions transmitted to it by the Faculty of Dentistry of the West China Union University, and whilst in full sympathy with the desires of the petitioners that dental practice should be carefully regulated and its benefits put before the public in an appropriate way; in view of the fact that membership in the China Medical Association is limited to graduates of medicine, and that it is inadvisable to broaden this basis without careful consideration by the whole body of the Association, remits this request to the Executive Committee with instructions to consider the same and present their recommendations to the members through the medium of the Journal, with a view to the next Conference taking action either for or against the proposal.

**Cancer in China**

The Conference of the China Medical Association assembled in Shanghai in February 1929 having considered the question of Cancer in its broad aspects, and being aware of the great differences in the incidence of this disease in different parts of the East, and the variations of this incidence as compared with Cancer in the West resolved as follows:

1. To draw the attention of the Health Committee of the League of Nations to this matter, and suggest to it that a Commission should be established to enquire into the relation if any of the manner of living or diet to the difference in the East of the frequency of the incidence of Cancer in the various parts of the body.

2. To instruct the Executive Committee to take steps to carry out the above resolution.

**Thanks**

That the thanks of the Conference be given to the retiring President, Dr. Arthur Woo, for his services to the Association during his term of office, and for the generous way in which he provided entertainment on the evening of the reception of delegates and members.
That the thanks of the Conference be given to the Committee of the Union Church, Shanghai, for their courtesy in placing the premises of the Union Church at the disposal of the Association.

That the thanks of the Conference be given to the officials of the Association for their arrangements for the comfort and convenience of the members and delegates, especially in the matter of the provision of lunch and the transportation of visitors to the College of Medicine of the National Central University on the occasion of their visit to Woosung.

That the thanks of the Conference be conveyed to the Foreign Young Men's Christian Association for their kindness in loaning the Lounge for the purposes of the reception of delegates and members.

That the thanks of the Conference be conveyed to the Managers of the Missions Building for the use of rooms for the purposes of the Conference and especially to the Presbyterian Council for the free use of their Committee room.

That the thanks of the Conference be given to the following bodies who have contributed to the pleasure and profit of the members during the meeting:—

The National Medical Association of China
The Staff of the Margaret Williamson Hospital
The Staff of the Shanghai Sanitarium
The Staff of the Red Cross Hospital
The Staff of the Orthopaedic Hospital
The Staff of the College of Medicine, National Central University
The Staff of the Municipality of Greater Shanghai
The Staff of the Health Department, Shanghai Municipal Council

That the thanks of the Conference be given to those in Shanghai who have so kindly entertained delegates and members during the course of the meetings of the Conference.

That the thanks of the China Medical Association be conveyed to the Rockefeller Foundation for the continuance of their grant in aid to the Association.
That the thanks of the Conference be given to the Press for the kind and generous way in which they have given publicity to the proceedings of the Conference.

That the thanks of the Conference be given to the Secretaries who have contributed to the success of our meetings and to the Committees who have given much time and thought to the Association's welfare.

The Minutes of the session were read by Dr. Sturton and confirmed.

The session was closed.

(Signed) F. W. GODDARD
S. D. STURTON

PRESIDENTIAL ADDRESS
ARTHUR WOO, M.B., B.S., LOND.

Ladies and Gentlemen:

When you did me the honour at our last Conference in Peking of electing me as your Vice-President I certainly did not anticipate that an unkind fate had in store for us the early departure of our worthy President, Dr. Fowler, and that you would have me in his place to inflict my Presidential address upon you today.

I profoundly appreciate this great and undeserved privilege, and fully realise my inability to perform my duties with that efficiency to which my predecessors have accustomed you. For my failings I can only crave your indulgence.

The circumstances of the times give to this, our 19th biennial conference, or the 2nd under the new name of our Association an importance far beyond the ordinary. We are upon the threshold of great developments and the prospect makes me wish all the more keenly that another better qualified than myself occupied this chair.

Medical ideals rise beyond politics but their realisation is dependent on peace and order for a stable political status is essential for the freest scope of medical work. Our immediate
sphere of labour is China: therefore, irrespective of nationality, we must, I think, note with pleasure that China is at last reunited under one central government. Moreover, it is, happily, a government composed of enlightened and active men, fully appreciative of the important function of medical science in organised society.

It is to us of special interest to learn that already a Ministry of Health has been formed in Nanking, and nothing can be more significant of the new spirit in the land than the fact that the Vice Minister of this new Department of State, is our friend, Dr. J. Heng Liu, formerly of the Peking Union Medical College. We anticipate with confidence that under his able leadership his Ministry will tackle the many Herculean tasks that lie in its path, with energy, judgment and resource. To him and to his Administration I feel sure that this Association will be ready at all times to offer the closest co-operation.

The creation of a special State Department to look after Public Health in the same way as Public Finance or National Defence is a new political development even in the West. It is one of the very few good things to emerge out of the thousand evils that the European War has inflicted upon mankind, for this world conflict drove home to the different peoples the vital importance of maintaining a healthy population. Nay, more. With the development of rapid means of transportation, the health of a country is no longer merely a matter of national importance but has become one of international concern. I therefore make no apologies for taking up a few minutes of your time with questions of public health, for if there is one country that cries out for every available unit of energy for public health reform, that country is China, where, generally speaking, even an elementary appreciation of sanitation, physical culture and the benefits of a hygienic way of life are lacking.

To what are we to attribute this lamentable state in a country which has enjoyed thousands of years of advanced civilisation and with an industrious and energetic people? To my mind the main factors are Poverty, Ignorance and Selfishness. With the first it is not within our province to deal. We can thankfully leave it to the political economists and the expert personnel of the Ministry of Finance, but there can be little hope for the emergence of a healthy and strong China unless we as doctors can devise ways of dispelling the ignorance of the
population in regard to the most simple facts of human physiology and anatomy, and of arousing them from the terrible apathy in which they lie. Intimately associated with this is the dead-weight of tradition and superstition which cause the people still to regard epidemics and illnesses in any form as visitations from irate gods who require propitiation in the form of processions and the beating of gongs. The third factor which we must overcome is Selfishness and the lack of any sense of social responsibility, but once again the root cause is to be found in the lack of knowledge, for even selfishness, were it only enlightened selfishness, would at once have detected the glaring fallacy in that well-known Chinese admonition, to sweep only the snow from your own door steps and to leave the rime on your neighbours eaves alone.

Though it is true that there is no royal road to physical salvation, yet all roads in that direction must pass through the gate of knowledge, for the greatest enemy is Ignorance. Consider what a tremendous step forward it would be if we could instill into the minds of the masses an adequate conception of the simple theory of bacteria. Induce them to fear germs, and the battle will be half won. How can these things be done? In many European countries and America, Public Health Services are found everywhere. They work either independently of or in co-operation with the Ministry of Health. Such services are indispensable to a country like China. Their chief function must be to create an enlightened public opinion. According to Sir George Newman, Chief Medical Officer of the Ministry of Health in England, the object of an enlightened public opinion is threefold.

1. It teaches how to secure and preserve personal health.
2. It teaches how to avoid disease.
3. It teaches the community how best to give its assent to sanitary reform and its consent to sanitary government.

To accomplish this is no easy task. Yet if there is a will there is a way. Now that we have a Ministry of Health, the long looked for reforms ought to go forward. Soon we hope to hear that through its instrumentality other organisations are being started throughout China, such as:

2. A National Association for the Prevention of Tuberculosis.

3. A Society for promoting a National Health Week.

Our immediate task must be to create a desire for knowledge on the part of the masses and to find the best methods of supplying it. The success of our Nationalist Government in its struggle for peace comes in here as a light to lighten our darkness, for the very methods used with such brilliant results in arousing in the common people a divine discontent with military tyranny and political corruption, an intense enthusiasm for a clean and united government, and a new spirit of nationalism, if employed by us with the same perseverance and determination in the cause of public health would, in the short space of a few years, achieve wonders. To accomplish this and to attain the apparently impossible, we should avail ourselves of the services of all who know, on behalf of all who do not know. Prominent parts should undoubtedly be played by the National Medical Association of China, along with our own China Medical Association and in co-operation with present existing Health organisations such as the Council on Health Education. Most important of all, we should enlist into our service as missionaries of hygiene all doctors, pharmacists, nurses, midwives, ambulance men and sanitary inspectors and other volunteers. There is yet another powerful ally viz: the Press, if we could invoke its aid to serve us. In America through this useful Agency the systematic spread of knowledge in matters of health has done a great deal to create an enlightened Public Opinion. It is fortunate too, that modern science has placed at our disposal the marvels of the cinematographic film and wireless broadcasting. With these we can reach even the illiterate population of the rural districts by means of simple talks on health, and, best of all, by ocular demonstration in the form of moving pictures.

I am not unaware of the fact that the main obstacle to the full development of widespread propaganda work is the cost. Here again we look to our Ministry of Health, working in co-operation with the Ministry of Finance, for guidance. Nor must we forget that the Ministry of Education will have to take an active part in this campaign by making the teaching of hygiene and elementary physiology and anatomy compulsory in all government schools.
I have but skimmed the surface of a very wide subject, and already I am afraid I have detained you too long. Into further detail I dare not enter, but I have no doubt, that at the meeting of the Health Section of the Conference, the subject will be discussed in all its bearings and at such length as its national importance demands.

Let us for a moment assume that we have succeeded beyond our dreams in educating the public in sanitation and public health, that we have replaced the ancient ignorance and superstition by the gospel of knowledge and light, and that the hoary system of Chinese medicine and with it the multitudinous forms of quackery and charlatanism have been swept bag and baggage into the limbo of discredited cults. Are we not still faced with the thorny problem, so often discussed, of an adequate supply of qualified medical men for the great needs of the country? Indeed, has not our very success multiplied our difficulties a hundredfold? For we shall have succeeded in creating a demand without the means of supplying it. Among the 400 million population there are perhaps not more than 2,000 doctors practising western medicine, that is, one in 200,000; and out of that number a large proportion are located in the large cities. It can safely be said that there are millions in country places who can never hope to have the aid of a western trained physician. Much might be done no doubt in establishing more good medical schools either under private or government control, in reducing the cost of medical education so as to bring it within the reach of a greater number of students, and by the creation of scholarships by government or private donations, but when all these have been done, we shall still have the agricultural districts unprovided for. The rural parts of China are and must remain for many years, so lacking in the amenities of life and so unattractive to the educated man as compared with the large cities that the only result of these measures must be to swell the number of doctors in the large cities of the coast without in any way relieving the needs of the farmers of the interior. We can already see this tendency at work, for of the many students who graduate in medicine in the medical schools of China every year or who return from medical schools abroad, few seek to establish themselves in the country where the need for western trained doctors is greatest, whereas in some of the larger treaty ports the struggle for existence in the profession is growing keener year by year.
Some, realising the urgency of the problem, have sought to cast the blame on the curriculum of the medical schools. Five years, they say, is perhaps too long a time to spend in training a man for the medical profession. They feel that the present position is an impossible one and that there is no chance of meeting this tremendous need of the rural population within the next fifty years. "Does that mean" they ask, "that during that period the whole of the rural population of China is to be left to quacks and charlatans?" And they proceed to suggest that there should be created a three years' course for medical students, though they specify that such qualifications must be distinct in their title, and that this branch of the profession should be placed under government control.

I wish to take this opportunity of registering my protest with all the emphasis at my command against a suggested change which to my mind, must result in lowering the general standard of medical education in this country, for depend upon it, however carefully you may hedge around this inferior class of practitioners, the public will not make fair distinctions, and the profession as a whole, must suffer. At a time when the tendency is toward prolonging the period of study to cope with new discoveries in the science and art of healing and the enlargement of our sphere of usefulness to the public, the creation of such a class will be a retrogressive step that will lead to disaster.

The profession in China though in its infancy, has already attracted to its banner an army of camp followers. Men who have spent varying periods as hospital coolies, cooks, ward dressers or surgical assistants, dispensers and what not, are in the market place loud in their claims to heal by the latest modern methods.

The creation of a special grade of medical practitioner by lowering the standard of entrance into the profession will not, I fear, minister to the crying need of the rural districts. Rather will it help to flood the commercial centres and large towns with another army of men ready, always for a consideration, to attempt more than their knowledge warrants. This can only bring discredit to the profession and drive the public back into the arms of the old style herbalists and pulse-feelers.
I submit that the progressive policy is not only the best, but the only policy. The time has arrived for the government to demand that all those who profess to heal the sick by modern scientific methods should have undergone sufficient training. The Ministry of Health, in conjunction with the Ministry of Education, should draw up and strictly enforce regulations governing the training and examination of medical students, and the government should forthwith require the registration of all medical practitioners on the production of satisfactory evidence of such training and the passing of the requisite examinations or their equivalents. The old familiar proverb that a little knowledge is a dangerous thing applies with added force to the treatment of disease, and the quack and the charlatan should find no place in well organised society.

The public should be encouraged to be liberal in its support of medical education and research, and when the National finances permit, the government should establish medical schools and endow research with a lavish hand, more particularly in the department of pharmacology and therapeutics to the end that what is of value in the old materia medica may not be lost, but be given to the world.

In this way only can this great Republic of ours contribute a worthy share towards that great field of scientific knowledge which has been built up by contributions from all the nations.

In my view the only solution to the problem of rural China is the creation of a State Medical Service on the model of the Indian Medical Service. The security of tenure, the dignity of being a state official, the prospects of promotion, the facilities for research and post graduate study and, last but not least, the provision for old age by a system of pensions—all these, which such a service must provide, will, I think, be found sufficient inducement to attract the younger members of the profession away from the glamour of the cities where they now congregate.

Another problem that has recently taken up a great deal of our thoughts is the question of the supply of midwives in China. We need thousands of them and we need them quickly. It may not be news to some of you, when I say that even in England and Wales every year 3,000 mothers die of child birth,
and of more than half of this number death is due to septic infection which, it is claimed, is or should be a preventable condition. If this is true of a country with a well organised medical service, how appallingly high must the Maternal and Infantile Mortality be in China!

I am glad to note that at the present moment a joint committee of the National Medical Association, ourselves, and the Nurses Association of China is sitting in Shanghai to discuss the whole question of midwifery training with a view to laying our opinions before the Health Department of the Central Government in Nanking, and it is hoped that as a result efficient regulations will be established on the basis of these.

The fact that in our efforts to find a solution to the problem of providing skilled obstetric assistance to the mothers of China we are working in harmony and friendly co-operation with our sister organisation, the National Medical Association, is pregnant with happy augury for the future of scientific medicine in China. There are many links which bind the two Associations together. We are both animated by a great and abiding love for this country and both aim at the advancement of the art of healing for the benefits of her people.

I am sure I am voicing the sentiment of all when I say that, in all matters pertaining to the good of China, it is the earnest hope and desire of our Association to have the full support, sympathy and co-operation of the National Medical Association. We should always work together at council and committee meetings in order to bring about a closer bond between the two organisations.

At this stage it is pertinent to ask what is to be the position of our Association in the future to which we are all looking forward. Two years before the China Medical Missionary Association became the China Medical Association, our former President, Dr. Johnson, in his presidential address in 1923 said “The China Medical Association should be to China what the British Medical Association is to Great Britain, and the American Medical Association is to the United States, an organisation of all physicians in the country of good standing, working for the highest professional ideals and for the establishment of a medical profession in China which shall command the respect which the medical profession commands in western lands.”
Will this remain but a pious hope? We now see as in a glass darkly, but one point clearly emerges. It would seem inevitable that our membership must become overwhelmingly Chinese, and the management of this Association must pass into Chinese hands, for no one can deny that the future of Chinese medicine is in the hands of the Chinese themselves, and Chinese will eventually be the official language of the profession in China.

To-day in our Association out of a membership of nearly 700, less than 100 are Chinese. Yet at this very time of China's Renaissance the wisdom of organizing the whole of the medical profession into one strong unit is obvious to all. It is specially so, because of the fact that now more than at any other time in our history, the Government is looking to the profession for advice and assistance in all medical affairs. As to how this is to be accomplished your careful consideration is earnestly requested. Again in the solution of this all important question, we seek the co-operation of the National Medical Association. Meanwhile we must therefore put up with the anomaly of having two medical associations to divide the honour of representing the medical profession in China, content only in the knowledge that we are working hand in hand for the furtherance of a common cause.

We Chinese must never allow ourselves to forget the debt which our country owes to our professional brethren from the West for the introduction of scientific medicine into the country, and for their devotion to their work of education and in the alleviation of human suffering. Many gave their lives for the cause during the plague epidemics, and the civil wars. In recent times whenever there was a shortage of Chinese surgeons, their willing hands were always stretched forth for the succour of the wounded or the ailing. The time has now come when the cry goes out to all, irrespective of nationality, to fight ignorance, selfishness and disease, and I am confident this appeal will not be made in vain.

I will not take up any more of your time by trying to review the work and progress of our Association during the past two and a half years. The China Medical Journal gives a full account of our activities and all scientific contributions. I would like to mention however, that since we met last, we have news that a portion of the Boxer Indemnity to be returned to
China Medical Association Section

China is to be used for the advancement of Medical Science in China. If this is definitely decided upon, as medical men we shall be more than thankful for this friendly gesture on the part of the British Government. Again the recently formed Lester Foundation for Medical Research in Shanghai, like the Rockefeller Foundation in New York, will be a tremendous boon to the world in general and to China in particular. We congratulate the Trustees of the Foundation on having appointed such an able man at its head, in the person of Professor Earle, formerly of the Hongkong University. He has working with him a staff of distinguished scientists and we wish them every success in their research work.

Having recently paid an extensive visit to most of the important medical centres in Europe, I am convinced more than ever that China can only hope to take her proper place and her share of leadership in World medicine if she is willing to accept associates in this work from anywhere and everywhere that can produce such. There is a danger just now that she may, in order to enforce her own leadership in her own land, do herself great damage by failing to realise that there is no nation under heaven, great in the medical sense, which is not continually borrowing and exchanging ideas and workers from other countries. Even with the best intentions there is much useless work being done by workers in the West, because they have not taken trouble to master what has been done by other workers in other countries in the same field.

With the Peking Union Medical College in the north, the Lester Foundation in Shanghai, and the Hongkong University in the south and similar institutions elsewhere, we may well expect that China will be in a position to make large contributions to the present store of medical knowledge more particularly in:

a. Research on certain tropical diseases such as splenomegaly, and kala-azar.

b. The prevention and treatment of diseases such as osteomalacia.

c. Research in biochemistry, endocrinology and pharmacology.
Time does not permit me to enlarge on them but I feel sure most of these subjects will be brought up at this Conference for full consideration.

In conclusion, I cannot let this occasion pass without making reference to the fact that our General Secretary, Dr. J. L. Maxwell, is going to relinquish office in our Association shortly. It is hoped however that he may remain with us as the editor of our China Medical Journal. In him we have a man who truly lives up to the ideals and traditions of our Association, and who has been a veritable tower of strength to us all. His life is symbolical of Dr. John Kirk's creed, viz:—"That there is no happier life work, no greater opportunity for service, no occupation more brimful of interest, no duty more urgent, no trust more sacred, than that which comes to those who seek in demonstration of the love of Christ and in the power of His Spirit, to make the benefits of modern medical science available to suffering humanity in China." It is with the greatest reluctance and the sincerest regret that we have to accept his resignation, but we venture to hope that we shall always be able to avail ourselves of his wise counsels. The appreciation and thanks of us all demand expression, and it is with much pleasure that I tender them on behalf of the Association and myself. Our best wishes go with him in his new sphere of work with the Lester Foundation.

May God's Blessing and Guidance be upon us in all the deliberations of this conference.

Reports to Conference

REPORT OF SECRETARY*

It is unnecessary to remind our Members that since the last report of the Secretary was made, the position of all scientific bodies in China has been one of very great difficulty owing to the continued fighting and political disturbance, which in addition to much material damage created an atmosphere of...
China Medical Association Section

anxiety and suspicion very inimical to scientific progress. A large number of our hospitals had to be temporarily closed and their staffs dispersed while a still larger number only carried on with the utmost difficulty.

It is a matter of great satisfaction to know that these dark days are largely past and we can now to some extent estimate the losses and gains that this critical period has entailed. We believe that the former are not nearly as serious as once seemed possible and that the latter far outweigh them.

Under the losses we must record a few hospitals completely looted and utterly destroyed, these are very few indeed. There are again a few where normal conditions have not yet been re-established, these also are not many.

More serious is the loss of some of our leading physicians who, approaching the years of retirement, feel unable to take up work again under the new order of things and the loss of some of the younger men who, so to speak, had hardly had time to become acclimatized to the work and are not now desirous of returning to it.

On the side of gains are to be put the knowledge that the hospitals in China have completely vindicated themselves, that the welcome back to their stations of doctors who had been driven out has been very hearty and spontaneous, and that the powers that be have widely recognised the altruistic nature of our work and the value that it has for the country at large. In consequence of all this the hospitals have reached a firmer and more stable position than ever in the past.

One even more important gain is the wider recognition of the unity of the medical profession in China. The value of the services of foreign physicians in this country and of their earnest desire to serve in whatever capacity they can be most useful has been very clearly shown. On the other hand the ability of the leading physicians of China itself to take the lead in all important medical enterprises subject only to the numerical handicaps of the fewness of such men for the size of this country has been more than ever demonstrated. The result of all this has been a drawing together of the profession on both sides with the desire to combine the services of all, without racial distinction, as each individual or group can help best in the common cause against sickness and disease.
The natural result of this has been a talk of more close organic union and it is certain that our members would heartily welcome this if and when it can shown to be practical. It is well to remember that unity can exist without such organic union and it is possible for union to be enforced without true unity.

Short of organic union we believe that much may be done by united action and a fine piece of such work is, as we write, being carried through by a joint Committee of the National Medical Association, ourselves and the Nurses Association. Such united action in many branches of medical work we may hope to see in the near future.

Perhaps the most important of all of these is that to do with medical education. The Secretary's post has been a peculiarly happy one but there has been one fly of late in the ointment. There is nothing to him more painful than the constant receipt of a stream of letters from hospital superintendents asking him to assist them in securing doctors for their hospitals. They might as well ask him to send them along a few ounces of radium. Neither are obtainable in this quantity.

The supply of doctors is absolutely and terribly inadequate to meet even the most urgent needs of hospitals in this country. The troubles of these last years have profoundly affected the medical schools. Some have been closed down, some have been in a state of suspended animation and very few have been able to take in new classes. The result can only be that the pitifully small stream of well qualified scientific doctors has been reduced for the next few years to a mere trickle. It is of the utmost importance therefore that all possible help and guidance should be given in the matter of medical education and all those interested should be united in this matter.

There are other possible ways of helping over the temporary emergency and these will receive full consideration at a meeting of the Missionary Division of this Conference.

Turning now from matters of general interest to our own special affairs the Secretary has to congratulate the Association on the remarkable way in which the Association has maintained itself throughout this very difficult biennium.
The Membership is still growing in size and was never larger than it is just now. It is especially difficult to say exactly what the number is, as the year closes with a number of members who have not yet paid their dues and of whom we are uncertain whether they wish to continue their membership. Some again have retired to foreign countries and may not keep up their connection with the Association indefinitely. The fact remains however that the Treasurer has received in Members’ dues a larger sum during 1928 than in any previous year.

Another encouraging feature is the number of Chinese members who are joining the Association, the proportion though still low as compared to foreign members is a steadily increasing one and we consider this a matter for great satisfaction. The contributions also of Chinese members to the China Medical Journal are of growing importance.

The Journal has been able to carry on without interruption during the biennium. On one or two occasions this has been only with the utmost difficulty because of strikes and difficulty with printers. In the end however, and by various expedients, every number of the Journal has been got out.

The Journal also has a satisfactory story to tell but that will appear in a separate report. Here however we would dwell for a moment on its increasing importance abroad. The China Medical Journal in addition to its circulation in China reaches North, Central and South America; Great Britain and most of the countries of Europe; Australia and New Zealand; Africa, India and practically all other countries in Asia.

The one unsatisfactory report that has to be made is in relation to the Association’s Councils. The Council on Publication continues its splendid work but practically all other Councils and Committees have been in abeyance and one, the Council on Hospital Administration, has simply faded away.

It is urgent that the Conference review the position of these Councils and consider what is wise for the future. It would seem to be a question whether the time has not come for their being dissolved as separate entities and their work handed over to Chinese bodies in whose deliberations our Association might also share.
Finally in this his last report in this office the Secretary would like to congratulate the Association on its continued vitality, express his thanks for the constant kindness of the Members to him while he has been in office and bespeak a similar generosity for his successor when appointed.

JAMES L. MAXWELL.

REPORT OF TREASURER

The Treasurer's report will be brief and, for once, satisfactory. He congratulates the Association on a year in which the income has exceeded the expenditure by over a thousand dollars. This has been due largely to economies in the printing of the Journal which it has been possible to carry out without diminishing that paper in size or, he believes, in attractive appearance.

The balance sheet for the year, duly audited and approved by the Executive Committee is appended to this report. Only one or two comments will be made on special items.

The Association has benefited to the extent of $250 from a back and long delayed payment on Conference receipts outstanding for some years, before the present Treasurer took office. A further sum has fallen into the receipts from a special reserve fund which had been arranged by the Executive Committee in connection with secretarial expenses, and which special circumstances made no longer necessary.

On the other hand receipts from advertisements in the Journal are considerably down owing mainly to delayed payments which have had to be carried on to the incoming year. The year as everyone knows has been particularly difficult for trade and it is satisfactory that the advertisements have, on the whole, kept up so well.

The Association has still to thank the Rockefeller Foundation for its very generous assistance without which much of its present work could not be carried on.

JAMES L. MAXWELL.
### CHINA MEDICAL ASSOCIATION

**General Balance Sheet for Year 1928**

<table>
<thead>
<tr>
<th>RECEIPTS</th>
<th>EXPENDITURE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Balance from 1927</strong></td>
<td>Journal Printing ...</td>
</tr>
<tr>
<td><strong>Membership Dues</strong></td>
<td>Office Printing ...</td>
</tr>
<tr>
<td><strong>Subscriptions</strong></td>
<td>Salaries and Wages ...</td>
</tr>
<tr>
<td><strong>Sales</strong></td>
<td>Travelling ...</td>
</tr>
<tr>
<td><strong>Advertisements</strong></td>
<td>Postage, Telegrams, etc.</td>
</tr>
<tr>
<td>Appropriation—Rockefeller Foundation</td>
<td>Loss on Out-port Cheques</td>
</tr>
<tr>
<td>Donations</td>
<td>Councils and Committees</td>
</tr>
<tr>
<td>Donations I. H. T.</td>
<td>Office Furnishings and Sundries</td>
</tr>
<tr>
<td>Bank Interest and Dividends</td>
<td>Rent and Taxes</td>
</tr>
<tr>
<td>Paid from Special Reserve</td>
<td>Commission on Advertisements</td>
</tr>
<tr>
<td>Conference Receipts (old)</td>
<td>Special Reserve</td>
</tr>
<tr>
<td>Exchange of Cheques (out-port)</td>
<td>Bank Interest</td>
</tr>
<tr>
<td></td>
<td>Conference</td>
</tr>
<tr>
<td></td>
<td>Sales Account—expenditure</td>
</tr>
<tr>
<td><strong>$ 21825.37</strong></td>
<td><strong>$ 20090.91</strong></td>
</tr>
<tr>
<td><strong>Balance: 1734.46</strong></td>
<td><strong>Total: 21825.37</strong></td>
</tr>
</tbody>
</table>

Audited and found correct.

WALTER MILWARD

REPORT OF EDITOR

In reviewing the position of the China Medical Journal during the past two years there are one or two points of importance on which the Editor would like to dwell.

Circulation. The latest jest at the editorial expense reads:

An editor was dying, but when the doctor bent over, placed his ear on his breast, and said; "Poor man! Circulation almost gone!" the dying editor shouted; "You're a liar! We have the largest circulation in the country!"

We are sorry that we cannot with the greatest stretch of imagination quite claim this but we are glad to be able to report that the circulation of the Journal has been well maintained throughout this difficult period and perhaps slightly increased. There is no reason why there should not be a still further increase and we look for this in the coming two years, especially as it is more and more in demand by the newly qualified men from the medical schools in China itself. Any increase in circulation abroad is not likely to be large but our Journal does hold a definite place and a very good place in the estimation of the profession in other lands.

We are constantly hearing of how much it is valued in libraries and other places in foreign lands and it is more and more quoted in medical literature abroad.

Cost of Publication. The Editor is glad to be able to report that the costs of publication have been very materially reduced without any reduction in the size of the Journal itself and despite a very largely increased number of illustrations.

Policy. The Editor has kept a very definite policy in front of him since he took charge of the China Medical Journal. The constituency that he has to meet is a very varied one, and is roughly divided into those whose interest in medicine is mainly scientific and those whose interest is almost entirely practical. At the extremes there are groups neither of which are quite satisfied with the Editor's policy however nice and kind they are about it. The extremes of the first group would like to see the Journal more a scientific paper giving mainly erudite articles dealing largely with medical research and kindred subjects, the extremes of the second group would like to exclude everything except matter of a practical nature of value to those in charge
of hospital work and particularly abhor papers of a technical nature.

The policy of the Editor is to attempt to steer a middle course giving to the readers a fair proportion of articles of a technical nature if these are not of excessive length while at the same time making the Journal otherwise as far as possible a record of practical work and of subjects of practical interest to the physician in his daily work.

The Editor flatters himself that he has had at least some success in this policy. There have always been a sprinkling of scientific papers of a high standard for which the faculty of the Peking Union Medical College have largely to be thanked. There have also been most valuable papers of a practical nature and while it may seem invidious to refer to one among many of great usefulness, he would like to take as perhaps the finest article of this nature that he has been able to publish during his term of office, the epoch making paper by Dr. Ludlow on Liver abscess.

In dealing with Current Medical Literature the Editor has attempted again to choose as far as possible matter of real practical interest and though not always successful in this, he is happy to record as an example the presentation of extracts from a paper by Ross on Hypertonic Saline in Adynamic Ileus which led to a further interesting paper by Pearson in the Journal and thus to the regular use of this method as will be brought to your notice in a paper at this Conference.

A further matter which has been constantly in the mind of the Editor has been the desirability of making this Journal one where articles on the distribution of disease in this country could find a place and two or three papers of this nature have aroused quite a little interest. He would bespeak more of such accounts of local distribution of disease from physicians in the more isolated and out of the way places.

The material that the Editor gets for clinical material does not quite satisfy his soul. There have been details and illustrations of some very rare and interesting cases but not nearly as much of this material as he could desire. He would ask brief—really brief—notes of any rare and interesting cases accompanied if possible by good photographs of the condition described.
Lastly of recent years the Editor has been able to add a Section on matters of practical interest to every hospital under the Section of Hospital Technology so ably edited by Dr. George Hadden. These short papers have roused considerable interest and not a little enthusiasm and the readers of the Journal were greatly disappointed at their disappearance after the closing of the Institute and the departure on furlough of Dr. Hadden. The Editor is hoping to be able to resume this section at once.

In one matter the Editor has to confess to continued disappointment, that is that the illustrations while often good are not good enough. He hopes to be able to make this a subject of investigation while on a visit home this year.

As a final word the Editor would like to thank those who have written to him praising the Journal and also those who have written criticising it. Being human a word of praise occasionally is very welcome; being fallible a word of criticism is always valuable. All of us want to make this Journal the best it possibly can be, therefore suggestions and constructive criticism are always welcome even, as often occurs, when circumstances make it impossible to adopt them. They are however of real value in helping the Editor to look up to a higher level of attainment.

JAMES L. MAXWELL,

APPENDIX TO EDITORIAL REPORT

There is one matter on which I have not touched in my report and to which reference should certainly be made. This is the question of amalgamation of our Journal with that of the National Association of China.

I need hardly remind you that proposals with this in view came before you in a referendum and an enormous and overwhelming majority of our Association voted in favour of such amalgamation.

Following on this certain difficulties arose,—not in the principle but in the practical details of how this might best be
carried out. It was only after my report was written that these difficulties were finally solved, and but a few details remain still to be adjusted by mutual arrangement.

In view of the spirit in which these negotiations have been carried out and the willingness on both sides for sacrifice in order to obtain the very best medical paper possible, I have no doubt in regard to the successful ultimate issue of these discussions.

The proposals which thus far have received the assent of both Executive Committees are briefly:

That the Journal should be equally the property of both Associations.

That the name of the Journal be changed to Chinese Medical Journal—English Edition.

That the Journal be edited by two Editors with equal powers representing the two Associations.

That an Editorial Reference Board of specialists be formed of equal numbers from the two Associations.

That the Business arrangements for the Journal, printing, publishing—etc—remain for the present as heretofore, but under the management of the two Editors.

That the arrangements outlined above come into force on 1st January, 1930 and continue for a period of two years, after which the arrangements be subject to review in the light of the experience gained during that period.

There are still a few minor details to be settled but in the name of the present Executive Committee I beg to propose the following resolution:

That this Conference approves of the scheme for amalgamation of the China Medical Journal with the English section of the Journal of the National Medical Association as outlined here, and instructs the incoming Executive Committee to take up the question of minor details with the representatives of the National Medical Association.

J. L. M.
REPORT OF COUNCIL ON PUBLICATION FOR 1928

The work of the Council has been proceeded with without interruption during the year, in spite of the unfortunate incidents at Tsinan in May. Of the ten members of the Council, however, only two have been in China throughout the year. Dr. Gillison’s return to China is uncertain, and the continuance of his work for the Council more so. Dr. Cormack has also left China. Dr. Cousland is living in Canada, but continues his superintendence of the work for which he has done so much. Dr. Heimburger has been on furlough throughout the year, and Dr. Shields was in America for the first nine months, as also was Mr. Read in the early months. Dr. McAll (the Editorial Secretary) and Dr. Kiang left on furlough in May.

With such a reduced staff the quantity of the work has inevitably suffered; yet the output for the year is not small. The efforts of the Council are being mainly directed to keeping their books up to date; it is their policy to provide a solid basis of standard books, abreast of the latest English editions, and including the Chinese terms as fixed by the Scientific Terminology Association, rather than to issue a series of translations too numerous to revise when need arises. A list of new books published during the year is as under; while many are revised editions, it is to be realised that even the revision of an old work is no small task.

<table>
<thead>
<tr>
<th>Title</th>
<th>Edition</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materia Medica, Bruce and Dilling</td>
<td>New Translation</td>
<td>pp 540</td>
</tr>
<tr>
<td>Appendix to Osler’s Medicine</td>
<td>New Publication</td>
<td>pp 28</td>
</tr>
<tr>
<td>Diseases of Skin, Heimburger</td>
<td>New Publication</td>
<td>pp 400</td>
</tr>
<tr>
<td>Diseases of Throat, Nose and Ear, Porter</td>
<td>2nd Revd. Edition</td>
<td>pp 242</td>
</tr>
<tr>
<td>Diseases of Eye, May</td>
<td></td>
<td>pp 498</td>
</tr>
<tr>
<td>Histology, Lewis and Stolir</td>
<td></td>
<td>pp 486</td>
</tr>
<tr>
<td>Pathology, Stengel</td>
<td></td>
<td>pp 502</td>
</tr>
<tr>
<td>Diseases of Infancy and Childhood, Holt</td>
<td>4th</td>
<td>pp 230</td>
</tr>
</tbody>
</table>

In addition the following books are in the press:

<table>
<thead>
<tr>
<th>Title</th>
<th>Edition</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anatomy, Gray</td>
<td></td>
<td>pp 2226</td>
</tr>
<tr>
<td>Physiology, Halliburton</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epitome of U. S. Pharmacopedia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insanity in Everyday Practice, Younger</td>
<td>2nd Revd. Edition</td>
<td></td>
</tr>
</tbody>
</table>
China Medical Association Section

While the following books are in preparation:—

Minor Surgery, Gwynne Williams
Bacteriology, Hiss & Zinsser
Chinese-English Medical Lexicon

The final meeting of the Scientific Terminology Association will be held immediately on the close of this Conference, and your Council have been preparing lists of terms for these meetings, in Gynecology, Obstetrics and Pediatrics, and further lists in Ear, Nose and Throat, Dermatology, Syphilology, Parasitology and Protozoology. It is right to refer to the laborious work in this connection of Mr. Leo Te Sheng, a co-opted member of the Tsinan Sub-committee of the Council, who has indeed been its mainstay during a year when so many of its members have been away. The Association's work has extended over twelve years, and with this meeting it will complete its labours.


<table>
<thead>
<tr>
<th>Income</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance</td>
<td>Printing</td>
</tr>
<tr>
<td>$ 2147.77</td>
<td>...</td>
</tr>
<tr>
<td>Sale of Books...</td>
<td>Pundits</td>
</tr>
<tr>
<td>24257.91</td>
<td>...</td>
</tr>
<tr>
<td>Loan Repaid</td>
<td>Insurance</td>
</tr>
<tr>
<td>1270.83</td>
<td>...</td>
</tr>
<tr>
<td>Deposit A/c cashed</td>
<td>Advertisements</td>
</tr>
<tr>
<td>5013.96</td>
<td>...</td>
</tr>
<tr>
<td>Interest</td>
<td>To Deposit A/c (to complete $5000)</td>
</tr>
<tr>
<td>1406.64</td>
<td>137.98</td>
</tr>
<tr>
<td></td>
<td>Miscel. (Postage, Travel, Freight Books, etc.)</td>
</tr>
<tr>
<td></td>
<td>206.80</td>
</tr>
<tr>
<td></td>
<td>Rent</td>
</tr>
<tr>
<td></td>
<td>90.00</td>
</tr>
<tr>
<td></td>
<td>Loss on exchange</td>
</tr>
<tr>
<td></td>
<td>33.50</td>
</tr>
<tr>
<td></td>
<td>Balance</td>
</tr>
<tr>
<td></td>
<td>4039.16</td>
</tr>
</tbody>
</table>

$84184.11

Audited and found correct.

(Signed) W. P. Pailing.

Respectfully Submitted.

19 January, 1929.

LAURENCE M. INGLE.
Acting Editorial Secretary.
REPORT OF THE COMMITTEE FOR CO-OPERATION
WITH THE NURSES ASSOCIATION OF CHINA

At the Peking Conference in September 1926, after a comprehensive scheme for the midwifery training of graduate nurses under the joint direction of our two Associations had been forwarded from our Committee and adopted by the Association, the following resolution was carried:—“That the Committee for Co-operation with the N. A. C. be asked to formulate a scheme in conjunction with the corresponding committee of the N. A. C. for the training of women other than graduate nurses as midwives, and to report to the Council on Medical Education.” (C.M.J. Oct. 1926, p. 1033).

The Revolution, breaking into Central China just at this time, made it impossible for this Joint Committee to meet; and soon most of its members were dispersed overseas.

In passing the scheme for the midwifery training of graduate nurses (C.M.J. Oct./26 p. 1033 et seq.) the Peking Conference had amended a clause relating to the granting of diplomas; and the N. A. C. Shanghai Conference in January 1928, while endorsing the scheme as a whole, still further amended this clause in an opposite direction. At the same Conference a resolution was carried, which appeared to preclude all possibility of any participation on the part of the N. A. C. in the training of non-nurses as midwives. (C.M.J. Mar./28 p. 213). This attitude and one of the reasons on which it was based were vigorously challenged in subsequent issues of the China Medical Journal.

It was not until October 1928 that exigencies of furlough made it possible for our Committee to begin again to function, when the problem of the impasse which had developed was taken up with the leaders of the two Associations. It was then found that the N. A. C. Conference resolution did not represent the true spirit of that Association, and that on both sides there was an earnest desire to explore fully the possibilities of co-operation.

Throughout last year in Chinese professional and Government circles there has been a rapidly growing interest in the
subject of midwifery training; and in December delegates from the C. M. A. and later from the N. A. C. also accepted the invitation of the National Medical Association to join their delegates in framing a memorandum on the subject to be sent to the Nationalist Government. This tripartite committee is drafting recommendations for Government registration and supervision of midwives, and the establishment and standardisation of schools for two courses of midwifery training, (a) for general nurses, and (b) for non-nurses.

On 8th January 1929 our Joint Committee met in Hankow. There was a full attendance of members, viz:—Drs. J. L. Maxwell, Ethel Rowley, Mary James, and Chapman (C.M.A. delegates), and Misses Mary Shih, Simpson, Stephenson, and Marten (recently appointed ad hoc by the N.A.C.). Every shade of opinion on the subject of the training of midwives was represented by those present or by letters which they brought from others; but after earnest and careful consideration of the problem a very cordial and satisfactory agreement was found to exist as to the course which should be adopted.

The following resolutions were carried unanimously:—

(1) "That the Joint Committee views with satisfaction the projected measures of the Nationalist Government for the training of midwives; and recommends the N. A. C. and the C. M. A. to co-operate in every possible way in this work, and to urge their members to participate in it in their local areas."

(2) "That the consideration of the joint scheme for the granting of midwifery diplomas, now before the Associations, be delayed till the action of the Government with regard to midwifery training be announced.

"That in the meantime the N. A. C. carry on its examinations [for midwifery] as previously."

H. OWEN CHAPMAN.

Chairman.

Hankow, January 13, 1929.
### Members Present at the XIXth Biennial Conference

*February, 1929*

<table>
<thead>
<tr>
<th>Drs. Ancell, F. C.</th>
<th>Drs. Hsiao, Y. T.</th>
<th>Drs. Read, B. E.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrie, H. G.</td>
<td>Hou, Hou-ki</td>
<td>Rieboy, M. C.</td>
</tr>
<tr>
<td>Bosch, T.</td>
<td>Hu, R.</td>
<td>Riego, R. C.</td>
</tr>
<tr>
<td>Branch, J. R. B.</td>
<td>Ingle, I. M.</td>
<td>Robertson, H. C.</td>
</tr>
<tr>
<td>Brown, E. L.</td>
<td>Irwin, R.</td>
<td>Song, M. B.</td>
</tr>
<tr>
<td>Brown, R. E.</td>
<td>James, Mary L.</td>
<td>Shields, R. T.</td>
</tr>
<tr>
<td>Butke, L. H.</td>
<td>Jen, T. K.</td>
<td>Siao, T. K. M.</td>
</tr>
<tr>
<td>Byles, H. M.</td>
<td></td>
<td>Slater, R. A.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Snell, J. A.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stone, Mary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stone, Siebe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Struthers, E. B.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Struthers, R. G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sturton, S. D.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sun, P. P. Z.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Swan, A. H.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shen, Y. B.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tan, S. H.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Taylor, H. W. Y.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teng, C. T.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thompson, H. Gordon</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thorngate, G.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Toottell, G. T.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Towers, A. E.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Travis, C. H.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trimmer, C. S.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tsong, A. F. T.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tucker, A. W.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turner, W. H.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tuyn, A. S.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ulmer, W. P.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Van, L. M.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Veldman, H. E.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wang, K. C.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wang, S. T.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wang, Z. T.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wen, C. J.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wesche, H. C.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wilkinson, L. L.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wilson, R. M.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wolcott, R.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wolfe, S. C.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wong, Amos</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Wong, R. W.</td>
</tr>
</tbody>
</table>
Official Delegates at XIXth Biennial Conference,
China Medical Association,
February, 1929

Visitors

TRADE EXHIBITION

The leading drug and medical supply firms in the Far East made their usual attractive exhibits at this year's Conference. The Union Church Hall lent itself unusually well to the purpose and full advantage was taken of the occasion to exhibit things
of the latest design and production. With the vast volume of ever-increasing quack remedies upon the market, it was a matter for remarkable notice that things of a strictly proprietary character if present at all were quite obscured by the splendid presentation of guaranteed brands of high grade pure drug products which are greatly needed in this country and which should be supported in every way possible by modern medical science.

**Pure Drugs and Chemicals**

*Parke Davis & Co.* displayed their new preparations of *Adrenaline* and *Ephedrine*. Of their other gland products the most noteworthy are the newly extracted principles of Pituitrin, named by Kamm *Oxytocin* and *Vasopressin*, now placed on the market under the more standard names of *Pitocin* and *Pitressin*, the uterus-contracting and the blood-pressure-raising and antidiuretic principles respectively. Their other gland products are now enteric coated.

*Alepol* and *Moogrol* the well-known preparations of the sodium salts and ethyl esters of Chaulmoogra for the treatment of leprosy were prominent in an exhibit of *Burroughs Wellcome's* well known pure Tabloid Brand products. It should be noted that while many people use Alepol intravenously, Burroughs Wellcome specially recommend it subcutaneously and intramuscularly. This firm also has unusually pure preparations of *Quinophan* and *Quinoxyl*, commonly known under the other trade names of Atophan and Yatren. A good nasal spray compound of ephedrine was shown in which there is added camphor menthol and oil of thyme to one percent ephedrine in liquid petrolatum. *Burroughs Wellcome's* well known cod liver oil and malt preparations are still to the fore but much greater prominence is now given to other vitamine-containing substances. *Parke Davis* and *Eli Lilly* make a first class liver extract which like all other brands is at present rather expensive. For the first time at our Conferences *Burroughs Wellcome* exhibited *Ergosterol*: we shall look for other purified crystallized vitamines at the next Conference. *Allen and Hanburys* will always be known for their high grade cod liver oil and milk foods, but their most striking exhibit was of surgical instruments and appliances. They have a good line in finely graduated syringes complete with needle in case which can be kept sterile in alcohol.
The exhibits of milk foods were some index of their present widespread use in China. *Dryco* Milk of *Hugo Reiss & Co.*, Lactogen of *Nestles*’ and *Vitamilk* were the most noticeable. As well as the old well-known cod liver oil preparations such as Kepler's solution and *Scott's Emulsion*, there was *Jerolin* made by *Mee-Yeh Handels Compagnie*.

It would be impossible to visit a modern drug exhibit without being impressed with the large number of synthetic drugs as specially made by the German firms. The great firm of E. Merck represented by *Schmidt & Co.* specialize in pure chemicals. Their synthetic *Ephetonin* was well displayed, in tablet form for oral administration, or in bottles of 10 grams for making solutions for the nose. Another drug of special interest to China is *Merck's Eumenol*, an extract of Tang Kuei. Such things have been marketed for many years but are not well known. These conferences give an unusual opportunity for people to become acquainted with them.

The synthetic drugs given special prominence were *Schering's Atophan, Medinal and Veramon*. The same firm have introduced a new seasickness remedy in *Vasano* representing a mixture of the camphoric acid salts of scopolamine and hyoscyamine from Mandragora root. Anyone interested in synthetic drugs can secure in either English or Chinese quite a volume of information in the books now obtainable from *Schering-Kahlbaums*, or the *China Export Import & Bank Co.* representing the I. G. Farbenindustrie Aktiengesellschaft.

The high grade products sold by *Eli Lilly & Company* are universally known. Special emphasis is laid upon their compounds containing amidopyrines such as *Amidophen* and *Amytal* compound. *Insulin Lilly* is still very extensively used.

In the field of antiseptics there was the usual wide range in the choice of drugs, though the more commonly used materials were scarcely in evidence. *Brunner Mond*’s proprietary preparation *Monsol* was well displayed, they also stressed the value of their *Sulphate of Ammonia* in helping to eradicate hookworm. Among the Heyden pharmaceutical specialities were *Chloramine* and *Gyneclorina*. These good chlorine disinfectants are of guaranteed strength.

*The Shanghai Dispensary* was the only firm displaying a large variety of ordinary drugs and chemicals of pharmacopoeial
quality and strength. Various other drugs were well shown by Carlo Witz representing the Sardox Chemical Works, by Kofa, American Drug Co., by Muller & Phipps selling Antiphlogistine, by the Hoffmann La Roche Co., and others with more limited scope.

Books

The Mission Book Company and the Kwang Hsueh Publishing House had their usual excellent exhibits of medical books. The former brings to the immediate attention of the delegates the publications of the C. M. A., lists of which appear regularly in the Journal. It is an advantage to see these books and to realize something of the wonderful service in this field rendered by our Association. The Kwang-Hsueh Press is the publishing House for the Nurses Association of China. They also showed many other books on medicine and surgery including the Oxford Medical Publications.

Optical Goods

Other than the usual display of first class microscopes such as the Leitz and Zeiss, there were numerous instruments shown by Schmidt and Company, and Carlowitz & Co. Reicherts had an interesting mono-binocular microscope allowing of instantaneous change over from one method of observation to the other. Anderson Meyer & Co. had taken special trouble to set out various X-ray instruments made by the Victor X-Ray Corporation most convenient for inspection by our numerous visitors. Mention should be made of the very excellent film demonstrations of the Eastman Kodak Company which were of unusual interest to the Conference members.

B. E. R.

Announcements

POST-GRADUATE COURSE IN OPHTHALMOLOGY

Peking Union Medical College Peping.

An intensive post-graduate course in ophthalmology will be given from April 29 to May 25, 1929, inclusive. By that time
the eye clinic will have been moved into the new building, where the facilities for teaching are far better than those in the present small rooms. This course will be given by Dr. Arnold Pillat, Head of the Department of Ophthalmology, in conjunction with the members of his staff, Drs. Pi, Ling, Lee, and Chou. Dr. E. deVries, Head of the Department of Neurology, will also give, in clinical form, a number of important lectures on neurology in relation to ophthalmology.

The course will be given in English and will cover systematically the whole field of ophthalmology. A preliminary knowledge of ophthalmology is required for this course.

The tuition fee for the course is $50. Applications should be directed to Miss M. E. Ferguson, Registrar of the Peking Union Medical College, Peking, and will be accepted in the order of priority. In view of the tutorial and intensive method of teaching, with practical work going hand in hand, the enrollment is limited to twelve persons.

The course will be given according to the following schedule of lectures:

- 12 hours Histopathology of the eye . . . . . . Pillat
- 6 " Examination methods and field of vision Pi
- 12 " Ward Rounds . . . . . . . Pillat
- 12 " Demonstration of operations of the eye . . Pillat
- 4 " Lectures on eye operations . . . . . . . Pillat
- 8 " Operations on pig's eye . . . . . . . Pi
- 12 " Theoretical and practical refraction, including skiascopy with cylinders . . Lee & Chou
- 24 " External diseases and selected chapters of ocular therapy . . . . . . Pillat
- 6 " Muscle imbalances . . . . . . Ling
- 8 " Bacteriology of the eye . . . . . . Pillat
- 3 " Neurology: The brain and the eye . . deVries
- 13 " Examinations with the slit-lamp (theoretical and practical work, in groups of four persons) . . . . . . . Pillat
- 21 " Lectures on fundus diseases, practical ophthalmoscopy, and demonstrations with the Gullstrand's ophthalmoscope Pillat
- 2 " Syphilis and the eye . . . . . . Pi
- 1 " Some infections diseases and the eye . . Ling

Total 144 hours
PEKING UNION MEDICAL COLLEGE INTENSIVE STUDIES
IN OBSTETRICS AND GYNECOLOGY 1929

J. PRESTON MAXWELL, M.D., B.S., L.R.C.P., F.R.C.S., Professor
of Obstetrics and Gynecology and Head of the Department.
(on furlough).

GORDON KING, L.R.C.P., F.R.C.S., Associate in Obstetrics and
Gynecology and Acting Head of the Department (from
July 1, 1929).

AMOS WONG, M.D., Assistant in Obstetrics and Gynecology.
SHIH WEI LEE, M.D., Assistant in Obstetrics and Gynecology.
MARION YANG, M.D., Instructor in the Department of Hygiene
and Public Health and Voluntary Assistant in the Depart­
ment of Obstetrics and Gynecology.

With the assistance of the Department House Staff and:

BERNARD E. READ, Ph.C., Ph.D., Professor of Pharmacology.
I. C. WEN, Ph.D., Assistant in Anatomy.
C. Z. GARBER, M.D., Associate in Pathology.
C. E. LIM, M.B., S.B., D.P.H., D.T.M., Assistant Professor of
Bacteriology.
ERNEST SHEN-CHIH TSO, M.D., Associate in Pediatrics.
GEORGE Y. CHAR, S.B., M.D., Assistant Professor of Clinical
Surgery.
G. SCHALLENBRAND, M.D. Associate in Neurology.
BERT G. ANDERSON, D.D.S., Assistant Professor of Oral Surgery.
C. N. FRAZIER, S.B., M.D., Associate Professor of Dermatology
and Syphilology.
THEODORE GREENE, A.B., M.D., American Presbyterian Mission,
Peking.

Intensive studies in Obstetrics and Gynecology will be
offered from August 24th to September 14th, 1929.

Special attention will be given to macroscopic and
microscopic pathology. Ward rounds will be held, dealing with
the diagnosis of cases, which will subsequently be submitted to
operation before the class, and a final ward round will be given
to discuss the after history of these cases. There will be special
demonstrations dealing with the diagnosis and treatment of sterility, the management of normal and abnormal labours, and female urology. The use of radium in the treatment of gynecological disease will be discussed and shown to the class.

Seminars will be held at which the class will be expected to discuss chosen subjects under the guidance of members of the Department. The class will also be invited to bring up cases and subjects for discussion.

An effort will be made to show to all the members of the class the conduct of normal labour, and they will be called to any case of abnormal labour occurring during the course. Rubin's test will be shown to the class.

Enrollment will be limited to twenty-five, and all doctors are eligible for admission. The tuition fee is $35.00. Applications should be sent to the Registrar of the Peking Union Medical College or to the Head of the Department of Obstetrics and Gynecology. For information in regard to fellowships address the Registrar of the Peking Union Medical College.

FELLOWSHIPS FOR P. U. M. C.

From January 1, 1929 fellowships for special and graduate students in the Peking Union Medical College will no longer be handled through the Peking office of the Rockefeller Foundation, but will be awarded direct from the College from a grant made to the Peking Union Medical College by the Rockefeller Foundation. Information about fellowships and application for them should be made through the Registrar, Peking Union Medical College, Peking.
THE ORAL ADMINISTRATION OF DERIVATIVES OF CHAULMOOGRA OIL IN LEPROSY

N. E. Watson, Surgeon, and L. F. Badger, Assistant Surgeon, United States Public Health Service.

For several centuries leprosy has been treated by the administration of chaulmoogra oil or allied oils, and latterly by their derivatives. The adoption of the derivatives in treatment has been stimulated by the desire to obtain the potent elements of the oil in more concentrated or therapeutically active form, with the hope of increasing and hastening the curative effects, and by the necessity for obtaining a preparation which can be administered over a long period without untoward results on the general health or comfort of the patient. The oils in most cases are very irritating to the gastrointestinal tract. Some persons tolerate them well.

The use of the esters or soaps of the oils is believed by several observers to be attended with good therapeutic results, when given by injection into the veins or muscles or subcutaneously. However, these intravenous treatments with esters or soaps are accompanied by considerable potential danger to the patient, either by immediate accidents or by the damage to his veins. The intramuscular injection of the esters over long periods is frequently interrupted by local inflammatory reactions. The discomfort to the patient of injection treatments carried forward through one to four years is apparent, and seems to be warranted only when the medicinal remedy is relatively specific or restorative of function. Practically all observers agree that the treatment must continue over long periods in order to accomplish the arrest of the disease. The degree of restoration of function depends naturally upon the degree of degeneration reached in the nerves, bones and blood vessels, and upon their power of regeneration.

The specificity of the medicaments is still sub judice, and their pharmacology undetermined.

Under these circumstances it seems desirable to make further efforts to obtain preparations of the esters or soaps of the oils, which can be taken by mouth, since their use has been regarded so promisingly by some observers.
Denney and others have attempted recently to reduce the irritant effect of the oil on the gastrointestinal tract, and locally when injected intramuscularly, by the addition of a drug with local anesthetic properties. They have not used the method for a sufficiently long period of time to warrant conclusions as to its therapeutic efficacy.

A preparation of the esters which can be given by mouth has been used by us for the past six months on 25 patients without discomfort to the patient, and without noticeable gastrointestinal symptoms.

The preparation is an emulsion in acacia and simple sirup of equal parts of the mixed esters of chaulmoogra oil, and of cod-liver oil to which iodine is added to make six one-hundredths per cent. The detail of manufacture is as follows: No. 1—Dissolve 0.625 gram iodine in 250 cubic centimeters esters and heat at 100° C. for one-half hour. Cool and add 250 cubic centimeters cod-liver oil. Add 60 grams of powdered gum acacia and mix thoroughly. No. 2—Dissolve 65 grams gum acacia in 250 cubic centimeters cold water and when dissolved add 100 cubic centimeters of cane sirup (made by making a saturated solution of sugar in water at 100° C. and then cooling). Add enough water to make a volume of 430 cubic centimeters. Pour No. 1 into No. 2 and beat with egg beater until emulsified, then add slowly 70 cubic centimeters 95 per cent alcohol while continuing to beat. The mixture is of about the same consistency as that of the U. S. P. emulsion of cod-liver oil, remains emulsified, and apparently does not deteriorate during periods of six weeks at room temperature.

The dosage has been given daily. The amount of the dose has been started at 1 or 2 cubic centimeters of the mixture (one-quarter to one-half cubic centimeter of the esters) and gradually increased. Tentatively the maximum dosage to be used has been set at 10 cubic centimeters of esters per week per hundred pounds weight of patient.

A few cases have interrupted their dosage for a day or two because of vomiting, but invariably they have found that the adjustment of the time of the dose in relation to their breakfast was all that was necessary. Some take the dose before breakfast and others after the meal. Several state that they have some eructation in which they taste the cod-liver oil until the next meal.
The efficiency of the treatment is not under consideration at this time; but the method of preparing the dose to be given by mouth is reported in order that it may be improved upon, or tried by others, and its therapeutic value thereby determined more definitely after a sufficient length of time of its use has elapsed.


EVALUATION OF THE RESULTS OF TREATMENT OF LEPROSY WITH THE CHAULMOOGRA DERIVATIVES

C. B. Lara.

The author is justified in claiming that the trial on such a large and prolonged scale as in the Culion Leper Settlement of the modern treatment by injections of the active preparations of chaulmoogra oil, permits them to draw more reliable conclusions than those of certain sceptics with very limited experience, so this paper is of exceptional value. The effect on the public of the improved results is strikingly shown by the fact that "whereas previous to the employment of the new methods, six years ago, most of the lepers had to be captured or forcibly detained, during the last three years the great majority have presented themselves voluntarily for isolation and treatment," and "a more general and adequate appreciation of the value of the chaulmoogra preparations will be of tremendous and far-reaching importance in the eradication of the disease."

In estimating the results only bacteriologically negative or apparently cured cases are taken into account, thus affording a stringent test of the efficacy of the treatment; yet in spite of the great majority of the lepers being at an advanced stage on admission, and all bacteriologically positive, in the six years up to September, 1927, no less than 536 had been paroled or discharged as recovered, against only 47 negatives in 15 years from 1906 to 1921 in the same colony. Moreover, a further 257 negative cases are awaiting parole, and by December 31st, 1927, more than 600 will be paroled or discharged, and a total of more than 900 negatives will be credited to the present treatment, or approximately 16 per cent. of the advanced series of cases treated. These figures can leave no doubt in the mind of any medical man regarding the great advance made.
The total ethyl esters of *Hydnocarpus wightiana* oil with 0.5 per cent. iodine, in doses gradually increased from 0.5 cc. to 5 cc. intramuscularly once a week has been the preparation most generally used for an average period of $2\frac{1}{2}$ years. Recently small doses have been injected beneath skin lesions with good results, especially in relapsing lesions. The conditions which mainly influence the results are that children do best, but the period of most active sexual life in the married or cohabiting couples is comparatively unfavourable, especially in males; and females do rather better than males. Of the different types the percentages of negative cases are 0.79 in cutaneous, 6.0 in mixed and 50.7 per cent. in nerve cases, partly due to the tendency of nerve affections to decline in activity after a time. Good hygiene, diet, exercise, the avoidance of sexual indulgence and pregnancy and the removal of complicating diseases, such as syphilis and helminthiasis, are all beneficial. The improvement has been greater in cases not showing reactions to the drug, and these are believed by the Culion authorities to be harmful, contrary to the opinion of Indian workers. [The latter deal mainly with earlier cases, in which reactions are safer and more beneficial.]

It is still early to say what the ultimate results are since many of the discharged patients have not been followed up, but of those detained for 18 months to two years after becoming negative before release, only 5.1 per cent. showed any recrudescence of the disease, and three-fourths of these cleared up with further treatment, and among 74 detained for over two years, only 1.3 per cent. recurred. Altogether these large scale results fully justify the general opinion that there is now hope for the leper.


**RECENT ADVANCE IN THE TREATMENT OF LEPROSY AND ITS BEARING ON PROPHYLAXIS**

LEONARD ROGERS, C.I.E., M.D., F.R.S., I.M.S. (Retd.)

After a brief description of recent advances in treatment, including the use of the new form of sodium hydnocarpate called alepol, and of Muir's iodide of potassium treatment, the results obtained in the Philippines, Hawaii and Calcutta are reviewed, showing that in Hawaii 8 per cent of advanced cases, 34 per cent.
The China Medical Journal

of moderately advanced, and 64 per cent. of early cases had recovered. The importance of attracting early cases for treatment is emphasized, and it is pointed out that with the present treatment compulsory segregation, unmodified by allowing out-patients without isolation, may easily do more harm than good by leading the early cases to be hidden until the most favourable time for treating them is past, for in both the Philippines and in South Africa the cases obtained by compulsory segregation average from six to eight year's duration on discovery, during which they may have infected others. It is also urged that under favourable conditions, such as in Europe, by examining all the households and other close contacts of all known lepers for every six months for five years, probably 80 per cent. of infections would be detected and cleared up by treatment, so that in a single decade the disease could be very greatly reduced. This plan is being adopted in several European countries, and if successful its use could gradually be extended to other areas.


THE PRESENCE OF MYCOBACTERIUM LEPROE IN THE PLACENTA AND UMBILICAL CORD

E. V. Pineda.

Previous observations on this point have been based on few cases, but the author now reports observations on 104 placentas at Culion, with positive results as regards finding acid-fast bacilli in 57, or 53 per cent. In 24 per cent. the organism was also found in the umbilical cord, showing passage through the placenta to the foetus, but in only one case was it found in the cord but not in the placenta. Both examinations of direct smears of the cut surfaces, and also preparations of the second centrifuge deposit of the pulp of the organ after passing through a press were examined, and one-fourth of the cases were only positive by the latter concentration method. In view of the great rarity of the very early development of the disease in the children of lepers, the author thinks that the organism is overcome by the tissues of the foetus in the great majority of those it reaches through the placenta, but the possibility of intrauterine infection should be considered when the disease develops in early infancy.

CIRRHOSIS OF THE LIVER
REPORT OF 84 CASES
CHI-SHII YANG, M.D.

GENERAL DATA

1. Incidence.—There were 19,034 admissions. Cirrhosis of the liver occurred in 84 cases. The incidence among the inpatients therefore was 0.44 per cent or 44 in 10,000.

2. Sex.—More males were affected than females. Among 19,034 patients there were approximately 6,345 females and 12,689 males. There were seven cases in females and 77 cases in males. The sex incidence in males and females was therefore about 7 to 1, although the admissions were only two to one.

3. Age.—Cirrhosis of the liver is a disease of the midaged, occurring most frequently in the fourth decade of life. The youngest patient was 20, and oldest 70. The highest incidence was in the age-group of 35-39, comprising about 23 per cent of the total series; there was a rapid decline after 60.

4. Occupation.—The prevalence of this disease in low economic levels of the population is a striking feature. Over 70 per cent of the cases were in the laboring class who live on coarse carbohydrate food, and lead a strenuous muscular and outdoor life. The incidence was unusually high among farmers, who compose 32 per cent of the series. The epidemiological significance of this fact is not understood.

5. Alcohol.—The consumption of alcohol by the working class, although no special study of the problem has been made, is probably lower than that in other countries. There were two patients in the group who gave the history of alcoholic habit, the rest either drank occasionally or were not users of alcohol. In a number of cases alcohol could be definitely excluded.

6. Fevers and enteric diseases.—Fevers and enteric diseases comprise the bulk of infectious diseases in China. Enteric diseases such as bacillary dysentery, typhoid fever are of especially high incidence. In fifty cases a past history of fever of one kind or another was given; the same applies to enteric diseases, but further details are not available for analysis. In several cases dysentery was present and often antedated the
The China Medical Journal

onset of ascites. Bacteriological studies of the stool in a number of cases revealed the presence of Bacillus dysenteriae or Bacillus typhosus. There were instances in which the enteric disease was closely related with the onset of ascites.

DISCUSSION

We have at present hardly any knowledge of the symptomatology of cirrhosis of the liver in its pre-ascitic stage that can be of practical value in the recognition of such early cases. This knowledge is obviously highly desirable both from the standpoint of therapy and of investigation. Alcohol from time immemorial has been incriminated as responsible for the destruction of the liver parenchyma, and is still so held by the majority of the profession. Alcohol as an "a priori" factor is by no means proven to have a significant role. The etiological agents which promote the final picture of fibrosis must be varied and numerous.

The high incidence among the working class is of special epidemiological interest. In this part of China, malaria is only sporadic. According to Lee and Meleney the spleen rate in the vicinity of Peking is about 10.4 per cent, which is considerably lower than that in South China. Schistosomiasis so far as is known does not exist here. Cirrhosis of the liver, especially Laennec's type, offers therefore a virgin field of study.


---

ON THE COMPARATIVE FREQUENCY OF NON-PULMONARY TUBERCULOSIS IN NORTH CHINA


From Table I we gather that in Shanghai, the Shantung Road Hospital in-patient figures for five years show 42.6 per cent. of pulmonary tuberculosis, 16.7% of bone, 14.4% of glands and 25.9% of joints (of all forms of tuberculosis). The Shanghai Red Cross Hospital out-patient figures show 63.5% of the pulmonary form. The Tsinan University Hospital in-patient figures show 66.5%. As we reach Chihli province, the P. U. M. C. out-patient records show 41.2% of the pulmonary form while the glandular form has risen to 29.3%. The Report of the Roberts Memorial Hospital, Tsangchow, Chihli mentions
"these cases of tubercular glands of the neck, together with tubercular bone and joint cases provide us with the majority of the operations in the women's hospital."

### Table I.

<table>
<thead>
<tr>
<th></th>
<th>P.U.M.C. (1916-1917)</th>
<th>Shi' Red Cross (1917-1918)</th>
<th>Tsingan (1921-1922)</th>
<th>Shantung Road Hospital (1917, 1919, 1922, 1924 &amp; 25 in-pat.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Out-pat. D.</td>
<td>Out-pat. D.</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>Long</td>
<td>117 41.2</td>
<td>80 66.5</td>
<td>469 66.5</td>
<td>189 42.6</td>
</tr>
<tr>
<td>Bone</td>
<td>50 17.6</td>
<td>6 4.7</td>
<td>85 12.0</td>
<td>74 16.7</td>
</tr>
<tr>
<td>Glands</td>
<td>84 29.3</td>
<td>20 16.0</td>
<td>105 14.8</td>
<td>64 14.4</td>
</tr>
<tr>
<td>Abdomen</td>
<td>9 3.2</td>
<td>4 3.1</td>
<td>44 6.2</td>
<td></td>
</tr>
<tr>
<td>Joints</td>
<td>24 8.4</td>
<td>16 12.7</td>
<td>3 4</td>
<td>116 25.9</td>
</tr>
<tr>
<td></td>
<td>284 99.7</td>
<td>126 100.0</td>
<td>706 99.9</td>
<td>443 99.6</td>
</tr>
</tbody>
</table>

### Table II.

**Harbin Hospital**

**Out-patients**

April 1924—September 1927

<table>
<thead>
<tr>
<th>Number.</th>
<th>Percentage.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lung</td>
<td>538 18.1</td>
</tr>
<tr>
<td>Bone</td>
<td>620 20.9</td>
</tr>
<tr>
<td>Skin</td>
<td>327 11.1</td>
</tr>
<tr>
<td>Abdomen</td>
<td>28 0.95</td>
</tr>
<tr>
<td>Glands</td>
<td>1065 35.9</td>
</tr>
<tr>
<td>Testis</td>
<td>41 1.4</td>
</tr>
<tr>
<td>Joints</td>
<td>296 9.9</td>
</tr>
<tr>
<td>Elsewhere</td>
<td>47 1.6</td>
</tr>
</tbody>
</table>

99.85


---

**THE INTENSIVE METHOD OF SERUM TREATMENT OF DIPHTHERIA**

**H. Stanley Banks, M.D.**

The important clinical features of the type of case treated by this method by the author since April, 1927, are as follows:
(1) Extensive diphtheritic membrane involving tonsils, fauces, uvula, soft or hard palate, and naso-pharynx; ill-defined, glassy membrane towards the spreading margin was of grave import, as was also oedema of fauces.

(2) Cervical adentis and peri-glandular oedema of severe degree, the swelling varying in size from that of a hen's egg to that of the extreme "bull-neck" type.

(3) Nasal discharge, especially if hæmorrhagic; membrane in nares.

(4) Fœtid odour from the throat, typical of severe diphtheria.

(5) Severe toxæmia characterized by delirium and restlessness or by great lethargy and hebetude; and evidenced in some cases by petechiae in the skin and by submucous hæmorrhages.

In several cases of the hæmorrhagic type in the series the patients had recovered.

The average dosage of anti-toxin employed for the above type of case was 70,000 units intravenously and 30,000 intramuscularly. As much as 250,000 units had been given to a case. As far as possible, the whole of the anti-toxin needed was given at one time, but if, after a lapse of from twelve to twenty-four hours the patient's response was not sufficiently good, a similar large dose was administered. The criteria of adequate dosage were (1) disappearance of toxic symptoms within twelve to twenty-four hours, brightness of demeanour replacing delirium or hebetude, and (2) opaque appearance of the membrane and well-defined edges within the same period.

In 300 verified cases of diphtheria treated during a period of twelve months, there were twenty-seven cases of the severe toxic type described above, with six deaths. The hospital death-rate for diphtheria was reduced from an average of 9.3 per cent. over the previous decennium, to 2.6 per cent. during the twelve months period under review.

Since commencing the intravenous intensive method I have learned that V. Bie, of Copenhagen, has employed similar methods since 1920, and, dealing with about 1,500 cases a year has secured a mortality-rate of 1.3 per cent. Laryngeal cases, and cases dying within twenty-four hours of admission, being excluded from the figures.

PLASMOCHIN IN MALARIA

(Editors Comments on a series of Papers)

Based on the clinical and laboratory data reported in this section, and also on the work of a great many other observers, certain conclusions seem justifiable in regard to the results to be expected by the exhibition of quinine and plasmochin individually and in combination, in the treatment of malaria:

(1) Quinine is a specific against the schizonts of all types of malaria, and these are responsible for the clinical symptoms. In acute cases it is the drug of election; and in order to get prompt results, large doses must be given (2 to 3 grams daily in divided doses). In pernicious and persistent cases, part or all of this must be given intramuscularly or intravenously, until the acute symptoms subside. Then oral administration suffices.

(2) In acute cases the exhibition of quinine for short periods favors for some unknown reason the appearance of gametocytes in the peripheral blood. This observation was made by Dr. H. C. Clark in his malaria surveys in 1926, and a preliminary report was published in the American Journal of Tropical Medicine, Vol. VII, January, 1927. The observation was confirmed by Dr. W. Cordes, and referred to in the Fifteenth Annual Report (1926) of the Medical Department of the United Fruit Company, page 66. The reader is also referred to Dr. O. T. Brosius' report in his Series I, page 42, in this section. In explanation of this phenomenon, two hypotheses are submitted:

(a) That the exhibition of quinine determines the gametocytes from the deep viscera to the peripheral blood, or

(b) It creates an environment which favors the development of increased numbers of gametocytes.

This may be considered as Nature's method of self-preservation of the species, and is comparable to what takes place in all forms of free-living unicellular life. When the nutritional conditions are favorable, multiplication takes place asexually. When the environment becomes unfavorable, the organisms, after conjugation, assume the cystic or resting stages until conditions are again favorable for their asexual multiplication. When malarial gametocytes in the peripheral blood are increased in numbers, mosquitoes are more readily infectible.
(3) Gametocytes developed under quinine administration are viable, as shown by Darling, Ross, Barber, and Wenyon. The observations in this connection were referred to in the Fifteenth Annual Report (1926) of the Medical Department, page 37.

(4) Plasmochin is mainly effective against gametocytes, and it also has a marked action in clearing the schizonts of the tertian and quartan types of malaria from the peripheral blood. On the schizonts of the aestivo-autumnal types, its action is negligible. It apparently does not prevent the development of blackwater fever, as can be noted from Doctor Brosius' report, Series A and B,—page 40. Moreover, it is not as effective in preventing relapses when administered alone as it is in combination with quinine.

(5) It appears from the few observations made by Dr. Barber and Mr. Komp (see page 54), to have a toxic action on the crescents, as, after a few doses, mosquitoes feeding on these individuals do not become infected. This observation is exceedingly important, and if it is confirmed, plasmochin must be considered of paramount importance in malaria control.

(6) If given in too large a dosage, or over a too prolonged period of time, plasmochin may cause toxic symptoms. In a small percentage of cases there appears to be an idiosyncrasy for the drug, and this is the case also with some people when taking quinine. The daily dosage should not exceed .06 gram, and this should not be continued over a period exceeding 6 days, unless the patient is under the closest daily observation. Apparently doses in excess of this are not more effective against the parasites, as can be noted from Dr. Brosius' report, Series B (page 40).

(7) The toxic symptoms take the form of headaches, giddiness, gastric distress, cyanosis, etc., and the drug may cause death. Clinical findings at the onset of toxic symptoms are leukocytosis and erythrocyte degenerations (see Dr. Cordes' report, page 62).

(8) The administration of quinine in combination with plasmochin apparently prevents the development of toxic symptoms, and because of this and the therapeutic action of
the two drugs on the different phases of the parasites, they should always be given in combination in order to get the best clinical results.

(9) Our experience indicates that for an adult the amount of quinine to be given daily in combination with plasmochin, depends on the clinical symptoms. In chronic cases without acute symptoms, 1 gram daily will suffice. In acute cases, from 2 to 3 grams daily are necessary to obtain optimum results.

(10) In ambulatory cases not under daily supervision, the daily dosage of plasmochin should not exceed .04 gram, in combination with 1 to 2 grams of quinine, for a period not to exceed 6 days; or .06 gram plasmochin, with the same dosage of quinine, over a period not to exceed 4 days. Whenever possible, all cases so treated should return for a reexamination within from 3 to 4 days after the course is completed; and if parasites are still present, a 2nd course of treatment is indicated.

(11) All ambulatory cases should be warned that if they experience headaches, dizziness, or gastric distress, or if blueness develops in the face or lips, the drug should be immediately suspended, and that they should report to the physician for further instructions.

(12) If, on a thick-film survey, the camp population should be heavily infected, 60 per cent or over, blanket treatment of the whole population is recommended, and the course of treatment should be administered in accordance with the dosage referred to above. Within from 3 to 4 days after the last treatment is given, the camp should be resurveyed; and if any cases are still found positive, another similar course of treatment should be instituted. It has been demonstrated that the heavily-infected carriers (frequently without acute symptoms) most readily infect mosquitoes, and that one heavily-infected mosquito may transmit malaria for 3 months at least. The importance of repeated surveys therefore to discover and treat the carriers cannot be too highly stressed, and it would be highly advantageous if this could be done during the dry season. This will prevent the high incidence of mosquito infection later on during the rainy season when conditions are more favourable for their multiplication.

United Fruit Company Sixteenth Annual Medical Report.
THE CHINESE REVOLUTION 1926-27. H. OWEN CHAPMAN M.B.,

We welcome very heartily this fascinating record of events in the
onetime centre of the Revolution at Hankow. There is no doubt that
the doctor, drawn into close contact with all classes of the community,
from the wealthy merchants and officials down to the very poorest of the
people, has an opportunity of getting an intimate view of affairs such as
few can equal and probably none surpass. Dr. Chapman has used his
opportunities well and has given a clear account both of the progress of
events and the manner in which these affected the various groups in
country and city.

The subtitle of the book is "A record of the period under Communist
control as seen from the Nationalist Capital, Hankow." In fact however
it covers much more than this title would suggest, including a historical
survey at the beginning and an estimate of the factors for the future at
the end. Further are brief reviews of some of the leading characters in
the scenes and a consideration of the reactions of the various foreign
powers to the situation as it unfolded itself.

The whole book is most interestingly written and the only disappoint­
ment is that the Author has kept so faithfully in his closing chapters to
the period defined in the title and so ends his book before the last and
most interesting of all the phases of the Revolution took place. Doubtless
his own departure on furlough made this necessary.

On the other hand Dr. Chapman's descriptions are so clear and his
estimates of the characters so judicial and fairly balanced that we would
like to have seen his book carried on at least to the end of the military
stage of the Revolution.

Dr. Chapman in this book gives the facts not merely fairly but in
such careful balanced relation to the circumstances in which they occurred
that the many and varied puzzling facts of the situation are fitted together
into one complete whole. Only in one case in a province far distant from
that in which he is writing does he seem to us to put undue emphasis on
one side of a story.

We trust that this book will have the wide circulation that it deserves
both here and in Western lands.

J. L. M.

THE OPIUM PROBLEM. CHARLES E. TERRY, M.D. and Mildred Pellens
for The Committee on Drug Addictions in collaboration with the

We regret to have to acknowledge that this volume has lain on our
shelves waiting review for some months. The reason for this is simple.
The book of over 1,000 pages is encyclopedic in character and hardly can be said to lend itself to review. While written mainly with the opium question in the United States in view it covers a much wider field. As a book of reference it is without doubt the most valuable on this difficult subject, as one for the ordinary reader of books it is frankly impossible. This will come out in the course of even this brief notice.

The first chapter deals with the extent of the habit and spends 53 pages in failing entirely to come to any conclusion on the extent of the habit in the States in which estimates of addicts vary from a hundred thousand or so to a couple of million! We would ourselves suggest that a much more simple way to reach a rough conclusion would be to investigate the number of addicts admitted to State prisons. The proportion of these to users outside the prisons probably does not vary very greatly and with the knowledge of the total in prisoners throughout the country and the proportion in a given area where it might be possible to carry out a thorough investigation a fair conception of the prevalence of the habit might be obtained.

The second chapter deals with the development of the habit carrying the investigation back into prehistoric ages. This from the ordinary readers point of view is much the most interesting chapter in the book.

The etiology of chronic opium intoxication is next dealt with and opinions quoted from the year 1871 onwards, but again without reaching any conclusive results.

Two chapters, some 260 pages are devoted to the pathology of the habit but little is adduced in proof of any true pathology beyond certain changes in the nerve cells which we should be ourselves unwilling to accept without much more proof.

There is an interesting chapter on types of users but again without any very satisfactory result. To quote from the Author's Summary:

In general, it would appear from the data submitted that this condition is not restricted to any social, economic, mental or other group; that there is no type which may be called the habitual user of opium but that all types are actually or potentially users.

We turned to the chapter of 100 odd pages on Treatment with real hopes of something useful for practice in this country. Some fifty authors are quoted, many of them at considerable length but the general impression we have got is very disappointing, and there are certainly few physicians in China who would gain much from this chapter. Many have had far more satisfactory experience of treatment of addicts here than is recorded in this book, and there seem to us to be no new methods of value for our use here.
The remainder of the book deals mainly with control, national and international.

We conclude that this book is an encyclopedic work of the utmost value to those studying the history of opium addiction and its pathology and methods of treatment but as in any way a textbook of the subject it is a disappointment.

J. L. M.


This book represents a very successful effort "to present a comprehensive statement of the best modern thought and practice upon the treatment of diseases included in the general specialty of internal medicine." The ideal set forth above has been very well adhered to and the result is a really practical and very useful book. Certain defects observable in many textbooks of therapeutics have been corrected in this one, and at the same time a large amount of possibly unnecessary material has been omitted.

The book is divided into two main parts, the first one considering a general discussion and description of the various methods used in treatment. While attention is paid to the use of drugs that are of value as well as to the methods of administration of them, due consideration is also given to the other therapeutic procedures which have become recognized as of great importance in present-day treatment, and they are described in sufficient detail to enable one to carry them out properly and successfully.

In the second part of the book "Special Therapeutics" is taken up, i.e., the application of therapeutic measures to particular diseases. Here the various diseases are considered and the various therapeutic measures which have been considered in the first part are applied in each particular case. The arrangement of the book as a whole is good, and no space is wasted by useless repetition in the second part of procedures which have been fully described in the first.

As usual with Mosby's books the type and illustrations are clear and the book is well gotten up. It should prove a very useful one to medical practitioners out here as well as in other countries.

H. H. M.
Hospital Reports

PEKING UNION MEDICAL COLLEGE HOSPITAL

FOR YEAR ENDING JUNE 30, 1928

Inpatients 4669 Outpatient attendances 119,443

The report of the Hospital is, as usual, full of interest and at the same time almost impossible of summary in view of the care exercised to exclude all extraneous material from its composition.

A general increase of work all round is noted on which the hospital is to be warmly congratulated in view of the disturbed nature of the year under review.

Each department gives its separate report and all are of interest. Indeed they are of so much interest that it seems invidious to refer to one especially. Perhaps owing merely to the reviewer's predilections he would like to pick out the report of the Department of Pathology and especially of its Division of Parasitology as primus inter pares.

Following the departmental reports is a valuable section dealing with general information concerning rates and regulations.

Finally come the statistical tables of diseases occupying 45 pages including a Table of Contents at the beginning. It is impossible to exaggerate the value of these tables which, if we are not mistaken, have been greatly simplified from the tables in earlier reports. They include both inpatients and outpatients in the same table and are so simply arranged that it should be possible for any hospital to follow this method and are yet so full that they give all the information that could possibly be asked from such tables.

The reviewer is indeed so impressed with them that he proposes to cut them out from the report for separate binding and future reference.

Even so, and just because these tables are so good we would suggest that one or two notes be attached in future giving explanations where mistakes could arise. Merely glancing over and being personally interested in the subject our eye caught the heading:
Stricture of the Esophagus, inpatients 2; outpatients 6 but turning on to "Neoplasms" we find "Carcinoma of the Esophagus" Inpatients 14; Outpatients 9.

Two questions arise at once. Does a patient who may have been treated as an outpatient and subsequently admitted as an inpatient appear in both columns? In other words is the total of Carcinoma of the Esophagus 23 or something smaller? Doubtless this is a simple question over which perhaps we ought not to stumble, but we suggest that the tables might be made clear even to the meanest intelligence. The second question is a more serious one. Carcinoma of the Esophagus so seldom occurs entirely apart from stricture that we are a little at a loss to associate the two sets of figures unless the former is for non-malignant stricture entirely, in which case the simple qualification-nonmalignant at the end of the first entry would obviate any possible mistake.

Obituaries

Dr. G. T. Chen (陳 楓 裔)

It is with very great regret that we have to announce the death of Dr. George Titus Chen (Mzen Ts Tswang), which took place in the C. M. S. Hospital, Hangchow, on December 23rd, 1928. Dr. Chen was a native of the Ningpo district and was born in humble surroundings in 1887.

By dint of hard work in the Printing Press at Trinity College, Ningpo, he was able to secure a general education and became a student of the C. M. S. Medical College at Hangchow, where he supported himself by office work in his spare time and during the vacations.

He graduated with high marks as a Licentiate in Medicine and Surgery in 1917 and held a short appointment as House Surgeon in the C. M. S. Hospital. After this he migrated to the P. U. M. C. and eventually became assistant in the ophthalmological department, being closely associated with Dr. Howard and Dr. Adalbert Fuchs.

In 1923 he left Peking on health grounds and returned to Hangchow, where he became Ophthalmic Surgeon to the C. M. S. Hospital and Lecturer in Ophthalmology to the Medical School. Latterly Dr. Chen had practised in Shanghai, and was on the staff of the Lester Chinese Hospital, visiting Hangchow two days a week for special clinical and teaching work until the civil war at the end of 1926.

Dr. Chen enjoyed the reputation of being a skilful and ethical practitioner who did much to raise the professional status of his old Hospital and Medical School.
Among other distinguished patients he was called in to prescribe for the ex-Emperor, Hsuan Tung, during his stay in Peking.

Dr. Chen married Miss Queenie Tsuy who had been brought up by Dr. and Mrs. Main, and was for many years Nursing Superintendent of the Maternity Department in the C. M. S. Hospital at Hangchow. He was buried on Christmas Eve in the Anglican Cemetery near Hangchow, and is deeply mourned as a Christian gentleman by his colleagues and friends.

S. D. S.

Dr. M. B. Sloan

The death of Dr. Mary Bailey Sloan at Rochester, Minn. December 6th, 1928, was mentioned in a previous number of the Journal. She was a member of the Faculty of the Woman's Christian Medical College and the Staff of the Margaret Williamson Hospital, and because of her unusual qualities of mind and spirit had rendered a great service to these institutions in her brief term of four years.

Dr. Sloan was born in Monticello, Fla. August 1896, where she attended public schools. She was graduated from Florida State College for Women in 1917, receiving her A. B. degree. She received her medical degree from Woman's Medical College of Pennsylvania in 1922, graduating with magna cum laude in a class of 27. She served an internship at Grace Hospital in Detroit, Mich. and a year as resident in a Maine hospital before coming to China. She was unusually versatile in her scientific attainments, dividing her time between biological chemistry and pathology. She had been in frail health for years, as she suffered from gastric ulcer, but she was a great student, and inspiring teacher, and had unbounded enthusiasm for her work. The charm of her personality was felt by all who knew her, and her contribution as a missionary was rounded out by a rich spiritual life which has left a deep impress upon the institutions which she served.

WANTED COLUMN

Yen Ching University, Peiping.

Locum Tenens

Any Medical Man who would care to act as Locum Tenens for the University Physician during the months of July and August 1929, can obtain all information on the subject by writing to the President of the University, stating his qualifications.

The above may appeal to some in the South who have not yet had the privilege of seeing the former Capital in the North, and to whom the change of climate with not very arduous duties would be in the nature of a holiday.

Wanted

A Chinese Woman Doctor, (Christian) for Hospital of 40 beds with big O.P.D. and maternity work—must speak Mandarin.

Apply for information to Dr. R. A. M. Scott, Buchanan Memorial Hospital Ichang, Hupeh.
News and Comments

Dr. Charles W. Young

We greatly regret to have to announce the death of Dr. Charles W. Young of the Medical Department of the Union Medical College, Peking, news of which has recently been received by cable. Dr. Young did splendid work in his post at the P.U.M.C. and his attractive personality made him greatly beloved by his many friends.

The Secretary

Dr. and Mrs. J. L. Maxwell are leaving by S. S. President Madison on February 23rd for Victoria, B. C. where they are hoping to spend a day or two with Dr. Cousland, former President of the Association.

Thereafter they hope to pay a visit to Toronto on their way to New York, and after a short stay in that city to cross to England.

Dr. Maxwell’s address in England will be: Clophill Barns, Ampthill, Beds. and he would be glad to hear from any of his China friends passing through England during the coming months. Dr. Maxwell expects to be back in this country in the autumn.

The Journal

In the absence of the Editor on furlough Dr. H. Gordon Thompson has very kindly consented to undertake the work of bringing out the Journal.

Secretarial Arrangements

For the present the work of the Office will be carried on by the Office Secretary. Members of the Executive Committee have kindly promised to attend to any special work until the new Secretary is appointed.

Supply of Leper Drugs

Arrangements for the continued supply of Alepol and Ethyl Esters of Chaulmoogra oil for those who are getting those drugs through the Mission to Lepers, have been made and applications for such may be sent to the Office as before.

School Children’s Health

30,000 Lives Saved in a Year in Great Britain

Sir George Newman, Chief Medical Officer of the Board of Education, in his report for 1927 on “The Health of the School Child,” surveys the work done by his department, and records that in the period under review 30,000 lives were saved as compared with six years ago. The formidable task of the State medical service is shown by the fact that some 2,000,000 children are medically examined every year. In order to carry this out some 2,000 doctors are employed with 600 school dentists, and nearly 5,000 nurses, while there are 1,500 school clinics.

—N. C. D. N. February 1, 1929.
NEW MEMBERS PROPOSED

Chen, Philip P. T.  M.D., St. John's,  Infectious Diseases Hospital  Shanghai
Proposers:—Dr. H. H. Morris  Dr. James L. Maxwell

Chen, Thomas T. M.  M.D., St. John's,  S.M.C.  Shanghai
Proposers:—Dr. H. H. Morris  Dr. J. C. McCracken

Clow, Ellen Menzies  M.B., Ch.B., D.T.M. & H. B.M.S.  Glasgow
Proposers:—Dr. Gordon King  Dr. J. Preston Maxwell

Foong, James Z. U.  M.D., St. John's,  I. R. C. Hospital  Shanghai
Proposers:—Dr. H. H. Morris  Dr. J. C. McCracken

Getzlaff, Edward E.  M.D., College of Private Practice Medical Evangelists  Tokyo, Japan.
Proposers:—Dr. L. H. Butka  Dr. H. W. Miller

Hall, Horace A.  M.D., College of Private Practice Medical Evangelists  Manila, P. I.
Proposers:—Dr. L. H. Butka  Dr. H. W. Miller

Hwang Wen Yu  M.D., St. John's,  W. Y. Hwang Hospital  Shanghai
Proposers:—Dr. Hyla S. Watters  Dr. Bruce W. Jarvis

Lai, Suchen Wong  M.D., Women's Med. A.B.F.M.S. Coll. of Pennsylvania  Shanghai
Proposers:—Dr. D. G. Lai  Dr. J. Preston Maxwell

Lieu, John K. W.  M.D., St. John's,  Taiyeh Works & Mines Hospital  Shanghai
Proposers:—Dr. H. H. Morris  Dr. J. C. McCracken

Pillat, Arnold  M.D., Vienna  P.U.M.C.  Shanghai
Proposers:—Dr. J. Preston Maxwell  Dr. H. H. Morris

Taiyuanfu, Sha.

Kiangwan, Ku.

Peping, Hopeh
Slater, Ronald A. M.D., Washington. U.C.M.S. Nanking, Ku.
Univ., St. Louis
Proposers:—Dr. G. L. Hagman,
Dr. Walter P. Ulmer

Sun, Paul P. Z. M.D., St. John's, Private Practice Shanghai
Shanghai
Proposers:—Dr. H. H. Morris
Dr. J. C. McCracken

Tsoong, Andrew P. T. M.D., St. John's, A.C.M. Shanghai
Shanghai
Proposers:—Dr. H. H. Morris
Dr. J. C. McCracken

Wen, Constance Jean, M.D., Coll. of Med. S.D.A. Shanghai
Evangelists
Proposers:—Dr. Donald E. Griggs
Dr. Harry W. Miller

Proposers:—Dr. John A. Snell
Dr. James L. Maxwell

Wu Shao Ching M.D., Hunan-Yale M.E.R.B. Nanchang, Ki.
Changsha
Proposers:—Dr. Geo. T. Blydenburgh
Dr. J. R. B. Branch

Zinninger, Max M. M.D., Johns Hopkins P.U.M.C. Peping.
Proposers:—Dr. J. Preston Maxwell
Dr. James L. Maxwell

NEW MEMBER ELECTED

Dr. J. L. Liu C. I. M. Yunching, Shansi.