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PHYSICAL TRAINING AS A HEALTH AGENT AND
THE NEED OF ESTABLISHING PHYSIOLOGICAL
STANDARDS IN CHINA.*

By ARTHUR SHOEMAKER, M.D., Tsing Hwa College, Peking.

There is no study more interesting than that which pertains to human life and development. It is the center around which all thought and all energy crystallizes. Religion, art, science, and our elaborate systems of education all aim at the elevation of life to a higher standard; the child is to be better than the parent, the race is to evolve toward perfection.

The outward form and its action have become the test of the inward man; the thoughts, the impulses, the feelings are recognized as having a physical basis that can be measured in some way and thus serve as a partial guide to the possibilities and probabilities of the future.

Psychology no longer is based upon personal opinion and speculation, but seeks for its proof in the physical data that can be gathered in practical physiology. A determination of the law of physical growth for the human body has done more to correct educational methods than any other influence in pedagogy. The school of keen observation developed the great teachers of the past; to-day their methods have been reduced to law so that the multitudes can profit by them. The establishment of the kindergarten by Froebel was the first practical attempt to reduce theory to facts and show a definite relation of pedagogical methods to the normal growth and development of the child. Now, in order that we might attain the highest mental development as well as physical perfection, we say, we must "know ourselves"; modern educational methods are based upon actual knowl-

*Paper read at Peking Conference, January, 1913.
edge of individual qualifications and peculiarities. Mental and physical development are harmonious, and both are necessary for the attainment of the largest and most useful life. One cannot be isolated and idolized at the expense of the other, as they were in the time of Saint Jerome, who championed the belief that soul and body are independent and mutually antagonistic entities. It was held that the greatest of all evils was pleasure, and that mental and spiritual health was best subserved by bodily weakness. Too long were the nations influenced by this body blasphemy and the narrow ideals of the monk whose highest ambition it was to become a hideous, sordid, and emaciated maniac. Many centuries of ignorance, misdirected and wasted energy have been required to lift the mystic veil that surrounded the human body and its legitimate place in this earthly cosmos, and place physical beauty and development on the high pedestal it deserves, and where the Greeks held it in ancient times.

The recent report of the Committee of One Hundred on National Vitality shows that the average span of human life is gradually increasing. That wherever sanitary science and preventative medicine have been applied, man's term of years has been lengthened. In Europe, longevity has doubled in three and one-half centuries. The rate of increase during the seventeenth and eighteenth centuries was about four per century, during the first half of the nineteenth century about nine years per century, during the latter half of the nineteenth about seventeen years per century. In Germany, where sanitary science has reached its highest development, the increase is thirty-seven years per century. Recent statistics for India show that the average duration of life there is less than twenty-five years, and that this figure is stationary.

Modern duration of life in the different countries is estimated as follows:

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<thead>
<tr>
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<th>Males</th>
<th>Females</th>
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<tr>
<td>Sweden</td>
<td>50.2</td>
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<tr>
<td>Denmark</td>
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<tr>
<td>France</td>
<td>45.7</td>
<td>49.1</td>
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<td>England</td>
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<tr>
<td>United States</td>
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<td>46.6</td>
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<tr>
<td>Italy</td>
<td>42.8</td>
<td>43.1</td>
</tr>
<tr>
<td>Prussia</td>
<td>41.</td>
<td>44.5</td>
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<td>India</td>
<td>23.</td>
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When we consider that the average duration of life in India is scarcely more than one-half that of France and less than one-half that of Sweden, we must conclude that the length of human life is depend-
ent upon definite conditions and can be increased or diminished by a modification of those conditions.

It is estimated that in the United States there are about three million persons seriously ill all the time, of whom about five hundred thousand are consumptives, and the great majority of the remaining two million five hundred thousand are due to preventable causes. When you realize that the major part of all the serious illness in the world—to say nothing of the millions of cases of minor ailments—could be prevented, even in those countries where modern methods of prevention have already been established, is it not urgent that strenuous measures should be applied here in the Far East where the span of human existence is only about one-half that of the West?

We know that life is shortened by death and narrowed by invalidity. The ideal life with respect to health and efficiency would be free from illness and disability of every kind. To approximate such a life is the aim of modern hygiene. Humboldt maintained that he had lived four working lives by retaining a working power double the average, for double the average number of years. The old time-worn adage that "an ounce of prevention is worth a pound of cure," is at last finding its realization in our modern health agencies. The new science of eugenics, which Galton, Pearson, and others are promoting, is receiving wide-spread attention. The practice of medicine which has always been known as the "healing art," is undergoing a radical revolution, the tendency is progressively to give up the use of violent drugs and depend more upon hygienic measures.

It is a common custom in many places for the patient to contract with the family physician to keep them well, rather than to cure them after they have fallen ill, for which service the physician receives no extra fee.

Physicians are turning from private practice to public service, and are acting as health officers in federal, state, and city governments, as heads of sanatoria, as medical inspectors of schools, factories, mines, and shops. As teachers and writers on hygiene, as physical directors in colleges, schools, clubs, and municipal playgrounds, and in many other fields, physicians are finding inviting work in the preventive art, rather than the healing art.

It requires no prophetic vision to see that among the rising generations there will be a great movement to conserve life and health. Why not place the twentieth century standard for duration of life at one hundred years, and mental and physical efficiency at one hundred per cent?
Among the most important agencies in modern times which have contributed toward the conservation of life and health, raised our physiological standards, and given youthfulness to our lives is that of physical training. Within a generation, every important college, school, athletic club, and branch of the Young Men's Christian Association has installed gymnasiums, and has regular classes in physical drills and games. In practically every instance the authorities are enthusiastic over the good results obtained in physical, mental, and moral improvement of those who have participated. Physical exercise is not excluded to any one class of individuals, but is intended for every one who has a pride in acquiring or keeping a beautiful, strong, healthy body and deriving from it the highest possible grade of efficiency.

Athletics and games not only give to the participant muscular strength and agility, but mental rest and recreation, youthful spirit, physical buoyancy, social esprit de corps, co-operation and neuro-motor education. Public playgrounds, recreation centers, and public baths, wherever they have been properly managed and controlled, have proven themselves the most efficient weapon in the fight against vice and vagrancy. Physical training, including supervised athletics and games, has established itself as a most potent public health agent.

Play is instinctive, and properly graded physical drills, games and athletic exercises is a real attraction to all ages of both man and woman, play is the natural outlet for the excessive physical activity of youth which must find some manner of expression. If you would keep a boy or girl out of mischief, then keep them busy at something interesting. They will even do hard physical work if it is disguised as play. It is strange that so few educators in the past have recognized and utilized this natural interest as a health agent, and in their educational methods.

The great movement for the conservation of health and human life has only begun to penetrate the Far East. Japan is probably taking the lead, in military hygiene, at least, as shown from the statistics taken from General Oku's army of 75,990 men during the Russo-Japanese war, which had but 187 typhoid fever cases. They reduced their dysentery cases from over 12,000 in the Chinese war to 6,624, in the Russian war; their cholera cases from over 7,000 to none; and their malaria fever cases from 41,734 to 1,257. This was in spite of the fact that their army in the Russian war was three times the size of that employed in the Chinese war. Japan has
also inaugurated a compulsory system of physical training in her elementary schools. I have been told by eminent Japanese that the average height of the nation has increased at least two inches in the last century.

Health, efficiency, and longevity will come in proportion to the importance given to hygiene exercise, and general health conditions. There is every reason to believe that human beings are as amenable to cultivation as other animals and plants. Professor Graves of the Yale Forest School, states that by protecting trees from infection, their lives may often be prolonged a century. Domestic animals and plants are equally dependent on care.

Ideal conditions for health comprise a pure air in which to live and work; pure food and a pure water supply; protection from infection and accident; and a proper adjustment of work, exercise, rest, and amusement. The present existing conditions in China do not compare very favorably with such a picture, but the hope of the present outlook over that of a decade ago, should be sufficient to enlist our hearty co-operation and enthusiasm.

Let us begin with something that is both tangible and vital, namely, collect large numbers of carefully taken physical measurements and strength tests, say 5,000 from each province; this would give sufficient data to establish pretty reliable standards, providing of course the measurements were uniform and intelligently taken. The question may be raised: Why do we place so much importance upon statistics and the establishment of a certain height, weight, and size of individuals? We can answer it in this manner: Sound vital statistics are the indispensable basis of modern sanitation. A nation that does not consider it necessary, or that is not able to provide adequate means for registering the births of its own children, or for officially recording the deaths of its own citizens, can hardly be supposed to attach sufficient value to human life to enable sanitary measures to be carried out. Physical standards are a great aid in the diagnosis and prognosis of disease by enabling one to make comparisons with a normal type and thus detect deviations from this type. They help us to forecast, to some extent at least, the nation's present physical status and probable future destiny. It has been found that various races follow special laws in their growth and development, as do the various organs of the body, and the discovery of this fact has led to important results in both anthropology and physiology. Types having comparatively long trunks and short limbs possess higher resisting power than the opposite types. It is also found that
certain physical organs, like the chest, have a direct relation to the working power of the individual when considered as a machine. The relation of total size to the respiratory power is an important physiological factor, as is also the relative length of different levers when the adaptability of the individual for special occupations is considered.

These facts should be sufficiently convincing for the most critical mind, and attractive enough for us to enter the field of statistics with a real zest toward the establishment of normal physiological standards for the Chinese to work for and the establishment of a national bureau for vital statistics.

The few measurements that have already been taken of the Chinese, show a deficient physical development as compared with English and American standards. They average lighter in weight, are shorter in stature and smaller in most of the body girth measurements. The China Medical Journal of September, 1910, contains an article on "Anthropometry of Chinese Students" by Dr. Merrins of Wuchang; also in the November issue of 1912, an article by Mr. G. Duncan Whyte, on the "Need for physiological standards in clinical research, with special reference to South China." Both of these gentlemen further establish the facts already referred to, of backward physical development among the Chinese. These are good beginnings along this line, but there is need of more help, more data, more uniform methods and a more complete list of measurements.
ANKYLOSTOMIASIS.*

By A. CARKUTHERS BRYSON, M.B. R.S., Chiao so, Honan.

There are indications that in the near future China's mineral wealth will be developed, and unless adequate prophylactic measures are taken, the economic aspect of ankylostomiasis will have to be seriously considered by those in charge of mining ventures. This disease is affecting a large proportion of the miners working for the Peking Syndicate in Chiaoatso, Honan, where the writer has been in charge of the hospital since November, 1906.

My attention was first drawn to this disease in the autumn of 1907 when some farmers from outlying districts came to the hospital for treatment suffering from progressive anaemia. Examination of their stools microscopically cleared up the diagnosis.

Realizing the dangers of an outbreak amongst the miners, investigations were made to ascertain the extent to which the local natives were infected with *Ankylostoma* . The stools of all in-patients were examined. It was ascertained that though there were apparently no cases of infection locally, yet a disease characterized by anaemia and dyspepsia had been prevalent for years in the native miners at Shang Kow, seven miles distant. Reports were sent in to the engineer-in-chief and the necessity of adequate sanitary arrangements in the pits was pointed out.

It was not until July, 1911, that the first Peking Syndicate miner was found to be infected. He was brought to the hospital with a fractured femur. The patient apparently had suffered in no way from harbouring the worms. After this date miners from No. 4 Pit were often found to be infected, though none seemed in any way affected by the parasites. By April, 1912, the numbers of infected coolies from No. 4 Pit were so great that it was estimated that nearly 40% of the miners were infected. Still there were no cases showing objective symptoms of ankylostomiasis.

In July, 1912, the first typical case of ankylostomiasis in one of our miners came to hospital, followed by an increasing number ever since. It is significant that only very few of the surface coolies have been infected, and not one case has come from No. 2 Pit which is only 300 yards away from No. 4. The probable reasons for this will be dealt with later. By September, statistics available showed that over 70% of the miners in No. 4 Pit were infected.

* Paper read by title, Peking Conference, January, 1913. 
Eight members of the foreign staff have been found to be infected. All of them had worked in No. 4 Pit. Those whose work was confined to No. 2 Pit or on the surface were found to be free of infection.

**DIAGNOSIS.**

There is no difficulty in spotting typical cases when one is on the look out for the disease, but occasionally I have had cases that were not a little puzzling.

The first case in a foreigner here was C. H., age 30. At 7 p.m. on May 18th, he was seized with vomiting, diarrhoea, and colicky pains which he considered were brought on by an indigestible meal taken at 2 p.m. With a dose of castor oil and hot applications to the abdomen, the symptoms cleared up by the following morning.

Late at night on May 19th, pain which was unrelieved by pressure came on again with considerable resistance over the epigastrium. No solid food had been taken for hours and the pain was so bad that hypodermic injection of morphine gr. $\frac{1}{4}$ was given. The relief was only temporary, the pain returning in three-quarters of an hour as violently as before. The stools were examined early in the morning on May 20th and found to contain *ankylostomum* ova. Within one hour of the first dose of thymol the pain which had been excruciating, completely left him and later ten worms were passed, six of which were full of blood. The condition at its worst suggested gall-stone colic.

Three weeks later I was called to another foreigner at 4 a.m. He had been suffering acute epigastric pain with vomiting and diarrhoea. There was no reason to suspect any indiscretion in diet. The stools were found to contain ova. Here again morphine gave but temporary relief and thymol almost immediately stopped the pain. In this case, despite care with regard to oils, alcohol, etc., signs of thymol poisoning were manifest with dark urine, collapse, etc., which, however, soon passed off. Similar cases have not unfrequently been met with amongst the natives. Dyspepsia is common enough, but acute symptoms in my experience are not so rare as one would be led to suppose from the literature on the subject.

Another interesting case was that of Liu Chang Ching, age 37, who came to hospital on October 17th with a history of dyspepsia for three months and acute abdominal pain for 24 hours. On examination I found he was very anaemic and there was considerable tenderness, pain, and resistance in the right iliac fossa. Pulse 74, temperature 98.6. He was advised to come into hospital, the diagnosis being
appendicitis and ankylostomiasis. The stools were found to contain *ankylostomum* ova.

As his condition improved with rest and warmth, after an enema, a course of beta naphthol was prescribed for the next morning following castor oil given that night. A large number of worms were passed and the patient against my wishes left the hospital on the night of October 18th.

He returned on October 20th suffering acute pain in the right iliac fossa where a lump was distinctly felt. The temperature rose to 100.6°, though the pulse remained about 84°. Operation was performed that afternoon and a large appendix abscess evacuated. The appendix had sloughed off, leaving a stump bound down by adhesions. He made an uninterrupted recovery.

In passing, I may say that during the past six years I have had six cases of appendicitis in natives, on three of whom operation was performed, together with one foreigner. All gave good results.

The condition known amongst Cornish miners as "bunches" has often been met with amongst the miners both foreign and native. By some it is supposed to arise from the irritation set up by the penetration of *ankylostome* embryos through the skin. The foreigners were constantly complaining of these very irritable lumps which came up on their bodies after working in No. 4 Pit. In foreigners they were found usually on the back of the neck and other unprotected parts of the body, though the buttocks were also affected after sitting on wet timbers. *Ankylostome* embryos were discovered to be present in the slime on the roofing timbers. Ova were found in the stools some weeks after "bunches" had shewn themselves on the body. The ordinary symptoms are too well known to require discussion. Loss of knee jerks has been occasionally noted.

The "peculiar pigmented state of the tongue" noted by some observers in this disease has not been seen by me. Eosinophilia is nearly always marked, but the same condition is often noted when only *ascarides* are found in the stools. A point with regard to eosinophilia in this disease should be mentioned. Recently a miner died of ankylostomiasis in hospital. The eosinophilia was 42 per cent. in July last, when he refused treatment, but on his return December 14th (the day before death), the eosinophilia had vanished.

From a fairly large experience of blood counts in this disease I am led to believe that in the early stages after infection the eosinophilia is high (60 per cent. in some cases).
As the disease becomes manifest, the eosinophilia is less marked, but increases for a few days after treatment. A low eosinophile count in an advanced stage of the disease is of bad prognostic import.

TREATMENT.

Filix mas, thymol, tannate of pelletierine, sulphur, eucalyptus oil and chloroform mixture and beta-napthol have all been tried. We have found beta-napthol the best drug for routine work.

The usual routine is as follows:—The patient is starved and well cleared out the first day with purgatives. The following morning at 6 a.m., 15 grains of beta-napthol were given in a cachet followed by a like dose at 7 a.m., 8 a.m., and 9 a.m. Three drachms of sodium sulphate complete the course at mid-day. Three days later the stools are re-examined for ova and if any are found, the course repeated. In some cases ten courses of the drug have been found necessary. When the worms have been cleared out, iron tonics are prescribed although some anaemic wrecks regain rude health marvellously quickly on beta-napthol alone.

Advanced cases of ankylostomiasis in which albumen is being passed in the urine will take beta-napthol with no ill effect when thymol and eucalyptus oil give rise to dangerous complications.

Development.—For ankylostome ova to develop into embryos certain conditions must obtain. The temperature and degree of moisture are probably the most important. Artificial cultivations are not always satisfactory. In some foaces the eggs hatch out quickly and thrive, while in others they hatch out but die almost immediately. I have found differences even when working with the same foaces under apparently precisely similar conditions.

Temperature.—Eggs are killed in 24 hours when exposed to a temperature of 40° C. or to a nearly freezing temperature. Boycott and Haldane found that eggs may hatch out at any temperature from 61° F.—100° F. At temperatures varying from 86° F.—61° F. nearly all eggs hatched within 5 days.

Practically, it is of course very important to find the minimum temperature at which “encapsuled” larvae can be grown. The limit has been placed by Bruns at 68° F. The critical point, however, seems to be, according to Haldane, 55°—60°. Below this temperature the eggs will not hatch, and above it they may do so and the larvae grow to the “encapsulated” stage. It is not, however, to be assumed that all samples of infected foaces will produce larvae at 62° F: the optimum temperature seems to be about 75° F.
The spread and prevalence of the disease depend on the development of the larvae to the infective stage, and there is no better illustration of the effects of temperature than the following table compiled from the figures quoted by Dr. Teubolt with regard to collieries in Westphalia.

<table>
<thead>
<tr>
<th>Temp. at working face</th>
<th>No. of collieries 1901</th>
<th>No. of men employed</th>
<th>Cases of anæmia per 1,000 men employed underground</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 63° F.</td>
<td>67</td>
<td>36,933</td>
<td>0.6</td>
</tr>
<tr>
<td>63—68° F.</td>
<td>84</td>
<td>68,604</td>
<td>0.4</td>
</tr>
<tr>
<td>68—72° F.</td>
<td>45</td>
<td>43,710</td>
<td>2.5</td>
</tr>
<tr>
<td>72—77° F.</td>
<td>33</td>
<td>39,836</td>
<td>11.7</td>
</tr>
<tr>
<td>Over 77° F.</td>
<td>12</td>
<td>9,633</td>
<td>39.9</td>
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</table>

Dr. Teubolt further found that cases in mines with a temperature of less than about 72° F. appeared to be among men who had come from mines at a higher temperature, where they were doubtless infected.

**Moisture.**—Thorough drying kills both eggs and larvae. Immersion in water prevents the eggs from developing and kills them in a few days. Larvae on the contrary thrive in water. The great importance of adequate moisture is shown by the history of the Westphalian collieries where the introduction of compulsory watering of the roads to prevent dust explosion in dry collieries, was at once followed by the flaring up of what had previously been a smouldering infection.

**Oxygen.**—Eggs will not develop at any temperature when sealed up. It has been estimated by Lambuilt that it takes about 10 days immersion in water to kill the eggs.

**Light.**—Strong sunlight killed off eggs in all my experiments.

**Disinfectants.**—Strong salt solution rapidly destroys the eggs, acting as a dehydrating agent. On first emerging from the egg, larvae have no special chitinous coat and are very easily killed by 0.1% sublimate or any germicide. At very high temperature, 100° F., the eggs hatch out quickly, but the young larvae soon die. It is suggested by Haldane that this is due to some substances contained in the decomposing faeces.

When the encapsulated stage has been reached 2% sublimate does not kill in 6 hours while in 25% H₂SO₄ they will live for three-quarters of an hour.

**No. 2 Pit.**—No. 2 pit is dry compared with No. 4. The workings in the former are mainly on the rise as compared with the dip workings in No. 4. No. 4 is the older pit and the ventilation is such that it is probably less hot than No. 2. Experiments are now being devised and carried out to ascertain the main factor of difference as regards infection.
Prophylaxis.—To examine the stools of all employees and treat those found infected would be an innovation which it was decided would probably cause trouble with the natives. Natives will not be dragooned and the only hope of eradicating the disease is by patiently educating them up to a higher standard of hygiene. The measures I advised to cope with the disease and which were eventually acted upon in Chiaotso, were as follows:—

Free Examination of all coolies and free treatment.

Education.—In prominent places throughout the district, posters have been put up and notices freely distributed pointing out the dangers of the disease, the life history of the worm, and the method of infection.

DISPOSAL OF FÆCES.

Surface.—One contractor is in charge of all the coolies on the surface. He has been made responsible for the cleanly habits of his men. Dry earth latrines (native) are put up wherever many coolies congregate. Trenches have also been used and found satisfactory for temporary use. These latrines are cleaned daily by the scavengers and the faeces taken to the sanitary station.

Underground.—A liberal supply of pails are installed. These pails are 15" diameter and 14½" high. In each, water to a depth of 4 or 5 inches is poured and enough "skip" oil to cover the surface. Skip oil is also known as "fuel oil" and "road oil." It is the first distillate from petroleum. The cost is $8.00 per 30 gallon tub.

This oil is a splendid germicide. No flies will come near it. I am indebted to Major Stark of the U. S. Army, Tientsin, for suggesting the use of this oil which has been found to be most satisfactory in practice. The pails are collected by scavengers and run to the surface on coal tubs. At the pit mouth another gang of coolies hand over clean buckets in exchange for the fouled ones which they take to the station.

At the sanitary station a large destructor has been erected. The pails are emptied into a tip up hoppet which is wound up to the top of the destructor on rails by a winch. The empty pails are now sterilized with jets of steam and finally cleaned ready for use again. The contents readily burn up, being aided by the oil and the coal dust which is added by each coolie after defecation.

In any mining venture in China, sanitary regulations should be devised at the commencement of operations. The trouble and moderate expense involved will be amply repaid by the increased
efficiency of the coolies. Once infection gets a hold on a warm moist mine where coolies have not been trained to use latrines, it spreads like wild fire.

Though not all infected show symptoms, nevertheless a good proportion are kept constantly below par and gradually become useless to their employers.

If it is inconvenient to erect a proper destructor, a small incinerator can be put up very cheaply. A useful form is that which the United States Army have adopted in Tientsin. It consists of a pit 7' in diameter 2' deep one end and 3' the other, dug in porous soil. The edges are tamped up to the height of another foot. This basin is lined with stones and steel rails are placed across. Once a fire is started the stones soon become red hot and anything dumped inside will easily be burnt up with a minimum of nuisance. The residue finds a market as manure.

Covering of feet in mines.—In wet and hot mines, coolies will not cover themselves properly to avoid infection, in fact most work naked underground. The foreigners are fitted with long boots and suitable headgear. Until helmets were issued to the foreign staff they were constantly complaining of "bunches" coming up on the back of the neck and other unprotected parts.

REFERENCES.
2. Ibid.

A REPORT OF THE PATIENTS DISCHARGED FROM THE JOHN G. KERR HOSPITAL FOR INSANE DURING 1912.

By J. Allen Hofmann, M.D., Canton.

In the following report, one should note that it is based on patients discharged, whereas most statistics are based on cases admitted. This would make it of little value for comparison with the reports of other institutions if it were not true that comparatively few of our patients stay in the hospital for prolonged periods of time; thus the patients discharged and those admitted during the year are nearly identical. One should also remember that 1912 was an exceptional year in China; it was a year of war and of danger to many. In our diagnostic scheme we have followed Kraepelin.
The writer has often been asked whether insanity among the Chinese is in any way different from insanity among Western peoples. When the questioner refers only to symptomatology this question can be answered negatively. In other words we have just the same kinds of psychoses here as in the homelands, and the symptoms of the different groups are identical with the symptoms of similar groups at home.

Our statistics, however, show differences in other respects. These, in a large measure, are more apparent than real and are due to the different social customs of the people. For example, from our records it would seem that insanity is much more common among men than among women. But this is probably not true, for the Chinese women are more apt to be cared for in their own homes by the women of the family, whereas it is far more difficult to care for the men in the same way.

There are, however, some real differences due to the habits and customs of these people, as well as some striking similarities which will appear as we study each group of psychoses separately.

There were discharged during the year 312 cases, i.e., 227 male and 85 female, almost three times as many men as women. According to the diagnoses these were classified as follows:

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<tbody>
<tr>
<td>Manic Depressive Insanity</td>
<td>86</td>
<td>39</td>
<td>125</td>
<td>40%</td>
<td>75</td>
<td>0</td>
<td>16</td>
<td>15</td>
<td>10</td>
<td>8</td>
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<tr>
<td>Dementia Paralytica</td>
<td>51</td>
<td>12</td>
<td>63</td>
<td>20</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>37</td>
</tr>
<tr>
<td>Exhaustive Psychoses</td>
<td>44</td>
<td>11</td>
<td>55</td>
<td>17.5</td>
<td>0</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>19</td>
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<td>Alcoholic Psychoses</td>
<td>9</td>
<td>2</td>
<td>11</td>
<td>3.5</td>
<td>7</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Involuntary Psychoses</td>
<td>7</td>
<td>0</td>
<td>7</td>
<td>2.5</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
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<td>98%</td>
<td>10</td>
<td>26</td>
<td>36</td>
<td>73</td>
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*Plus 1 not insane.

**MANIC DEPRESSIVE GROUP.**

This group was represented by 125 cases, i.e., 40% of all cases discharged belonged to this group. Of these, 86 were men and 39 were women, i.e., almost one half were women. Women are more
subject to manic depressive insanity than men. This seems also to be true in China. Of the other more important forms of insanity the proportion of women to men was as follows: dementia precox $\frac{4}{4}$, general paralysis $\frac{1}{4}$, exhaustive psychoses $\frac{7}{4}$.

The ages of our manic depressive cases ranged from 15 years to 62 years, the average age being 28 years.

<table>
<thead>
<tr>
<th>Decade</th>
<th>Number of Cases</th>
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<tr>
<td>16-25</td>
<td>49</td>
</tr>
<tr>
<td>26-35</td>
<td>30</td>
</tr>
<tr>
<td>36-45</td>
<td>14</td>
</tr>
<tr>
<td>45 and up</td>
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Thus, as at home, manic depressive insanity is principally a disease of the young. Seventy-nine of the ninety-seven cases, whose ages are known, occurred before the thirty-fifth year. On the whole the depressed cases were younger, while the mixed form of the disease occurred in the older cases. The manic cases exhibited the widest range of ages and was by far the most common of the three forms.

Most of these patients were reported as physically strong and well. Many of them were reported as always more or less peculiar, e.g., selfish or overgenerous, hard to please, hot-tempered, moody, etc.

Of these 125 cases, 22 showed paternal hereditary taint, 11 maternal, and 4 collateral hereditary taint, making a total of 37 cases or almost 30%. More than one-half of these patients came through the police and no complete history was obtained; furthermore, in most of the patients brought by friends the maternal family history is not known. No doubt if a complete record could be obtained the usual 70 per cent. of patients with an hereditary tendency to mental aberration would have been recorded. With regard to vicious habits of the parents tending to produce weakened offspring, the opium habit and alcoholism were more common in this than in any other of the groups of psychoses. Venereal disease in these parents was rare.

Among the patients themselves, many were given to bad habits. In quite a number the disease immediately followed some festive occasion at which too much wine was imbibed. Shortly after Chinese New Year there was a regular deluge of these manic cases.

A history of previous attacks was found in 35 cases or 28 per cent. Among the precipitating causes given, were:—lack of sleep, sudden death in family, severe pain, sorrow, troubles, anxiety, financial loss, various hardships, robbery, quarrels, fever, etc. There were also many cases said to have been due to fright or fear because of the fighting. Suicidal attempts were reported in 11 cases.
Our results in this class of patients were about the same as are obtained at home.

76 cases or 61 per cent., were discharged cured.
16 ,, ,, 12 ,, ,, ,, much improved.
15 ,, ,, 12 ,, ,, ,, improved.
10 ,, ,, 8 ,, ,, ,, not improved.
8 ,, ,, 6 ,, ,, died.

The much improved and the improved cases were, most of them, on the way to complete recovery, but were taken back by their friends who felt that the patients were sufficiently recovered to be cared for at home. If then we add these to the patients who left the hospital completely recovered we get 85%, the number usually given by text books as the percentage of recoveries in this psychosis.

DEMENTIA PRECOX.

Next in order of frequency was dementia precox. This is a very common form of insanity in China as elsewhere. More than 20 % of all cases discharged belonged to this group. At Manhattan State Hospital, N. Y., only 11 % of the cases admitted during 1911 were dementia precox patients. Last year we had in all 63 cases of this disease, 51 of whom were male and 12 female, i.e., more than four times as many men as women. Just as at home, this form of psychosis is more common among men than among women. It appears most frequently as hebephrenic type. According to our records this type is very common in young men of the better class families socially. The age of onset is from 15 to 24 years or even older, the average age being about 18. Next in order of frequency is the paranoid type, which occurs in slightly older cases. Least common is the catatonic form. This order of frequency also corresponds with home statistics.

As to the causes of dementia precox in South China, we find that hereditary tendency is by all odds the greatest factor and this is especially true in the hebephrenic form. According to our records the hereditary weakness seems to come most frequently from the father's side of the family, but we must bear in mind that often little is known of the mother's family. Granting that the hereditary influence of the mother is just as potent as that of the father the already important hereditary causal factor is almost doubled in importance. Besides the direct hereditary tendency to dementia precox there is also that other form of hereditary mental weakness due to the excessive use of opium or alcohol in the parents which for some reason or other undermines the mental stability of the children. The opium habit or more or less
alcoholism was common in the fathers of our cases, indeed almost as common as in the progenitors of our manic depressive cases.

The physical constitution and mental endowment of these patients on the whole was below the normal, but some of them were exceptionally well endowed. Their habits before they became insane in a large proportion were reported as unusually free from vice. With many of them the precipitating cause was in some way or other related to the sexual life. Many became insane just before or just after marriage or betrothal; some refused to get married, others became unbalanced because they could not get married. Among the other reported precipitating causes were quarrelling, fright, fear, overstudy, disappointment, childbirth, family troubles, and opium-smoking. But in many of these cases the causes given were really the early manifestations of the disease.

Seven cases gave histories of having had previous attacks, but this must be taken with a grain of salt. These patients were probably more or less insane all the time, but because they worked they were regarded as recovered by their friends.

Of the 63 cases ten had at one time or another made one or more suicidal attempts before admission to hospital and two of them had made homicidal attempts.

Results.—Two of our cases were discharged as cured. Both of them were cases of hebephrenia and both of them were gradually induced to take an active interest in their surroundings, one by playing volley-ball, the other by easy and regular employment. It is possible that these so-called recoveries were but prolonged remissions, but one of these patients is now in school and after three months is still doing well. Three cases were discharged during a remission, five were much improved, and four improved. These nine cases, all more or less deteriorated, and all still holding fast their delusions but keeping them under, as it were, went back to their homes and to work.

A surprisingly large number of these patients always regarded as hopeless in the homelands, outside of an institution, are able to go back to their homes and do something for a livelihood. I remember one case who, while in the hospital, was to be the Emperor of China and was going to have the heads of all who opposed him cut off as soon as he came to his throne. This patient escaped over the wall and now has a little shop on Houam Island. He still hopes to be emperor some time or other but he has sense enough to know that just now it is not safe to talk about empire, and so he continues with his little business. In the United States the rush and hustle of the factory system crowds these unfortunates to the wall. Inside of the institu-
tious many of them plod away at something or other but it is not safe to discharge them, whereas here in China where life is more easy-going these patients can find positions and will only be regarded as a bit peculiar by their fellows. None of the catatonic cases were improved.

Thirty-six cases were discharged not improved (most of them having deteriorated). Twelve died, most of these from gradual wasting due to their mental disease, the remainder due to intercurrent diseases. Of these tuberculosis and bowel troubles were most common.

**DEMENTIA PARALYTICA.**

This was the third group in order of frequency. Five years ago when the writer first came to this hospital there were scarcely any cases of this disease present and it was often spoken of and wondered at. Why was it that in China, where syphilis is said to be such a common disease, there was so little general paralysis? It is only during the last two or three years that general paralysis has become more frequent in our wards, but to observe that general paralysis has become so common that almost of all cases discharged belonged to this group is nothing less than a surprise.

Why then this increase? Five years ago the patients were practically all brought by their own relatives and friends from in and about Canton. Only now and then were any patients brought by the police or the Namhoi Magistracy. The police patients were picked up upon the streets of Canton while the Namhoi patients were brought from Hongkong whence many of them had returned from the ends of the earth. These two classes of patients have been gradually increasing in numbers until now more than one half of all cases admitted are officials’ patients. It was observed that as these patients increased, paresis also increased. It was further observed early in the year that a great many of the patients sent up from Hongkong were paretics and that comparatively few of the Canton police cases were such. A more careful investigation in the autumn disclosed some further interesting facts:

1. Of these cases from Hongkong many had been abroad. Among the places these had returned from were:—Amam, Malay States, Macao, Philippine Islands, Borneo, North and South America. Some of these had been coolies, other merchants.

2. Another considerable number had been in the maritime service, sailors, cabin boys, boatmen, dockmen, firemen, etc.

3. All of these from whom it was possible to get a history had contracted syphilis abroad.

4. Besides their venereal habits most of these patients indulged also in excess of alcoholics, or opium, or were exposed to the strains of all kinds of hardships at sea.
Add to these facts the fact that very few cases of general paralysis come to us from Canton proper who have not been exposed to syphilis abroad and you have a very interesting state of affairs to explain.

To be sure it is a well-known fact that at home much the same thing is true. Most of the cases of paresis come from the large cities, especially the ports, and it is most common among men who lead a "rough and ready" life away from their families. There is, however, this difference, these men contract syphilis in their own land whereas here there were but few who had contracted that disease in Canton, a port, and a metropolitan one at that.

It is well known that syphilis is not uncommon in India but paresis is exceedingly uncommon. Whether syphilis is common in China or not I am not prepared to say, but it seems pretty certain to me that paresis is not common among the Southern Chinese who have never been away from their own native land.

This condition of affairs suggests some questions for further and more careful investigation: e.g.

1. Is syphilis really as common in China as we have been led to believe? If so,
2. Is syphilis alone, without any other factor entering in, sufficient to cause general paralysis? In other words, is paresis more common in the West and in Western colonies in the East, because besides the prevalence of syphilis the infected individuals lead a more debauched life, drinking and carousing and at the same time being obliged to use up more nerve energy in the more strenuous life of the West?
3. Or is there some difference in the treatment or non-treatment of syphilis in the East which tends to prevent paresis?
4. Or does the difference lie deeper than this? Is the syphilis of the East caused by a different strain of spirochete which does not tend to produce paresitic conditions?

During this year, 55 cases of general paralysis left our wards; that is, almost 18 per cent. of all cases discharged. Forty-four were men and eleven were women, exactly four times as many men as women. Thus, as at home, this disease predominates in the male sex. Manhattan State Hospital admitted, during 1911, 16 per cent. male and 4 per cent. female paretics, also four times as many men as women. Only 10 per cent. of all cases admitted there were paretics.

The ages of our cases varied from 31-63, the average being about 43 years,—slightly higher than the average age usually given in textbooks. A word as to the reported causes of this psychosis. There were six cases which gave a history of insanity in the family, but these were mostly in distant relatives. Wine and the opium habit in the parents is a minor factor. Bad habits in the patient, however, was almost universal. Most of the patients gave a history of having been physi-
cally strong and well until this disease began. Many fantastic precipitating causes are mentioned by the friends, but in most cases, I take it, these were but the first signs of the disease.

Of our 55 cases:

One was discharged improved (probably the beginning of a remission).
Five were discharged during a remission of the disease (their friends considered them cured).
Nineteen were discharged not improved.
Thirty died after a short stay. In fact, most of these came in during the year, and in such a dilapidated condition that even the attendants recognized the nature of the disease by the tremors, ataxia, speech defect, and grandiose delusions.

EXHAUSTIVE PSYCHOSES.

According to Kraepelin "the exhaustive psychoses include those cases which follow upon nervous exhaustive conditions whether these be due to excessive nervous abuse or defective restoration of the nerve elements."

We discharged during the year eleven cases of this group of psychoses. Nine were men and only two were women. This is an anomalous condition as compared with Western statistics. According to these, $\frac{3}{4}$ of all cases are women, while here more than $\frac{3}{4}$ were men. The explanation of this probably lies in the fact that this was a year of war. In fact, most of these cases were caused directly by the shock of fear, fright, and exposure during the war. At least one half of these patients were soldiers. Most of them were reported as normally strong and well mentally as well as physically. Only one gave a history of hereditary taint. Among the other causes for this condition were anaemias, acute disease, \textit{viz.}, malaria and typhoid; one case was an advanced case of ankylostomiasis, another on discovery that he was a leper was sufficiently shocked to be upset in his mental equilibrium temporarily.

Of these eleven cases, seven were cured; one, much improved; one, improved; one, not improved; and one died, \textit{viz.}, the ankylostoma case.

In connection with these exhaustive psychoses cases it is well to mention also two cases of infection psychoses. Both of these were infection deliria, the delirium in each coming on before any fever had developed. The causes were cancrum oris in a young man and the other cellulitis with gangrene following erysipelas in a young woman. Both these patients died.

Alcoholic Insanity takes fifth place in order of frequency. This is still a rather rare disease in South China though it seems to be on the increase. There are, however, no statistics to prove this. During the
year there were seven cases, i.e., 2.2 per cent. of all cases discharged. All were middle-aged men. Some of these were practically only acute intoxication patients who at home would never have reached a psychopathic hospital. In Western lands 10 per cent. or more are cases of alcoholic psychoses.

In my five years in South China I have seen but one case which resembled delirium tremens. This man was in the habit of drinking one to two pints of native rice wine per day when his hallucinosis began. Hot-baths together with hypnotics soon controlled this. He is now in a confusional state which almost amounts to pseudo-paresis.

If, however, alcohol is not used in sufficient quantities to produce alcoholic insanity here in South China, it is still very frequently the exciting cause of manic depressive insanity. Following a wedding feast or other festive occasion where Bacchus, or the Chinese god of the wine cups, whatever his name may be, is too fervently worshipped, many a man begins to rave and finally lands in the insane asylum. Excessive alcoholism was also found quite frequently in the progenitors of dementia precox as well as manic depressive patients. Of our seven cases of alcoholic psychoses five were discharged cured and too much improved.

In connection with alcoholic insanity one should also mention that other form of intoxication so common in China in the past, namely opiumism. It seems queer that there should be but a single case of insanity due to chronic opium intoxication to report from such a place as this. To be sure we have had a number of opium-smokers who were insane brought to the institution, but these had contracted the habit after becoming insane, the friends in the beginning giving the drug as a sedative and hypnotic. Then there have also been a number who became insane immediately after breaking off the opium habit. Most of these were classified as manic depressive cases since the symptomatology closely resembled that disease. A few have gone on to deterioration; I dare say that these were insane before they ever smoked opium.

What are the reasons for this scarcity of opium intoxications? Does the opium pipe not produce the symptoms that the injected morphin produces? Is it because there was much less opium smoked during the past year than previously? Or is it because the opium smoker is more likely to go to a general hospital or an opium refuge to break off his habit? No doubt all of these reasons suggest a part of the truth, but we are inclined to believe that the chief reason is that the useless, often thieving smoker was not regarded as unbalanced and
was tolerated in his own home and on the streets instead of making him an inmate of an institution as should have been done.

While opium intoxication as a distinct form of psychosis has contributed but few cases to our numbers, the opium habit has still exerted a terrible and evil effect upon the sanity of the descendants of the smokers. I have in several instances found almost whole families of children hopeless idiots, imbeciles, or demented, in whose history I could find no other cause than excessive addiction to the opium habit in the father; and this in families where the opium-smoking father in his younger days had been intelligent and progressive enough to pass the competitive examinations of his country and become an official. I think it is pretty certain that excessive opium smoking by the father has been as frequent an hereditary cause of hebephrenia in one or more of his children as any other form of heredity.

**INVOLUTIONAL PSYCHOSES.**

There is nothing of particular interest to mention regarding these cases. Suffice it to say that this group was represented by involution melancholia, four men and one woman; and senile dementia, three women. One fact, however, is worth noting, viz., the comparatively younger age at which senility with its various scleroses sets in—60 years of age was the average age of these senile dementia patients.

There were besides the groups of insanity mentioned above also one male and two female cases of epileptic insanity, and two men with gross brain disease. The one was probably hemorrhagic in character, following trauma of the head, and the other some form of nonspecific tumor of the brain.

During the year, five cases of idiocy died in the hospital. Nothing was known of the history of these children, hence one can only guess at the causes. One of them was a microcephalic idiot—the lowest grade I have ever seen. Not even the vegetative faculties were developed: though she was 12 years old she could not walk, neither had she learned to eat except what was placed into her mouth.

In conclusion, a word about the frequency of insanity in China. Judging from the number of applications from certain districts near Canton, where our work is better known, and from the frequency that we hear of other cases in taking our histories, we are forced to the conclusion that insanity is as common as, if not more common than, it is in the West. A priori, one would expect this to be true of those forms which depend upon heredity and surroundings unfavorable to healthy
mental development, for the custom of ancestor worship demands that every male should have offspring. Much as we have advised against it, still it has happened many times that demented patients have been taken out of the hospital to get married. Right here I think is the reason why hebephrenia is more common among the well-to-do. The mentally insufficient poor man is forced to give his more normal brothers the first chance to buy a wife, with the result, in most cases, that he does not get a wife; while the wealthy man, even though he be demented, is forced to procreate whether he wants to or not. Thus the inferior stock increases among the wealthy and middle class while this tends to die out among the poor.

SOME NOTES ON SYPHILIS AMONG THE CHINESE.

By JAMES L. MAXWELL, M.D., Tainan, Formosa.

It seems to the writer that it is high time that some of the more prevalent diseases among the Chinese were more systematically dealt with in the pages of our medical journals; and this not only for our own sake, though we ourselves have much to learn even about the diseases with which we are most familiar, but still more for the sake of the scientific world outside of China. The ignorance of our leading scientists in the West about diseases in China is as appalling as is the confidence with which they make generalizations on the subject. I suppose that for half a century now the clap-trap about leprosy being absent from North China has been current. I have seen it stated that the Chinese do not suffer from piles because they do not use the seated "conveniences" universal in the West! Recently it has been stated that tuberculosis is rare in South China! And now we are told by the leading syphilologists of Great Britain that only a mild form of syphilis is met with among the Chinese. I think it is not unfair to speak of such ignorance as appalling, even if we may not go further and say that, in men that speak as those having authority, it is actually culpable.

There is some excuse then in trying to record, even in a somewhat fragmentary way, one's personal experience of syphilis among the Chinese.

Sir Henry Morris, the President of the Royal Society of Medicine of England, quotes as correct, Dr. Ashmead of New York in a recent discussion on syphilis, as follows:—"These races (Japanese and Chinese) by their long generational experience with the disease, have
acquired a great measure of resistance to the germ"—and again: "Is it not probable that as syphilis is known to be much milder in character in hot countries and in the Tropics than in more northerly and colder climates, tertiary syphilitic changes in bone rarely occurred in such countries?"

Are these statements true to the facts as we who practise among the Chinese in the Tropics meet them?

I believe they are grossly inaccurate, and for that reason should like to briefly sketch the forms of syphilis as we meet them here.

I propose to divide my remarks under three heads:—Hereditary syphilis, syphilis in its ordinary manifestations, and parasyphilis.

**HEREDITARY SYPHILIS.**

The subject of hereditary syphilis is really the most difficult of the three to deal with, for several reason. First, because some of the stigmata which are common in occidental lands are absent or little marked here; second, because acquired syphilis is very common among young children, and third, because in older children the manifestations of hereditary syphilis are easily confused with those of other diseases. To deal with these difficulties first.

The stigmata of hereditary syphilis as given in the ordinary textbooks are mainly Hutchinson's teeth, depressed nasal bridge, radiating scars round the mouth, and Parrot's nodes. I have never seen a specimen of Hutchinson's teeth nor a marked case of Parrot's nodes. The Chinese here, at least, seldom boast of a high nasal bridge and one rarely sees children with markedly depressed bridge, unless there has been necrosis of the nasal bones. Radiating scars round the mouth are not confined to hereditary syphilis: we have seen them occur many times in acquired syphilis in children: which leads one to remark again on the prevalence of acquired syphilis in children. Quite recently we had in the out-patient room in one morning five children, one family of three and another of two, all suffering from acquired syphilis: a few weeks before we had two children in the hospital suffering from the same. The ages of these children ranged from one to five years and I am continually meeting such cases. Usually in these cases the mother is suffering from a secondary eruption and the children have acquired the disease from the mother's breast, or from each other by contaminated articles used in eating, etc. The primary sore therefore may be found almost anywhere, but most frequently about the lips or mouth. A mucous patch or condyloma about the anus is, I read in the text-books, pathognomonic in a
young infant of hereditary syphilis. This is far from being true out here, where a very well marked condyloma would make me suspect acquired syphilis, and these children, too, very frequently exhibit mucous patches at the angle of the mouth. The delayed manifestations of hereditary syphilis—keratitis, arthritis, and enlargement of liver and spleen—form a subject of no little difficulty as regards diagnosis in a country where tuberculosis, arthritis of all kinds, and palludial diseases are rife; and while we meet with not a few cases, there are again many where diagnosis is very doubtful. Despite all this, hereditary syphilis is undoubtedly extremely common, probably in the large majority of cases leading to death of the foetus or of the infant within a few days or weeks of birth. However, we see plentiful examples in the out-patient rooms of those who survive exhibitory typical ‘snuffles’ and coppery rashes on buttocks and face. As a rule they yield well to ordinary treatment and appear to be neither more or less severe than the same disease in Western lands.

ACQUIRED SYPHILIS.

1. The Primary Sore.—For the purposes of this paper I shall deal with the primary sore only as it is found on the genital organs, acquired after the usual manner. In a very large number of cases we find the primary manifestation a typical sore of the Hunterian type, the inoculation period corresponding to that given in the ordinary textbooks on syphilis—namely about one month. Sometimes, however, it is little more than an erosion or may escape notice altogether. Chancres inside the urethra are not extremely rare. Mixed infection is not rare, and it is in these cases, in our experience, that phagedenic ulceration sometimes ensues. This is often very severe leading to partial or even complete gangrene of the penis, and not infrequently calling for partial amputation of that organ.

We therefore see that primary syphilis is not less severe than in occidental lands. That gangrenous cases are much more common does not really prove that the disease is more severe. I suspect that they all arise in a mixed infection.

2. Secondary Symptoms.—The typical secondary symptoms are:—A general slight enlargement of the lymphatic glands, a cutaneous eruption, affections of the hair and nails, sore throat and mucous patches with more rarely affections of the eye, ear, and joints. Most of these manifestation are the same here as at home but we feel confident that the cutaneous eruptions are more often severe out here than in occidental lands. I am at present treating one case where
considerable tendency to ulceration existed from the beginning, leading to quite extensive ulcers of the angles of the mouth, the external ears, and the nostrils, as well as very severe condylomata around the anus. Ulcerating eruptions are not really very uncommon in the secondary syphilis we see here, and where ulceration does not occur the eruption may yet be very severe, as in one case at present under treatment, where it would be difficult to lay a ten cent piece on any portion of the body without covering more or less, one of the dark brown coloured spots. Iritis is quite common and complete deafness from affection of the auditory nerve is far from rare. Secondary affections of the joints are uncommon anywhere, but we see quite our share of these: at present I have in the hospital a man who is just recovering from an acute arthritis with much swelling of both ankles and knees, making walking impossible when he was admitted. The joints have cleared up on nothing but mercury by the mouth, the swelling disappearing contemporaneously with the disappearance of the secondary rash, and so I think we may take it conclusively that the arthritis, too, was of secondary origin. I repeat that I am confident that, on the whole, secondary syphilis is more severe out here than at home.

3. Tertiary Symptoms.—Gummatas and gummatous ulcerations in all situations are appallingly common, as our yearly bill for Potassium Iodide well bears out. In certain situations these seem to denote a specially severe form of syphilis. We shall merely enumerate these affections with a short note on each.

Vascular System.—An obliterating endarteritis leading to gangrene of the extremities in some cases, and to hemiplegia of young adults in others, is certainly far more common here than in the West. On the other hand aneurysm is excessively rare. Note:—This applies to Formosa and South China; it is probably not so true of Central and North China.

Bone affections.—Nodes of the long bones are met with almost every day. They do not denote a severe form of syphilis. Soft nodes of the skull are, however, usually taken to mean a severe form, and we see quite a few of such. The same may be said of diffuse osteitis leading to extensive, often enormous, thickening of long bones, and this is quite common. Syphilitic dactylitis is also met with and necrosis of the nasal bones is frequent. Necrosis of the palate with perforations is appallingly frequent, and perichondritis of the larynx is anything but rare.

Joints.—Gummatous inflammation of the joints is often met with and occasionally a hydro-arthritic condition, which is undoubtedly
syphilitic. There conditions are, however, commonly met with in young people, and it is difficult to say whether they are not really due to hereditary syphilis.

_Eye affections_ are met with, but I am not in a position to compare these with similar affections at home. Syphilitic retinitis and optic neuritis account for much blindness.

_Tongue._—Syphilitic affections of the tongue are singularly rare. Leucoplakia I have never seen, and gummatous ulcers are very uncommon.

_Visceral syphilis. The alimentary tract._—We have already remarked on the rarity of syphilis of the tongue. In the case of the oesophagus it is more difficult to speak. Stricture of the oesophagus of a non-malignant nature and not due to the ingestion of caustic fluids is decidedly more common than at home. All we can venture to say is that this is probably a syphilitic manifestation. Of syphilis of the rectum we can speak much more confidently. Stricture of the rectum is very common and in the large majority of these cases it is due to syphilis. We have ourselves done little short of 100 proctotomies for this condition.

_Liver._—Gummata of the liver we have met with, it is everywhere so rare that comparisons of frequency are almost impossible, especially in the absence of post-mortem examinations.

_Testes._—We are unable to say whether syphilis of the testes is more or less common than at home.

_Brain and spinal cord._—Syphilis of these organs, again, is rare everywhere; we suspect that gummata of the brain are less commonly met with than at home—at least our experience here is restricted to a very few cases. On the other hand transverse myelitis due, probably, to the pressure of syphilitic gummata is far from rare; en passant, one would remark that these cases lend themselves especially to Salvarsan treatment. To be effective the treatment must be successful before pressure has destroyed the delicate nerve elements in the cord. Salvarsan treatment answers this requirement in a marvellous manner. To see a patient brought into the hospital with absolute paraplegia, and to see the same man a few days later walking about, is one of the real joys of a doctor's life here.

_Late cutaneous eruptions._—Severe cases of Rupia, tubercular syphilides, and the like are met with and are themselves a proof of the severity of syphilis among the Chinese.

_Malignant syphilis._—Under the heading of malignant syphilis is usually meant a condition in which the secondary eruption undergoes
extensive ulcerative changes and is little affected by treatment. We have seen nothing of this. We have, however, met with several cases of what may well be termed *malignant* syphilis, viz., gangrenous cutaneous tertiary lesions. Among a number of such cases I pick out two for description. The first a young man who two years before had acquired the disease in the usual manner; the earlier stages had cleared up without any regular treatment, but when he came to the hospital he was suffering from gummatous ulcers on the face and arms. These at first appeared to be likely to yield to the ordinary treatment when suddenly they assumed a gangrenous nature, eating deeply into the tissues and spreading widely. This was accompanied by severe constitutional disturbance. Enormous doses of iodides proved ineffective and as this was before the days of Salvarsan, Soamin was used in doses of grs. iii every other day till 100 grains had been given, then a few weeks' intermission and then a second course of Soamin. Under this treatment the gangrenous process was arrested and the ulcers gradually healed. He left the hospital practically well, but returned a few months later with the old scars broken down and further gangrenous ulcers. Again Soamin was exhibited and proved successful. A third time he returned in the same condition and on this occasion Soamin proved of little use and he left the hospital again, doubtless to die. The second case was a woman of 45, bearing the marks of many healed tertiary lesions. She came to the hospital for gummatous ulcers of the legs. These healed under treatment, but she came again a year later, the ulcers having broken down. Once more they healed, though not completely, before she left the hospital. She returned a third time a few months later with enormous gangrenous ulcers of the legs rapidly spreading. The usual treatment proved of no avail nor were we more successful in the use of Salvarsan. The woman succumbed to her condition a week or two later. It is only right to add to this, that for years she seemed to have been suffering from chronic starvation.

The above description of syphilis as we meet it here among the Chinese, though of necessity sketchy and very incomplete, is, I think, quite enough to refute the extraordinary statements quoted by the President of the Royal Society of Medicine, that the Chinese have acquired a great measure of resistance to the disease and that syphilitic bone disease is rarely met with.

One very interesting subject remains to be dealt with—that of *Paras* syphilis. It is a little difficult always to know what is to be included under this term, as there is no close agreement among the writers on the subject. Whatever manifestations may be included, however, it i-
especially in connection with tabes dorsalis, general paralysis and similar conditions that the term is employed. The leading authority on this subject in England is Dr. Mott and he estimates the incidence of parasyphilitic conditions at from 3 to 4 per cent. of persons affected with syphilis. There was a time when I was sceptical about the presence of these cases at all among the Chinese here, though I know that this opinion is incorrect. On the other hand all medical men in China will acknowledge at once that there is nothing like even 1 per cent. of parasyphilitic conditions in the syphilitic infections among the Chinese. This places us in a curious position toward the opinion to which Dr. Mott inclines that "a race long syphilized is, on account of a racial immunity, more liable to suffer with the late degenerative forms." In other words that, in a people like the Chinese, parasyphilis should be particularly common whereas we know it to be extremely rare! But he begs the question it seems to me in the phrase "on account of racial immunity." Have we the least proof that racial immunity can be acquired in connection with syphilis? I do not know what evidence Dr. Mott bases the phrase, but I feel quite sure that in connection with the Chinese race it is quite out of place. For myself, I do not see why we should expect it to occur. Syphilis, in our student days, was classed among the infective granulomata along with tuberculosis and leprosy. Is there such a thing as racial immunity to either of these diseases? Our own experience of the terrible prevalence of both tuberculosis and leprosy, and the extremely long history of the latter at any rate, leads one to an intense scepticism of the phrase as applied to syphilis.

To return, however, to the question of parasyphilis among the Chinese.

*General paralysis* must be extremely rare; we have never seen a typical case. We do not in the least mean to claim that it does not exist, but we do think we may go so far as to say that it is relatively very rare.

*Tabes dorsalis* is the other typical manifestation of parasyphilis and at one time we were inclined to doubt its presence. We can now, however, speak from personal knowledge of three cases, and Dr. Randall Vickers of Wuchow has very kindly referred me to two cases which he has met with, and of one of which he very kindly sent me full notes. There can be no doubt of any of these cases: one of my own indeed being so absolutely typical that I was able to read out of a book of medicine the symptoms of the disease and point out to my assistants each one as we came to it, in the man
before us, including Charcot's joints and visceral crises. It is quite possible, of course, that tabes is more common than I have allowed for, but there is also no possible doubt that it is very rare when compared with the number of cases met with at home.

Before closing this paper I should like to refer again to the statement made at the Royal Society of Medicine's meeting, to which I referred at the commencement. Dr. Ashmead of New York referred to the Japanese and Chinese races. With regard to the latter I believe this paper proves his statement to be grossly incorrect. Is it possible that his conclusions about the Japanese are also to some extent mistaken? I have, of course, no experience among the Japanese in Japan; I have a good deal of experience of syphilis among the Japanese in Formosa. It does not coincide with Dr. Ashmead's statements. I have myself seen very severe cases of syphilis of the bones, skull and long bones among the Japanese; I have also seen severe cases of visceral syphilis. The infection has been acquired in Formosa probably from Chinese women. Granting then that Dr. Ashmead's contention about the Japanese in Japan is correct, it implies not racial immunity but reduction in virulence of the germ; for when they come to Formosa they are apt to acquire syphilis from the Chinese in a severe form.

INDIVIDUAL CUPS FOR THE HOLY COMMUNION.

By Dr. Volrath Vogt, Yiyang, Hunan.

Last year in September, I myself and some of our other doctors were consulted by an evangelist of our society: he complained of swelling and some ulcers of the scrotum. On examining him we found him suffering from a tertiary luetic affection of the testicles. We were quite surprised on finding such a disease in this man. He is a man about fifty years old, has been a Christian for about ten years and always been considered one of our best and most reliable Christians; he himself understood that there might be some suspicion as to syphilis and pleaded for his own guiltlessness; he also declared that he had never before suffered from any disease of the genitals.

Later on, one of our Norwegian pastors told me that he, during the autumn 1910, was consulted by the said evangelist. At that time he was suffering from an ulcer in the throat and one or two months later he had an eruption all over the trunk and around the anus. The pastor found it to be rather similar to the syphilitic exanthemata. He, however, considered his own diagnosis quite incredible, as the man's
moral life was above suspicion; but now—hearing the diagnosis verified—he declares that there can be no doubt that it was a syphilitic exanthema with tubercular mucosa around the anus.

According to these facts there can be no doubt at all that this evangelist has contracted *syphilis insonis*—the throat being the place of the primary infection.

Of course it is impossible now—three years afterwards—to say from what source the man has been infected; probably a Chinaman many times a year is exposed to luetic infection through the mouth. *And if* he already has been infected, all of us know that he for some years will be a constant menace to other people, *if* he is eating and drinking from the same cups as from which they drink; we consider it our duty to call the attention of our Chinese patients to this fact.

The above-mentioned patient has been a member of a congregation for many years and has constantly taken part in the holy communion. Now I am glad to state the fact that our society, *half a year before* the man was infected, had brought into use individual cups—and I think it was due to God's providence that we had done so just at that time.

If we had gone on with the old custom, certainly this man would have had a constant opportunity to infect his fellow Christians—both Chinese and foreign. It also would have been an unsolved question, whether this man himself had been infected through his partaking of the holy communion or from some other source.

In most parts of China we have—as far as I know—still the old custom of *one cup common* to all the communicants. In view of the above case and of our knowledge about syphilis in this country I dare to ask:—

*Is it right to go on with the old custom—still using the common cup and thus exposing the communicants to this and many other severe infections?*

Certainly we ought to use all our influence to abolish this old custom and get individual cups; that is the only method by which all risk of infection can be excluded from the communion.

In this connection I may also add that our Chinese Church members made no objection at all when we brought the individual cups into use. Some of them had even pleaded for the reform *before* any steps were taken on the side of the foreigners.
ELEPHANTIASIS OF SCROTUM.

By Adrian S. Taylor, Yangchow.

The operation for elephantiasis of the scrotum is one most spectacular in its results, and one that has caused the most favorable comments in our clinic. As the details of this operation in the best books on tropical medicine are very scant, and as we have a method that for us is a better one than that given by Manson, Castellani, and Chalmers, it is herewith reported for the Editor to use as his need for copy demands.

Every endeavor is made to get the surface of the tumor clean. We use a one per cent. solution of lysol in hot soap water applied vigorously with a brush, taking care to get the cracks and crevices as clean as possible. This is repeated the second day, and then the parts left in dry sterile dressing till morning of operation. While anesthetic is being given, the skin to be removed is rubbed with Harrington's Solution, which is essentially a strong solution of perchloride in acid alcohol; and after this dries the whole region is painted with tincture of iodine. Should one fear the official tincture, which is seven per cent. in the U.S.P., to be too strong, it may well be diluted with alcohol to one half. This coat of iodine is allowed to thoroughly dry before the draping is done. The tumor is examined now, and the limits of the elephantoid tissue are determined. A long rubber tube is now wound tightly around the base of the tumor and fastened either by sterile bandages to a belt around the waist, but better in our experience, is held from slipping by towel clamps in the skin, one anteriorly in pubic region, one in front of anus, and one on each side, all of course being clamped below the tourniquet. We like this method of holding the tubing much better than the figure of eight around the waist, as it is necessary to unloosen this after the tumor is removed before finally closing the wound, and it is hard to prevent soiling of the wound while the helpers are doing this. We have had perfect control of hemorrhage by our method.

As soon as the tourniquet is applied, a long sagittal incision is made from a point on pubes in good skin perpendicularly downward through preputial opening along median raphe to a point in good skin in perineum in front of anus. This incision is first deepened over the canal where one expects to find the buried penis, until the preputial mucous membrane is found. We always expect to find this normal.
Figure 1.—First incision made, from good skin over pubes, vertically downward in midline through prepuceal opening in median raphe to good skin in front of anus.
Figure 2. - Side view before operation.

Figure 3. - At completion of operation before dressing. Notice T-shape closure, with penis partly covered by mucous membrane at junction of horizontal and vertical arms of incision.
and as soon as it is reached, a circular cut separates the prepuce from
the, outer layers of elephantoid tissue. There is a line of cleavage
running right down around penis to its root, and it is a matter of a
few moments only to thoroughly isolate penis with its elongated mucous
membrane canal forming a kind of foreskin deprived of its outer cutan­
eous layer. This mucous membrane is all carefully preserved, as it
will be very useful in making flaps for the penis. The next step we
find to be one that makes the whole procedure safe and easy. Keeping
carefully to the mid-line, the tumor is boldly bisected and each half
laid over on its respective side. The testicles are approached from the
median aspect, rather than from primary perpendicular incisions from
the outside as usually recommended. We find them nearer the median
line than they are to the external surface, and the tissue is far
easier to work in. Carefully going in, the testicles and cords are one
by one isolated, any hydrocele present attended to, and then the two
testicles turned upward along with the penis till tumor is removed.
The tumor tissue is separated well from these three structures, and
then working outward towards skin surface, the elephantoid tissue is
cut away from perineum till skin is reached. We think that we are
able to tell better, working from inside outwards where the skin
incisions must be, and as soon as we have cleared the tumor away from
the mid-line from the pubes anteriorly to the anus posteriorly, we are
ready to cut through the skin, thus releasing the whole tumor mass.
We have found it well to use a large number of clamps, and to clamp
first, then cut. In the big one here illustrated, we followed this plan,
and had only two spurters to catch after removing the tourniquet, and
we found that a large number of the clamps could be removed with no
need of tying after they had been in place for some minutes while the
final separation was being done.

As soon as hemostasis is complete, we slit up the preputial mucous
membrane as much as is necessary to turn it back, and use it for a part
of the covering of the penis. The incision is closed horizontally across
the pubic region down to the penis, and from here downward vertically,
making a T-shaped closure. The testicles are placed in as normal a
position as possible, and covered over with the flaps saved from the
sides of the tumor. We have had no experience with cases where the
flaps have been insufficient to cover the testicles, though in one case we
thought wise to remove one testicle on account of large hydrocele, and
in another case on account of large hernia on that side. The everted
mucous membrane is stitched to edges of skin, and one is surprised at
the normal appearance of organ after operation.
We feel that this method of approach has these advantages. A minimum amount of work is done from the external surface of tumor inward, and danger of infection is thus lessened. A large part of the work is done from the mesial surfaces of the bisected tumor, which are of course sterile.

The heavy tumor has to be lifted very little. As it is cut in two, it falls apart, and rests between patient's legs on the table. It is gradually liberated by working from the mid-line externally, and from before backwards, with the tissues to be cut in plain sight, with good opportunity to clamp every bit of tissue before cutting, if desired, so that one should have to lose very little blood. It is possible in as unfavorable a case for a surgical operation as the one pictured here, to have patient experience no shock whatever.

The testicles are easily reached by blunt dissection with little danger of injury, and the cords are quickly isolated up as high as desired.

Drains are desirable in a case of this kind where there is a certainty of much oozing, and abundant dressings will tend to prevent subsequent infection. The administration of a urinary antiseptic such as hexamethylenetetramin may help to prevent infection from spilled urine, and will do no harm. It is very convenient to have the bowels tied up for several days after operation.

Before attempting operation it is well to satisfy one's mind that there is no hernia present. If there should be, it may be attended to in the usual way before the scrotum is touched, and if there is reason to hope that the testicle on the other side is in good condition, it is wise to ligate the cord high up in the ring, remove as much as possible through the hernial incision, make a tight closure of inguinal canal, and finally remove testicle with stump of cord through scrotal opening. It will be very difficult to pull up testicle from elephantoid scrotum through incision for herniotomy, though one may often do this where castration is desired in other cases. In our first case this procedure was adopted, and the patient was gratified by return of sexual power, and by the birth of a child a year later.
SOME FEATURES OF MEDICAL PRACTICE NOT SUFFICIENTLY EMPHASIZED IN BOOKS.

By J. M. Swan, M.D., Canton.

What I plan to say to you is prompted by past experience and observation. I desire to lay stress upon certain features in the diagnosis and treatment of disease which I believe should receive more emphasis in literature than is usually accorded them. Especially in the teaching of Chinese medical students have these features been impressed upon me.

It may be readily acceded that the medical profession, more than any other, requires wider and more exact powers of observation, and where is there to be found a wider field than in China, a greater variety of diseases in all stages, affording the best opportunities for making observations? But do we find clear, practical directions how to develop such power or ability? Is it not true that not only advanced medical students, but also many engaged in active practice, have not developed that keen sense of sight, hearing, and touch which is essential to thorough, intelligent work? A close scrutiny of a patient as he presents himself to the physician will often yield a valuable clue as to what part of the human mechanism has gone wrong. As one can read character to a certain extent by looking at an individual, so, by forming the habit of close scrutiny can the physician learn to read disease as expressed in the gait, outward bearing, and appearance of his patients. I have been told by a graduate of Vienna University that for at least a year prior to receiving their degrees of Doctor of Medicine, students must conduct their diagnoses without any interrogation of the patient. In other words, they must rely solely on their sense of sight, hearing, and touch.

A good deal might be said in regard to the physiognomy of disease. I refer more directly to facial expression. In cardiac disease even prior to failure of compensation, there is discomfort, anxiety, perhaps anemia and an expression of care which is shown in the face, these becoming so marked as to be unmistakable as disease advances. The anemia of various forms of nephritis can be seen to differ from malarial or other forms of depleting chronic diseases. The typhoid expression is one of the plainer forms of facial expression of acute disease and often an important guide. In questionable diagnoses of bubonic plague I have a number of times relied on the facial expression as a deciding point, and it has not failed me. I believe this feature to be one characteristic
of that dread disease. A restless, rather dull, staring expression of the eyes, somewhat drawn features, anxiety, often a quivering of the lips, make up a picture which, if studied, is recognized as characteristic. I mention this as one of the expressions of disease I have found valuable and reliable, yet I have not found it emphasized in books.

Passing from the sense of sight to that of touch—there may be found a wide difference in development. Not only must there be constant care and treatment of the hands in a general way, but combined with the persistent effort of the physician to avoid any work that thickens or hardens the tips of the fingers, there should be that concentrating of the mind to recognize the slight difference in form or consistency, thus developing in time a greater confidence in this part of diagnosis. Just in the same way that a blind person reaches a higher development through hearing and touch, I believe that by persistent, thoughtful effort it is possible for the physician to develop a keener sense of touch than is ordinarily found in even the most delicate fingers.

In hearing it is possible by persistent effort to educate this sense so that one can detect slighter variations in sound than by ordinary application. The quality of the cardiac systole or the character of a systolic murmur may vary much and the variation have important significance. It is not enough be say that a soft blowing murmur, or a hard, harsh murmur indicates a certain valvular lesion. The degree of hardness or softness and length of sound have their bearing, yet may be easily overlooked.

Therefore in the exercise of these senses in our work as diagnosticians, painstaking precision should be our watchword, increased ability and better results being the reward.

It is with some diffidence that I turn to another phase of our relation to our patients. Moral suasion, or influence, only partly expresses my idea. The more perfectly we can win the absolute confidence of our patients, the fuller the assurance rightly and honestly given, imparting at the same time genuine sympathy, the greater will be our success. I do not of course refer in any sense to hypnotic suggestion or any forced influence. Better than anything I have read in books do I remember a final address delivered to our graduating class by Dr. J. W. Wright, nearly thirty years ago. In that address he gave prominence to this idea of the power we may exercise over, and the confidence we can inspire in, our patients. Rightly exercised it is a keynote to success. It excludes all roughness, brusque indifference, and finds its main spring in love and sympathy for our fellow-men. While attending the annual
meeting of the American Medical Association last year in Atlantic City, I was much impressed with an address delivered to the Surgical Section by Dr. Crile, of Cleveland, Ohio. His subject was "The Results of Operations, especially Abdominal, performed on the Principle of Anoci-Association," of which the following is a very brief extract: "In the body there are large stores of potential energy. This energy is released and converted into action through associative memory. Associations (stimuli) may be beneficial (beni-association, or they may be harmful or nocuous (noci-association). Surgical operations as usually performed cause noci-associations. By special technic, operations may be performed without noci-associations. This neutral state is designated anoci-association. Especially in abdominal operations, in operations for Graves' disease, and in handicapped patients, remarkable results are achieved, general operative mortality is reduced and post-operative impairment is greatly diminished."

Dr. Crile showed that in his experience in carrying out this theory, temperature and pulse were favorably influenced, surgical shock notably absent, quiet, restful sleep produced, mortality rate lessened, and convalescence materially hastened. He was certain that the time he specially devoted to quietly assuring his patients and winning their absolute confidence was time well spent. Such testimony by a surgeon of international fame is well worth bearing in mind. I believe we owe a debt to suffering humanity along this line and that we should be more careful to exercise this influence over those who come to us for relief.

Another feature in surgical practice I must refer to, and that is the standard we should aim to attain. Perhaps advanced conservatism best expresses my idea of that standard. How often we have keenly felt the responsibility of deciding—with only a slender hope—whether a given operation is justifiable. There is considerable medical literature in defense of staunch conservatism, a word we sometimes like to hide behind when too late to rectify a mistake, and also much is written on very advanced surgery which may often be more truly expressed as experimental surgery. How gladly would we, in critical cases, turn to some safe guide for help! In major operations, where there is distinct danger yet urgent need for surgical interference, I should like to see the pros and cons more clearly defined; in other words, a clearer line of demarcation drawn by a definite setting forth of what points to a successful result or a fatal termination. Here our best powers of observation and foresight are required. A life may depend on our ability to find one or two definite symptoms or signs that point to a successful issue. A failure to observe some definite ante-mortem sign or symptom
may lead us into the error of performing an unwarranted operation, possibly removing any existing chance for recovery. I have taken chances in serious operations sometimes to my regret and sorrow, at other times rejoicing I had done so. I believe, however, that if one is intelligently resourceful, and carefully weighs the points for and against the recovery of the patient, the necessity of "taking chances" will be limited to very few cases. We are certainly not justified in performing an operation on the ground that the patient will die anyway. Operations on the human subject simply as an experiment are rarely, if ever, justifiable.

After all, if we with our technical knowledge and skill are able, after carefully weighing the evidence, to put ourselves in the patient's place and apply the Golden Rule, "Do as we would be done by," we may be quite sure that we shall be neither too advanced nor too conservative. In the pressure of everyday work let us hold fast to the highest ideals in a profession that is resplendent with ideals, and we need have no fear of the final issue.

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A PROTEST AND A CHALLENGE.

An article in the July number of the Journal by Dr. Samuel Cochran on "Recent Advances in Anaesthesia" is taken up largely by a denunciation of chloroform as a routine anaesthetic. For the sake especially of younger men coming to work as surgeons in China, and who may, by such an article, be turned against an anaesthetic of great value and particularly easy of administration, we wish most vigorously to protest against Dr. Cochran's article as applied to China. We speak from the joint experience of some 10,000 chloroform administrations given in our hospitals—not by qualified anaesthetists, but by Chinese assistants, often with little or no training. In these 10,000 cases we have had 5 deaths due to the anaesthetic, all of which were cases in which the respiration was greatly impeded before the operation was begun—two were enormous ovarian cysts, both died before the operation was commenced; one in a labour case, where there was great dropsy and probably hydrothorax; one in the case of a foreign body impacted in the trachea; and one in a case of necrosis of the lower jaw. We think that every one will acknowledge that cases like these are apt to die suddenly with any anaesthetic; it was the fact of anaesthesia not the nature of the anaesthetic to which death was due. We believe an anaesthetic death rate of 1 in 2,000 would compare
Is Prevention Possible in China.

By W. W. Peter, M.D.

In America and Europe they are finding it possible to prevent certain diseases to an increasing extent. Boards of Health have collected exhibits which accomplish just what they were meant to do. They attract and then disgust. People go away exclaiming: "Is this possible!" Municipal authorities are conducting publicity campaigns for better health conditions in their respective cities. Lecturers trained to use lantern slides, charts, and actual specimens of diseased tissues are sent from place to place. But it is often an uphill job. For even in our fair homelands the first and most difficult step is to convince the general public that certain unsanitary conditions are an actual menace to health. There are many unbelievers. And it is even harder to attain to the next step, which is to make the public understand that it is possible to remedy unsanitary conditions, and that it really pays in dollars and cents. There are few communities that are really will-
ing to try. But after they have tried, they wonder how it happens they never thought of cleaning up their city years ago.

The fly.—Who would dare to think that such a thing as eradicating the fly is possible? Because of the graphic methods at the disposal of a good artist, it is not a difficult matter to convince the public that there is a distinct connection between filth and flies. The next step is more difficult—to establish clearly in the mind of the layman the connection between the fly and tuberculosis, typhoid fever, and dysentery. But even if the layman does not believe in “bugs” as he calls bacteria, he will agree before you start that flies ought to be exterminated, merely because they are a nuisance. When it comes to the practical question: “Can the fly be done away with?” There's the rub. But it has been done away with in several cities.

A city in what is sometimes called a backward state suffered an annual epidemic of typhoid with an average death rate of 4½ per cent. A doctor in that city talked his tongue off nearly an inch short before he persuaded the people to unite in a campaign to do away with flies and typhoid. By the use of pyroligneous acid, the sanitary privy, a proper disposal of animal manure and other measures, the seemingly impossible was actually accomplished. The city was converted into a place healthy to live in.

In another city, the citizens learned the “fly catechism” as they called it. How would it sound in Chinese?

1. Where is the fly born? In manure and filth.
2. Where does the fly live? In every kind of filth.
3. Is anything too filthy for the fly to eat? No.
4. Where does he go when he leaves the vault and the manure pile and the spitoon? Into the kitchen and dining room.

5. What does he do there? He walks on the bread, fruit and vegetables; he wipes his feet on the butter, and bathes in the buttermilk.
6. Does the fly visit the patient sick with consumption, typhoid fever, and cholera infantum? He does—and may call on you next.
7. Is the fly dangerous? He is man’s worst pest and more dangerous than wild beasts or rattlesnakes.
9. Did he ever kill any one? He killed more American soldiers in the Spanish-American War than the bullets of the Spaniards.
10. Where are the greatest number of cases of typhoid fever, consumption, and summer complaint? Where there are the most flies.
11. Why should we kill the fly? Because he may kill us.
12. How shall we kill the fly?
   (a) Destroiy all filth about the house and yard and street.
   (b) Pour lime into the vault and on the manure.
   (c) Kill the fly with a wire-screen paddle, or sticky paper, or kerosene oil.
13. Kill the fly in any way, but kill the fly.
Considering the vast difference between conditions in our home ­lands and in China, are measures to prevent certain diseases possible of execution in China? Would it be worth while to try? Along what lines could a start be made to better the health conditions throughout China? Are such organizations as the China Medical Missionary Association, the Young Men's Christian Association, and Municipal Boards of Health responsible in any large way? What about attempting to check the ravages of tuberculosis, malaria, infected eyes, parasites, and unsanitary conditions? Are such attempts feasible in China?

References to recent Health Literature:

State Boards of Health pamphlets: Indiana, Kansas, New York, California.
Current British and American medical journals.

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**Customs Surgeon's Report.**

**REPORT ON THE HEALTH OF CHANGSHA FOR THE YEAR ENDING 30TH SEPTEMBER, 1912.**

By Dr. F. C. YEN.

**GENERAL HEALTH OF THE FOREIGN COMMUNITY.**

During the past year the foreign population of Changsha has increased by one-third, with the consequence that more cases were seen during the year, as the appended record shows.

These figures can by no means serve as a basis to determine the health of the community. Besides the constantly changing character of the foreign residents in port, many of them, who applied for medical assistance, were either temporary residents or travellers en route to and from inland cities. The year cannot, however, be considered a particularly good one. This was due to extremely wet winter and spring seasons, followed by an exceptionally hot summer, immediately after a big flood. The unhealthiest months of the year were June, July, and August. The highest record of sickness was in June, and had it not been for the fact that most of the foreigners were away in July and August, the record for these months must have been high.
Dysentery.—Of the four cases of dysentery seen during the year, two were among the new arrivals. In both instances, the disease was first contracted in Hankow, but the relapse set in with the advent of the hot weather.

Typhoid fever.—Three cases of typhoid fever were observed during the year among the Europeans. In July, four cases of the disease were reported to have occurred simultaneously among the Japanese. The fact that uncooked foodstuffs, notably raw fish, are still being used by them was responsible for the occurrence. All the cases among foreigners occurred within the months from May to September when there was an epidemic among the Chinese.

Undiagnosed fevers.—Eleven cases of fevers were recorded, mostly of a mild type, lasting from one to seven days. Disorders of digestion were responsible for the majority of them, and a few were perhaps typical forms of dengue fever. At least one case presented symptoms similar to those described by Dr. Lambert of Kiukiang under the name of "urticarial fever."

Births and deaths.—Three births with two deaths occurred during the year. The first death was that of a child, three months old, who died of tubercular peritonitis, and the second was due to collapse from alcoholism.

GENERAL HEALTH OF THE CHINESE.

The most common diseases among the Chinese were tuberculosis and syphilis. Of the former, pulmonary tuberculosis was by far the most prevalent type, with cervical adenitis as the next in frequency. We have obtained excellent results in treating those cases of tubercular adenitis before the stage of secondary infection with surgical operations. The operation must, however, aim at the total extirpation of the glands and their removal en bloc. In order to do that and to avoid injuring the important vessels to which these glands are often closely adherent, the skin incision must be made liberal. Having made the incision, the omohyoid muscle is next sought for and that muscle is used as a guide to locate the internal jugular vein which lies behind it. With this vein in view, the dissection may proceed upward with safety. Both the superficial and the deep chains are then removed en bloc. If proper antiseptic precaution is taken, the wound will generally heal without suppuration.

Infection with intestinal parasites, particularly ascaris lumbricoides, is exceedingly common. So much so, that it has been, for a long
time, a routine practice at the Yale Mission Hospital to give santonine to all in-patients on their admission. More cases of malarial fever (Benign tertian and quartan) were seen in Changsha than formerly.

Cholera.—Eleven cases of cholera were seen in the hospital during the summer. Of these, some belonged to that fatal type known as cholera sicca, in which the usual symptoms of vomiting and purging were slight or absent altogether. Nervous symptoms, such as intense headache, delirium, coma and at times, aphasia, appeared early and constituted the most prominent symptoms. These patients usually died in a few hours from collapse.

Epidemic of typhoid fever.—An epidemic of typhoid made its appearance in July, and after having reached its maximum severity in August, it began to abate, although it has not yet disappeared at the time of the present report. During the months from May to September, forty-six cases were reported altogether by the Yale Mission Hospital and the Red Cross Hospital. The epidemic was characterized by the absence of the typical rose colored rash, prominence of the cerebral symptoms, and a high mortality, due to complications from intestinal hemorrhage and perforation.

Cause of the epidemic.—The defective sewerage system in Changsha is, in a great measure, responsible for the epidemic. Public drains are laid under the streets and the very best of them are lined with bricks which will, of course, permit the contents to leak out into the surrounding soil. The sewerage arrangements in private houses are even worse. A bare hole is dug in the ground and into it the waste water of that house is poured. The dirty water, thus collected, is allowed to filter gradually through the soil and find its way to the nearest well. The direct cause is undoubtedly the flood which visited Changsha in July. The entire district outside the city as well as many low sections inside the city were several feet under the water. This flooded the sewers, and when the water went down, their contents were thrown on to the streets. Of the seven cases of typhoid among the foreigners, six were among those who live outside the city where the flood was the worst. This indicated a close relation of the flood with the epidemic.

There were no cases of typhus fever, plague, beri-beri, anthrax nor leprosy observed during the period under review.
The China Medical Journal.

SPECIAL REPORT.

The increased patronage of Western medicine by the Chinese.—

The increasing popularity of Western medicine among the Chinese is shown in the following record of the Yale Mission for the past three years:

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of patients seen</th>
</tr>
</thead>
<tbody>
<tr>
<td>1909</td>
<td>... 2,582</td>
</tr>
<tr>
<td>1910</td>
<td>... 5,215</td>
</tr>
<tr>
<td>1911</td>
<td>... 9,820</td>
</tr>
</tbody>
</table>

The Red Cross work and work in connection with the plague have done much to advance Western medicine in Hunan in recent years. The most significant fact was that in both enterprises Western medicine was exclusively used, with the result that many of the Chinese have since become ardent patronizers of it.

The Red Cross work—This constituted the most important work of the year. Under the united efforts of Chinese and foreigners in Changsha, a Red Cross Society was organized soon after the outbreak of the Revolution in Wuchang. In this way, over 400 wounded soldiers came to the care of the Society for the three months from November to January. The Hospital has since become a permanent City Hospital, rendering helpful services to needy sufferers.

Opium prohibition.—Few provinces in China have suppressed opium smoking more vigorously and with better results than Hunan. Not a single opium den or shop can now be seen in the city. From the first of January, the Government took over the sale of opium from private dealers, with the consequence that no opium could be obtained anywhere except through these sale agencies opened by the Government. Beginning from June 1st, the use of opium was considered to be unlawful and its violators are punished by imprisonment or heavy fines. On the 10th of October, with the closure of these Government depôts for the sale of opium, the final proclamation was issued, to the effect that the use of opium after that date would be punishable by death. Some suppression of the various anti-opium remedies sold on the market was also adopted. There were a number of dishonest chemists in the city who had been putting on the market anti-opium pills containing opium and morphine. The authorities, in their desire to suppress the sale of these illegal medicines, are continually sending us specimens for analysis. Thus far, several fake remedies have been condemned after analysis in our laboratory.
The China Medical Journal.


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

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

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

Editorial.

NOGUCHI'S LATEST DISCOVERY.

The report of Dr. Hofmann of the insane asylum in Canton and the article by Dr. J. L. Maxwell in this issue, both bring to our notice again the interesting question of the relative prevalence of syphilitic infections in China. Especially interesting are the observations on the so-called parasyphilitic conditions, tabes dorsalis and paresis. That these two conditions are comparatively rare in China, will be borne out by most all observers, at least in the interior.

The interesting conjecture which Dr. Hofmann makes, that from the fact that he has found general paresis not particularly rare in Chinese coming from Hongkong and other port cities and in marked contrast to the infrequency of incidence in natives who have never been exposed, as it were, to "foreign contamination," that therefore the spirochete which causes syphilis in foreign countries where parasyphilitic conditions are not rare, may be a different strain, is not without reason and interest. Even in foreign countries, it has been recognized that there is something strange in the fact that parasyphilis develops in some men and not in others who have apparently the same virulence or non-virulence of infection, and the instance which Dr. Meyer quotes, in which, of nine glass blowers infected from the same source, five developed either locomotor ataxia or paresis, is most significant.

The epoch-making discovery which Noguchi has just made of the treponema pallidum in the cerebral cortex in a case of general
paresis may not only make it possible to demonstrate a different strain of spirochaete in these cases of parasyphilis but may lead to a more satisfactory therapy in these cases. The work of Dr. Ellis of the Rockefeller institute in the treatment of tabes dorsalis with intraspinous as well as intravenous injections is worth mention in this connection.

It has been shown by many observers and workers that ordinary drugs, mercury, potassium iodide, and salvarsan are not excreted at all or only in very minimal amounts in the cerebrospinal fluid. Therefore it may well be that the previous methods of treatment of tabes and general paresis have been inadequate, and in the light of more definite knowledge of the treponema pallidum and newer methods of treatment that we can hope even to deal with these hitherto almost hopeless affections. Great honor is due those keen observers in the past, who have from clinical observation connected lues and parasyphilis, and Noguchi's discovery is their glorious justification.

THE EVIL OF THE COMMON CUP.

Our attention is again called in a forcible way to the evils of the common communion cup in the article by Dr. Vogt in this issue of the Journal. The concrete case of the pastor with lues, which he cites, is most interesting and convincing and no doubt could be duplicated could we have before us the experiences of all medical missionaries in China. Certainly the presence of a communicable disease such as the one here cited could be demonstrated among one or more of the church members in many congregations in China. That the common cup is unhygienic and sometimes becomes a real menace could be proved and has been proved to the satisfaction of most medical men. It is manifestly advantageous to adopt the individual cups and the Christian church should not be the last to adopt a measure which makes for cleanliness as well as safety.

The day when the public from a sense of modesty were excluded from the confidence of the medical men as regards prevention of luetic and other communicable diseases is passing. We see the movement in Europe and America to educate the public as to the
Editorial.

Evils of and modes of infection in venereal diseases, and we have just seen the attitude taken at the seventeenth International Medical Congress recently held in London. We quote from the J. A. M. A.
on the attitude at this congress.

Particularly is it gratifying to note that at last the "conspiracy of silence," which has for so long prevailed over all attempts on the part of the profession to arouse the public mind to the venereal peril, has been overcome; and the important resolution passed by the Congress has been not only widely disseminated, but also commented on and generally approved. That resolution, after calling attention to the ravages caused by syphilis, urges the governments of all the nations represented at the Congress to institute confidential notification of syphilis to a sanitary authority, and to make systematic provision for the diagnosis and treatment of all cases of syphilis not otherwise provided for. It is also gratifying to learn on good authority that so far as the British government is concerned, it has acquiesced in the proposition, as was indeed foreshadowed in Lord Morley's speech at the government dinner to the Congress.

Surely it is encumbent upon us, as advisers to the missions and the Christian Chinese, to state in no ambiguous terms to our clerical brethren and the church our convictions that we should adopt the individual cup for the Holy Communion. It will be found that if the question is brought to the attention of the Chinese, they will not be averse to the abandonment of the common cup for communion and the difference in expense is hardly one to deter even the poorest church in China from adopting it. It is to be hoped that Dr. Vogt's appeal will set us all thinking of our responsibility as advisers to the Christian community in this regard.

BERI-BERI.

The relation of the polished rice theory to beri-beri seems pretty well established in the minds of the scientific world, and when Dr. W. L. Braddon at the International Congress of Medicine urged the abolition of the quarantine against beri-beri, which he said is now known to be non-contagious, he expressed sentiments in accord with the belief of practically all men who have written on that subject in the last few years. It is true that beri-beri has and does develop at times under conditions which seem to obscure the question of diet and to point to infection, and that there are still those who protest against the exclusion of infection as a cause of it, especially some observers in South America whose protests have appeared in the form of letters to the British Medical Journal, but
still the day seems to be with the rice theory. That there are
other diets which by their deficiency in certain elements can also
cause beri-beri is probably also true, as evidenced by the case of the
Norwegian sailors who in 1894 substituted wheat flour for rye flour,
the former evidently lacking the necessary anti-neuritic substance.

The still further relation of the phosphorus content to the
development of beri-beri is not so definitely settled. The conclusions of Fraser and Stanton that "In the examination of a large
number of rices, none were found associated with human beri-beri
or polyneuritis in fowls which yielded a phosphorus pentoxide
content of 0.4 per cent or over as estimated on the undried
material" has, however, a very practical bearing on the prophylaxis
of the disease. This polyneuritis seen in fowls on the polished
rice diet is not exactly the same thing as human beri-beri but the
"similarity is greater than the difference" as noted by Vedder and
Clark. Acting on the polished rice theory beneficent legislation
has been enacted in many countries looking toward the eradication
of this disease, especially in jails and other institutions under direct
government control. It is interesting to observe that China, whose
population has used unpolished rice and has, with the exception
of the coast towns, been practically free from beri-beri, should now
with the advent of western civilization be in danger of adopting a
practice which may add yet another to its many ills. I refer to
the fact that there are mills with modern machinery being intro-
duced into China to polish rice. Of course it will be long before
the population at large consumes much polished rice, but it is quite
likely that the middle classes will learn to prefer the whiter, cleaner
looking product from the mill, and be willing to pay a higher price
for it. It is to be hoped that faster than the Chinese learn to eat
the new milled rice, education in the causation theory of beri-beri
will prevent it from becoming a menace.

A NEW JOURNAL ON TROPICAL DISEASES.

We are glad to be able to welcome a new journal which is
published monthly. This is the American Journal of Tropical
Diseases and it is the official organ of the American Society of
Tropical Medicine. Two numbers have already appeared and
both have contained valuable articles.
Editorial.

In the first there is a good résumé (inter alia) of the "Surgical Treatment of Elephantiasis;" and in the second number a series of papers on the present position of the beri-beri question. These form an admirable synopsis of the matter, and should be consulted by any specially interested in the question.

J. P. M.

MEETING OF THE EXECUTIVE COMMITTEE.

Shanghai, October 14th, 1913

Dr. Main in the chair. Following members present:—Dr. Main, Dr. Johnson, Dr. Cochran, Dr. Cole, Dr. Venable, and Dr. Morris. The minutes of the previous meeting were read and approved. On motion Dr. Logan was invited to take part in the meeting as a corresponding member. A motion was carried that Dr. Lincoln be asked to serve on the Executive in Dr. Davenport's place during the latter's absence from Shanghai. Dr. Hutcheson was appointed to continue to edit the Journal. Two replies to the appeal sent out in the May Journal asking for men to give their time to the Association were read, and one of them was referred to a sub-committee for a future report.

A letter from Drs. Cadbury and Todd in Canton was read, stating that the Chinese editors of the Chinese Medical Journal were unwilling to have the paper taken away from Canton, and that they did not wish it to be stated on the title-page that the paper should be published by the C. M. M. A. The matter was then considered ended.

A letter from the Central China Medical Missionary Association was read, containing the following resolutions in regard to the appeal for a member to give his time to the C. M. M. A.:—(1) That the post of editor be kept separate from the other offices, and that this latter post be taken, if necessary, by one who is not a medical missionary; (2) We do not consider it necessary for the editor to reside in Shanghai. No action was taken by the Executive.

The report from the committee of the C. M. M. A. and the Nurses' Association was left to be sent around by mail to the members of the Executive for further consideration.

The meeting then adjourned.
The China Medical Journal.

ITEMS OF INTEREST.

THE SEVENTEENTH INTERNATIONAL MEDICAL CONGRESS.

This congress held in London in July was one of stupendous size. No fewer than twenty-five separate governments sent official representatives, and between seven thousand and eight thousand members attended. Of these it is worthy of note that quite a considerable proportion were women, about eighty of them from English-speaking countries. This is quite in contrast to the same congress which met in 1881 in London where invitations were issued to men only.

HONOR FOR MEDICAL MISSIONARY.

The British Medical Journal, in speaking of the Medical Graduation at the University of Edinburgh which took place on July 11th, of this year, says:—

"On the present occasion sixty-one men and one woman received the degree of Doctor of Medicine, and three men that of Master of Surgery. Five gold medals were awarded for theses, four going to the M.D.'s and one to the Masters in Surgery. One of the M.D. medals was given for a thesis on an anatomical subject, another for one on chemistry, and the other two were awarded for clinical work; it is interesting to note that one of the recipients of the greatly coveted gold medal was a medical missionary in active service in China under the English Presbyterian Church."

We heartily congratulate Dr. G. D. Whyte of Swatow on the good use of his time in the homeland. May others of us do likewise.

HARVARD MAKING A STUDY OF TROPICAL DISEASES.

Harvard University has undertaken an important work in establishing a school of tropical medicine, the course of which is planned to extend over a period of six months. This school has been placed under the charge of Dr. Richard P. Strong who, with two other instructors in the new school, Drs. E. E. TYZzer and C. T. Brues, is now in Peru, South America, making a special study of the protozoa. As soon as Dr. Strong completes his investigation in Peru, it is his intention to go to Brazil to conduct researches into the etiology of beri-beri.

INTERNATIONAL CONFERENCE ON TUBERCULOSIS.

The International Conference on Tuberculosis occurred in Berlin, October 22nd to 25th, with Bourgeois of Paris as president. With it there were two weeks of educational trips for information in hygiene to various cities, such as Munich, Hamburg, etc.
WOULD TRANSFORM BATTLESHIPS INTO SANATORIUMS.

At the closing session of the Fourth International Congress of School Hygiene in Buffalo, August 29th, the following resolutions were offered by Dr. S. Adolphus Knopf, New York City, and were adopted without discussion:—

Resolved, That the Fourth International Congress on School Hygiene petitions the United States government to place at the disposal of the various States of the Union as many of the discarded battleships and cruisers as possible to be anchored according to their size in rivers or at the seashore and to be utilized by the respective communities for open air schools, preventoria, sanatorium schools for children, or hospital-sanatoria for adults. Be it further

Resolved, That the Congress expresses its appreciation to the Italian government of the example it has given by consecrating three of its discarded men-of-war to the combat of tuberculosis. Be it further

Resolved, That this Congress expresses the sincere wish that other governments may follow the example of Italy; and be it finally

Resolved, That copies of these resolutions be presented to the American and other governments represented at this Congress.

*   *   *

Dr. C. W. Young, Professor of Pathology and Bacteriology in Peking, China, Union Medical College, delivered a lecture on Manchurian plague conditions, at Baltimore, May 18th.

*   *   *

A recent report by Dr. Gorgas, Chief Sanitary Officer of the Isthmian Canal Commission, shows that in 1912 the annual death rate among employees in the Canal Zone was only 7.14 per thousand, as against 10.42 in 1911, and 45.73 in 1905.

*   *   *

Mr. F. C. Danson, J. P., has been appointed Chairman of the Liverpool School of Tropical Medicine, vice Sir William Lever, who recently resigned.

This book is one of the Mosby Co’s monographs which they are getting out on various medical subjects. It is full of valuable suggestions to the physician who wants to make an early diagnosis in diseases of the lungs. In fact it is a good book for any medical man to read, as it emphasizes and impresses on one the necessity for close observation of every detail, and of educating ourselves to make use of our senses which at times have been more or less neglected—seeing, feeling, etc.

Pottenger calls attention to the fact that in early inflammatory disease in the thorax, the muscles are thrown into a state of spasm, apparently due to a reflex stimulation. Later, when the condition has become chronic, we find a degeneration of these muscles taking place, with consequent wasting away. In both spasm and degeneration, the change is visible to the careful eye, and palpable to the sense of touch, even when only of very slight degree. The pectorals, sterno-cleido-mastoids and trapezii are the ones most commonly observed, although any of the other superficial muscles may partake of the change, according to the location of the lesion.

He goes into the causes of these changes, together with the changes produced on the chest itself, and the effect which spasm or degeneration has on percussion and auscultation of the lungs.

In the last part of the book he takes up the subject of light touch palpation, and states that one is able, “by very light palpation, to detect the differences in density of tissues which are situated within the great cavities of the body at a distance from the surface walls,”—heart, liver, stomach, consolidated lung, etc., can all be outlined accurately by this method.

In these days when there is a tendency to leave so much to laboratory diagnosis,—reactions, agglutinations, etc., it seems to me this book is of value for the light it throws upon what we really can do if we choose to educate our senses, and for the stimulation it gives us to do so.

H. H. M.


In reading any medical work it is always a great satisfaction to feel that it is the work of an authority and when to this is added the
fact that the book is prepared and published in an attractive form and with every attention to detail it is a double cause of satisfaction. Such is the case with Hartmann's Gynecological Operations. Operative technic naturally occupies the first place in such a work but the details of minor gynecology are also considered, such as mineral water cures, electrotherapy, etc.

The various stages of the operations are not only discussed in detail but numerous illustrations make such stages easy of comprehension by the reader. There are altogether 422 illustrations, many of which are in color. While the author is himself an authority and states his own preference of method and the general method of choice yet he also gives the procedures of other eminent gynecologists. After discussing methods of clinical examination in gynecology, then minor gynecology, instruments, etc., the author takes up the operations on each portion of the genito-urinary tract in detail. If one desires a book on operative procedure and with the advantage of the expression of preference by a recognized authority in his special field he will find such a book in Hartmann’s Gynecological Operations.

A. C. H.

We acknowledge with pleasure the receipt from P. Blakiston's Son and Co., of the following books for review:

- Practical Bacteriology, Blood Work and Animal Parasitology. E. R. Stitt, M.D.
- A Manual of Surgery, by F. Z. Stewart, M.D.
- Compend of Bacteriology, by R. S. Pitfield, M.D.
- Operative Surgery, by J. F. Binnie, A.M., C.M.

P. Blakiston's Son and Co., announce the following recent publications:


The Nurses' Association.

Good reports have been received by the secretary from Kuling and Kuilang, of meetings held at the respective places during the summer. A report appears in this number (C. M. J.) of Kuling results re curriculum and regulations.

The officers requested to act for 1913-1914 are:

President, Miss Gage, Changsha.
Vice-President, Miss Booth, Hankow.
Treasurer, Miss Gordon, Shanghai.
General Secretary, Miss Alice Clark, Shanghai.
Editorial Secretary, Miss Alice Clayton, Shanghai.

Registration Committee 1913-1914:
Mrs. Ts'en, Wuchang. Miss Lowe, Anking.
Miss Chung, Tientsin. Miss McCracken, Wuhu.
Mrs. Burnip, Shanghai. Miss Simpson, Foochow.
Miss Hope Bell, Hankow.

Appointment of Examiners.—Owing to the change in the constitution of the Examining Board, the following appointments were made:—
Miss N. D. Gage, Changsha (retires 1914);
Miss A. Clark, Shanghai (retires 1915),
also two members of C. M. M. Association. Several new members have been added to our roll and as soon as possible the secretary hopes to forward membership cards, but these have still to be printed. The Kuling meeting resolved, re meetings for 1914, that "inasmuch as no members present from Central and West China would be able to travel to Foochow, the Annual Business Meeting shall be held in Shanghai, during the first week in July, 1914." We thank the Southern branch for their kind invitation and are sorry so many find it impossible to accept; we hope a good contingent from the South will find Shanghai convenient for next year. A more united gathering is very desirable for our Association at this time.

The report from Kuilang came too late for the Kuling meetings, but all the points brought forward in the report have been before the Kuling meeting this year and are to be put through as soon as possible.

One very helpful point for the editorial secretary was emphasized by our Fukien friends and has already borne fruit. It is "that each member of the Fukien Branch sends, as often as possible, items of interest in her nursing experiences, to be forwarded for the C. M. J."

The secretary has received a most interesting account of work going on in the "Magan Memorial Hospital, Foochow." We have already exhausted our space in this number and hope this account will appear in the next.

A. Clark, Gen. Sec. N. A. C.
COURSES OF TRAINING AND STUDY.

1. The course of training must cover a period of at least three years, and must be taken in a hospital which is registered under the Association, or recognized by it.

2. The course of study shall include the following subjects:

First Year.

Elementary Anatomy and Physiology, Hygiene and Elementary Bacteriology (including theory of sepsis, infection, contagion, etc.), Chinese dietetics, including cookery of special foods.

Bandaging (roller and triangular bandages, preparation of splints, plaster of paris, etc.).

Materia Medica of common drugs: doses, effects, administration.

Common poisons and their antidotes.

General nursing principles.

Second Year.

Medical nursing: theoretical and practical diseases of the circulatory, respiratory, digestive, and urinary systems.

Of the skin and of infectious diseases.

Surgical nursing: theoretical and practical of fractures, burns, septic conditions, and hemorrhages; preparation of cases for operation, and their after nursing; preparation and conduct of operation theatres, including sterilization and care of instruments, ligatures and dressings, etc.

Nursing of children: medical and surgical cases.

Third Year.

Ophthalmic nursing.

Gynecological and obstetric nursing (for women nurses).

Genito-urinary cases (for men nurses).

Ambulance and First Aid.

N.B.—It shall be understood that the whole course must be covered, but the order in which the subjects may be studied is quite optional.

3. Examinations for diploma shall be held once a year, in the month of May or June.

4. A candidate may take the examination any time after the full three years of training have been completed, and when the candidate has attained the age of twenty years, foreign reckoning.

Special cases may be considered by the Examining Board.

5. The examiners shall be four in number; two of whom shall be appointed by the N.A.C. and two by the C.M.M.A. Each examiner shall be appointed for two years, one representative of each association retiring annually.

6. Every examiner must be a full member of his or her respective organization, and shall have spent at least three years in China.

7. (a) The examiners of the N.A.C. shall be appointed at the annual business meeting. Should a vacancy occur at any time on the Board of Examiners the President and Secretary in consultation with the examiners shall be empowered to fill the vacancy.

(b) The examiners of the C.M.M.A. shall be appointed and vacancies filled by the Executive Committee of the C.M.M.A.

8. The examiners will set papers in the following subjects:

1. On first year syllabus. (See regulation 2.)

2. On medical nursing.

3. On surgical nursing.

4. For women—on gynecological and obstetric nursing.

5. For men—on genito-urinary nursing, ambulance, and first aid.

N.B.—Terms will be those found in the C.M.M.A's standard terminology (Dr. Coupland).

9. Arrangements shall be made by the Board of Examiners for practical examinations to be held at the local centres. Results of these examinations shall be forwarded at once to the Examining Board.

10. The Examining Board shall send particulars of the examination results to the secretary for presentation to the Executive of the N.A.C. who shall grant the diplomas.

11. Every candidate before taking the examinations must present a certificate to the secretary of the Association, duly signed by those in charge of the Training School to the effect that:

(a) The applicant has given satisfaction in character and general conduct and in practical work in the wards.

(b) The applicant has had at least three full years training as a nurse.

(c) The applicant has regularly attended classes for instruction.

12. The above application, together with the name and address of the person responsible to whom the examination papers shall be sent, must reach the secretary of the N.A.C. not later than March lst.

13. Fees The fee for examination shall be $1.00 Mex. for each candidate, payable at the time of application for examination.

14. Marks Sixty per cent on the examination shall be the minimum for a "pass," and eighty per cent must be obtained to secure "honors."

15. Any candidate failing to pass an examination may present himself or herself at the next, or any later one of the annual examinations.
EXAMINATIONS IN MIDWIFERY.

Candidates for special N.A. diploma in midwifery shall comply with the following regulations:

1. They shall not be less than twenty-one years of age, foreign reckoning. Special cases may be considered by the Examining Board.

2. They already hold the diploma of the Association for proficiency in nursing.

3. The examination in midwifery cannot be taken less than one year after the nursing examination.

4. They must present a written statement signed by the staff of their Training School, that they have satisfactorily delivered and attended at least twenty cases of confinement.

5. They shall be required to pass an examination in midwifery which shall be both oral and written, including practical demonstration on a model.

6. A minimum of 75% of marks on the whole shall be required in order to pass.

7. The syllabus for examination is prepared by the C.M.M.A. Board of Examiners.

SPECIAL REGULATIONS.

It is fully recognized that, for some years to come, there will be many well trained Chinese nurses who are quite unable to pass a written examination. Such nurses may gain the diploma of the N.A.C. up to, and including, the examination period of 1916 under the following conditions:

1. The candidate must comply with the general regulations Nos. 1, 2, and 3, and as far as possible with regulation 4.

2. The candidate may take the examination any time after five full years of training have been completed, and when the candidate has attained the age of twenty-two years, foreign reckoning.

3. Every candidate before taking the examination must present a certificate to the secretary of the Association duly signed by those in charge of the Training School to the effect that—

(a) The applicant is unable to take a written examination.

(b) The applicant has given satisfaction in general conduct and character.

(c) A statement should be made as to the applicant's age, number of full years completed in the Training School, position held and as to his or her general proficiency in the practical work of the wards.

4. An exhaustive practical and oral examination shall be conducted by one member of the N.A.C. and one of the C.M.M.A. appointed by the Examining Board.

Note.—These examiners must in no case be members of the staff of the hospital and training school to which the candidate belongs.

5. A full record of the examination signed by all the examiners, shall be sent to the N.A.C. secretary for presentation to the Executive Committee of the N.A.C. who shall grant the diploma.

6. A minimum of 75% of marks must be obtained for a "pass."
Branch Report.

The Fukien Branch of the China Medical Missionary Association held their annual meeting August 19th at the home of Dr. H. R. and Mrs. Pakenham, Kuliang. Twenty-one members and two visiting physicians were in attendance. Most interesting and instructive papers were read by Dr. J. H. Montgomery, Changpu, on "Large tumor in floor of mouth; removal," and "Mitchell's operation for hemorrhoids: the most satisfactory operation for this condition and report of cases so treated." A discussion followed. Dr. Wilson reported two cases of liver abscess and strangulated hernia with excision of bowel, and a case of vaginal hysterectomy. Dr. Sheldon reported a case of amoebic dysentery treated with the alkaloid emetine. Dr. Walker reported a case of ovarian cyst; the tumor weighed 101 pounds; the patient made an uneventful recovery. Drs. Gillette, Lawson, Sheldon, Matthews and Walker were proposed for membership in the C. M. M. A.

The following officers were elected.
President: J. H. Montgomery.
Vice-President: H.M. Churchill.
Sec'y and Treas.: Emma J. Betow.
Executive Committee: J. E. Skinner.
E. F. Lawson.
F. B. Sheldon.
Emma J. Betow, Secretary.

Medical and Surgical Progress.

Salvarsan in Scarlet Fever.

(From Therapeutic Gazette.)

At the German Congress for International Medicine, April 1913, a very interesting address was delivered by Jockman, of Berlin, on "Salvarsan in Scarlet Fever." He confirmed the good results which he had reported to a former Congress. He had treated in Virchow Hospital in Berlin 117 cases of scarlet fever with small doses of salvarsan, 0.1 gramme to 10 grammes of weight, and has derived the impression that the general condition, especially in severe comatose patients, was very favorably influenced. Its great advantage lies in the favorable influence which it has on the swelling in the neck. Out of twenty-five of these cases twenty-four were promptly improved, in that the membrane was quickly cleaned off and disappeared and the swelling went down. In four cases whose prognosis was absolutely unfavorable, three were saved. Out of 51 cases in which the prognosis was doubtful, only three died. Schreiber (Magdeburg) confirmed likewise the favorable influence, and recommended salvarsan especially for the processes in the neck.

A Clinical Test for Malaria.

Atkinson, in the Lancet of June 28th, 1913, draws attention to Schlesinger's reaction for demonstrating the presence of urobilin in the urine. This can be obtained in patients suffering from malarial fever even when the malarial parasites are absent from the peripheral blood.

As is well known, the high colour of urine in malaria depends upon the increased amount of urobilin present. Plehn, in 1909, rec-
The China Medical Journal.

ommended this very delicate and simple reaction to demonstrate the presence of urobilin in the urine. To obtain it the following are required: (1) Schlesinger's solution, which consists of zinc acetate, 1 part; alcohol, 10 parts; (2) Tincture of iodine; (3) A sample of urine to be tested.

In a test tube one-third filled with the unfiltered urine an equal quantity of Schlesinger's solution, which has previously been well shaken, is added. A few drops of a weak solution of tincture of iodine are now poured in, as this accelerates the reaction. The mixture is then filtered, and if urobilin be present the filtered mixture shows a more or less distinct fluorescence. This reaction is met with in the urine of patients suffering from all types of malarial fever. To show how delicate it is, in cases of malignant malaria it can be obtained after diluting the urine with 200 parts of water. Quite healthy urine does not give the reaction, as it contains, if any, only the slightest amount of urobilin. Urobilin is present, of course, in many other diseases, such as cirrhosis of the liver, liver abscess, many infectious diseases, etc.

Atkinson used the test frequently in the Government Civil and Victoria Hospitals, Hongkong, and found it useful, particularly in diagnosing doubtful cases where parasites were not present in the blood. The absence of the reaction speaks strongly against acute malarial fever, a fact of great value when a quick diagnosis is to be made.—*Jour. Trop. Med. and Hygiene.*

NEO-SALVARSAN IN THE PREVENTION OF SYphilitic A BORTION.


—A positive Wassermann's reaction is conclusive of syphilis, but a negative reaction does not exclude it. Numerous statistics as to the reaction in mother and child show an unexpected frequency of latent syphilis. They also prove that Colles and Profeta's laws are founded on misconception. There is no such thing as immunity to syphilis either of the mother or child. The presence of spirochaetes in the maternal and foetal portions of the placenta proves that the fetus is infected from the mother. Twenty to ninety per cent. of the mothers of syphilitic infants give a positive Wassermann's reaction and fifty per cent. of the infants of mothers with latent syphilis give the reaction during the first weeks of life.

To prevent haematogenous infection of the infant, the mother should be treated with salvarsan. During 1911, the writer gave ten pregnant women—who had previously had frequent abortions, and presented a positive Wassermann's reaction—a single intravenous injection of 0.6 gm., or 0.9 gm. of neo-salvarsan. In every case pregnancy proceeded to term and a healthy child was born. Since then this has become the routine treatment in the Jewish women's hospital in Buda-Pesth with encouraging results as regards the children.—*Medical Review.*

THE IDENTITY OF ENTAMOEBA HISTOLYTICA AND ENTAMOEBA TETRAGENA.

* A Preliminary Note.

Recent work on the entamebas found in the intestinal canal of patients suffering from dysentery has resulted in many authorities concluding that the entameba described by Schaudinn as *Entamoeba histolytica* is really identical with the one later described by Vierecck, which he considered a new species and named *Entamoeba tetragena.*
Until recently I have considered these two species distinct and the object of this communication is to place on record the opinion I now hold, as the result of the study of recent material, that *Entamoeba tetragena* is identical with *Entamoeba histolytica* and that the life-cycle of this entameba, as described by Schaudinn and confirmed by myself and others, is incorrectly described so far as reproduction by the process of "budding" or spore formation is concerned.

As *Entamoeba tetragena* is, so far as our present evidence goes, identical with *Entamoeba histolytica*, the name "tetragena," as a specific name, should be abandoned. Although Viercack considered that he had described a new species of entameba when he described *tetragena*, he really first correctly described the cystic stage of the life-cycle of *histolytica*: and as Schaudinn undoubtedly separated this species from the harmless *Entamoeba coli*, and gave it the name "*histolytica,*" this name must stand, as *tetragena* becomes merely a synonym of *histolytica* if we believe the two are identical.—Charles S. Craig, M. D., in *J. A. M. A.*

[S. T. Darling, of the canal zone, states in an article in the *Jour. Am. Med. Ass.*, April 19th, and in an article in the *Annals Trop. Med. and Hygiene*, June 1st, that there is but one pathogenic entameba and that is *E. Tetragena*. Therefore we see that these two observers agree in the fact that there is but one species of pathogenic amoeba but differ as to what name to give this one species, a disagreement which time alone will settle. —Ed.]

**KERATIN-COATED EMETINE.**

The keratin-coated product of emetine constitutes yet another advance, and has been introduced in order to enable the hydrochloride to be given orally. The keratin coating facilitates the contents of the product reaching the pathogenic areas of the bowel, unimpaired in activity and without interfering with gastric processes. Tablet emetine hydrochloride, gr. $\frac{1}{2}$, keratin-coated, is especially suitable for routine treatment in dispensary and out-patient work, since it enables the patient to take the remedy himself.—*Indian Medical Gazette*, February, 1913.

**SALvarsan versus Profeta's Law.**

The theory of syphilitic immunity, as established by Ricord, has long been upset. If there is a syphilitic immunity in infected persons this is due to two circumstances combined: first, to a saturated condition of the fluids and solids of the organism with spirochetes and their toxins; second, to the capacity of the organism to produce antibodies to counteract the poisonous influence of the virus. With time the spirochetes become inactive and the disease, in a latent condition, loses its poisonous influence. The Wassermann test in these conditions turns negative, and yet the patient is not cured, and may show syphilitic signs of a late type. The attenuation of the virus is seen also by the observation of syphilitic families, when we see the first pregnancy end in miscarriage, the second in premature birth, the third child born alive, and only after a few days showing some syphilitic manifestations, and others born well, showing only late, faint signs of the disease. The diminution in the poisonous intensity of the virus occurs slowly and at times in a saltatory way. In some syphilitic families a healthy child is born, and the next child will show signs of hereditary syphilis,
I shall repeat my statement, made at other times, that the spirochetes in the organism of the father, after a certain time and after some treatment, are unequally distributed, hiding themselves in those organs and those tissues which are not so easily affected by the antisyphilitic remedies. Whether an infected or a healthy child is born to him may depend on the presence of the spirochetes in the semen.

It is exceedingly rare and difficult, however, to find that the mother who gives birth to a syphilitic child is not infected with syphilis. The Wassermann test of to-day has already destroyed Colles-Baumes' law. They claimed that mothers bearing syphilitic children from fathers affected with latent syphilis escape the disease, or at least pass through a modified form of it. Their children, affected with mucous patches on the tongue or the lips, suckle the breast of the mother without infecting her; but if they were to suckle the breast of any other healthy woman, she would be positively infected.

Montesau writing on Colles' law reported a case of a woman, who returned, after four years' separation, to live with her husband who had been infected. She became pregnant and gave birth to a child apparently well. She never had any signs of syphilis until two years later. Then the child was taken with epileptiform spasms and the mother had ulcerative patches between the toes. Wassermann test of both the mother and the child proved to be positive. The woman had been declared immune according to Colles' law, and yet she had a latent syphilis. The immunity of the mother who has in her uterus a syphilitic fetus is only ephemeral. She has not escaped infection as Ricord claimed, but has latent syphilis.

Profeta's law maintains just the reverse of what has been asserted to happen to the mother and to the child. It was maintained under his theory that this child coming from syphilitic parents has acquired a congenital immunity, which protects it, at least temporarily, from syphilitic infection. This occurrence was explained in two ways: either that the placenta would be able to oppose a strong barrier to the entrance of the spirochetes, protecting the fetus mechanically, or that the child, saturated with antigens arising from the system of the mother, would be protected and immunized from subsequent infection.

Profeta's law had a strong support in a series of observations from Profeta himself, and later from Caspray, Finger, Ogilvie, Brugge-man, and Glick. But in recent years exceptions have multiplied to such an extent that I must agree with Matzenhauer that it has no more reason to be called a law.

To-day we can say that there is no congenital or hereditary syphilis without syphilis of the mother. Immunity, either active from the passage of toxalbuminous substances, or passive from antigens passing from the mother to the fetus or vice versa, can no longer be maintained.

After these observations I shall refer to the clinical case, the subject of my late study and the motive for this paper.

Patient.—An Italian laborer came to consult me for a lenticular papular syphilid with all the accompanying symptoms. Injections of gray oil were given and the eruption was gradually disappearing and the man was feeling much better. He was not seen for some time until he came with his wife, who had recently come from Italy.
to join him. He had infected his wife, of course, and she also had papular syphilid. It was at the beginning of the new era of treatment, the salvarsan, which had to accomplish the sterilisatio magna, and both husband and wife were treated with two intramuscular injections in the lumbar regions with a full dose of 0.6 gm. After the injection both improved remarkably. The woman was in the beginning of pregnancy. Her husband had not shown any symptoms since the injections; Wassermann and Noguchi tests were found negative. The woman could not be induced to have a Wassermann test made. She had one necrotic abscess in the place of one of the salvarsan injections, which healed up in a short time after due treatment. For some time I lost sight of this couple. The woman came again with a well-nourished, well-developed baby 8 months old, which when carefully examined showed no signs of lues. She related that the pregnancy at the time of the syphilitic manifestations ended in miscarriage. Since the salvarsan injections she had seen no signs of the infection, and she had given birth to the child she had in her arms. She came on account of a sore under lip, which was touched up with a solution of bichlorid 1:100 in alcohol and ether. The sores in her mouth were undoubtedly mucous patches of the mucosa. A few weeks later she came on account of the child, who had an initial lesion on his chin, as shown by the illustration, with enlargement of the submaxillary and cervical lymph-nodes. At the same time the face, chest, back, arms, thighs and legs were covered with a macular syphilid (roseola). I had the picture taken to show the mucous patch at the right corner of the mouth of the mother, and the initial lesion on the left of the chin of the child.

Comment.

The child was perfectly well and had never shown any sign of luetic taint. The father, with the mercurial treatment and after the salvarsan injection, had shown no further symptoms, had negative Wassermann, and was able to generate a child free from lues. The mother, also, showed no signs of lues for some time and it seems that the active spirochetes were killed. I would say, with Pollitzer, that some of the inactive spirochetes still remained in her tissues, and were not allowed to pass through the placental filter. This case gives no support to the idea of Matzenhauer that the fetus receives infection from the mother only; it would rather maintain the opinion of Hainiss that the cause of hereditary lues is the infected sperm.

The father had shown no symptoms for a long time, the Wassermann test had been negative, and he did not communicate the disease to the offspring. The mother, at the time of conception, although still having spirochetes in her system, did not communicate lues to the offspring. Some months afterward she showed mucous patches of the mouth. The receptivity of the infection by the child shows that he had no immunity whatever and his own mother with her saliva containing spirochetes in a maternal kiss inoculated him. The result was an initial lesion, and secondary eruption. If the Profeta law had any bearing the mother could never have inoculated her child, because it would have been protected by immunity.

Immunity in syphilis does not exist, and when a child born from a syphilitic mother is not infected that shows that he has latent syphilis, which sooner or later will manifest itself. In all cases of doubtful condition of infection ex-
Harold J. Levis reported a case of severe syphilis in a woman who was in her fourth month of pregnancy. After two intravenous injections of salvarsan, she recovered and at full term she gave birth to twins in good health.

Conclusions.

As a conclusion we can state that in the presence of the Wassermann test and of the administration of salvarsan, Colles-Baumes' and Profeta's laws have no right to existence. Syphilitic immunity lasts as long as the disease lasts, consequently the child in this case was born perfectly free from syphilis, although born from a woman who later showed syphilitic symptoms.

The opinion of Pollitzer that salvarsan kills the active spirochetes and allows the inactive spirochetes to escape unaffected finds support in my case, in which the mother had conceived and carried to full term the child free from syphilis, when she still had spirochetes in her system.

In this family, salvarsan had cured the father, had operated a great improvement in the condition of the mother, and had saved the child from maternal syphilitic infection.—Augustus Ravogli, M.D., Cincinnati, in Jour. Am. Med. Ass. Volume LXI, No. 2.

ABOLISHING PAIN AFTER OPERATIONS WITH NERVE BLOCK A DISTANCE.

The abolishing of pain after operations is one of the most important, if not the most important, problem with which modern surgery has to contend. The post-operative pain is one of the most unpleasant and disagreeable remembrances the convalescent has of his operation, and in reality it is the most distress-
Before beginning the operation, the entire line of incision is anesthetized with a weak cocaine, one-tenth per cent., or novocaine, one-fourth per cent., solution with adrenalin, even though general anesthesia is used for the entire operation. Whenever possible I begin and finish the operation with local anesthesia alone, because the nerve block à distance is easier and usually more thorough with the patient awake and able to tell when the analgesia is complete. A sterile solution of urea and quinine hydrochloride, one-half to one per cent., is injected with a long needle into each layer of tissues, one or two inches from the margin of the wound, as it is sutured. Solutions weaker than one-half of one per cent. have proven unsatisfactory; the analgesia is uncertain and of too short duration. The urea and quinine provides a complete nerve block, and as the solution does not come in contact with the cut surfaces it does not interfere with the healing. With this method the single advantage possessed by urea and quinine as a local anaesthetic—prolonged analgesia—is utilized without its disadvantages. Post-operative analgesia persists longest when the urea and quinine are infiltrated in this manner. It is well known that a local anaesthetic lasts the longest in tissues that are not cut. The analgesia continues for three to seven days. By the time the nerve block à distance has lost its effect, healing has progressed sufficiently to make further anesthesia unnecessary.

Next to the operation itself, the post-operative pain is the principal factor with which we have to contend in the production of shock. The nerve block à distance prevents post-operative stimulation of the brain cells, therefore there can be no after pain or shock and exhaustion of the subjective mind. The lessening of shock reduces the mortality rate, and renders borderline cases under the old methods safe risks with the nerve block. The importance of this is evident when one considers the number of cases operated on each year in which the outcome is uncertain or doubtful when they go on the table. Crile says, under general anesthesia the patient may not move when you cut unblocked nerves, but there will be the same degree of shock as though he was cut without any anaesthetic whatever being used. It must be remembered that with inhalation anesthesia the greater part of the brain is awake and responds to injury just the same as though no anaesthetic had been used. The entire subjective mind is unanesthetized and sensitive to the slightest trauma, with the resultant nervous shock.

After operation the use of sedatives and opiates is unnecessary, because pain is absent. With a comfortable and painless convalescence it is reasonable to presume that, as it becomes generally known that the post-operative pain can be eliminated, surgery will lose much of its dread, and perhaps operations will become more popular.—Leigh Watson, M.D., in Annals of Surgery, May, 1913.

THE SURGICAL TREATMENT OF ELEPHANTIASIS AND ELEPHANTOID STATES DEPENDENT UPON CHRONIC OBSTRUCTION OF THE LYMPHATIC AND VEinous CHANNELS.

"If we adopt this conception of the histologic process which underlies the pathology of elephantiasis as it is recognized in its endemic tropical types, as well as in the
sporadic cases, which may occur in all climates, we can readily appreciate that the histologic process is of a generic character, though it may by initiated by many specific causes,—the underlying histologic background remaining, however, always the same. In this manner, we can easily reconcile the many conflicting views relative to the pathology of elephantiasis. The long established duality of classification of the disease into the classic \textit{Elephantiasis tropicum}, which is usually attributed to the presence of \textit{Filaria nocturna}, or the strictly parasitic type of the disease, and the \textit{Elephantiasis nostras streptogenes}, which prevails in all climates, no longer suggests distinct and specific types of the disease. These are histologically alike as morbid processes, and only differ in the primary cause of the lymphatic and venous obstruction which initiates the process. Therefore, while nosologists classify elephantiasis into the previously mentioned groups, it is evident that the elephantiasic process is always one and the same; always maintaining similarity of histologic type regardless of the multitude of causes that may bring it into existence. The one etiologic factor which seems to be inseparable and essential to its pathogeny is infection — frequently repeated — which brings about permanent alterations in the vasculo-lymphatic apparatus of the skin and its underlying connective tissue. The reason why elephantiasis, as a clinical entity, is so much more frequent in the tropics than elsewhere, is because the conditions which predispose to and favor cutaneous infection as well as lymphatic obstruction, are so much more frequent there than in colder climates; greater exposure of skin areas, especially the lower extremities, to traumatisms of all sorts; greater activity and, consequently, greater irritability of the skin; universal presence of suckorial insects and gross parasites; and greater frequency of eruptive diseases, etc., all of which tend to open wide the portals of infection. It is now pretty well admitted that filariasis is only one of the causes that initiate the elephantiasic process even in the tropics. Certainly, the filaria are not so frequent a cause of the disease as was formerly believed. The incidence of filariasis is not coincident with that of elephantiasis. For instance, Creighton Wellman, (\textit{Journal of Trop. Med.} 1908, p. 118), while stationed as health officer at the Portuguese Colony of Angola, in West Africa, had many opportunities for investigating the relationship between filarial disease and elephantiasis, and in a careful study of fifty cases he never found any evidence of embryon filariase in the blood, or for that matter, in the blood of five hundred individuals in that colony, whom he examined for evidence of filarial disease. Le Dantec had a similar experience in French Guiana, where elephantiasis is common and filariasis very rare. Prout, in Sierra Leone (1908), observed a great many cases of filariasis in that colony, but met with a similar experience in the Congo, where filariasis is almost a universal disease. Sir Patrick Manson, who immortalized himself by his researches into the mode of propagation of filarial disease through the agency of the mosquito, and was the first to establish the relations of filariasis to elephantiasis, has modified his earlier views on the relationship of filarial parasitism to elephantiasis. In his work on \textit{Tropical Diseases} (1907) he now teaches that the mechanical obstruction of the lymphatics caused by \textit{Filaria bancrofti} is not alone sufficient to cause elephantiasis, and that a secondary microbial infection of the
Medical and Surgical Progress. 421

obstructed area is necessary to cause the tissue changes of elephantiasis. This same observer writes:

"Lymphatic stasis, by itself, does not cause elephantiasis. The obstruction may cause lymph edema, but not a true hypertrophy of the edematous tissues. If an inflammation (infection) is acquired in a closed area of lymphatic congestion, an event which may result as a consequence of the slightest traumatism, elephantiasis will then develop."

According to Low, if a lymphatic obstruction caused by adult filariae is followed by an attack of erysipelas, the filarial embryos are killed and their disorganization is a cause of the lymphangitis which culminates in elephantiasis. Clinical observation also abundantly shows that if a lymph scrotum develops as a consequence of filarial obstruction, it will remain a plain lymph scrotum for an indefinite period of time, and will only become an elephantiasic scrotum when repeated attacks of erysipelatous infection follow in the wake of the mechanical stasis and in this way starts the fibromatosus process which is the histologic essential of elephantiasis. The burden of this discussion is merely to show that even in tropical climates where filariasis prevails endemically, elephantiasis is a diseased state not subject to one cause, but to many, and, in fact, to any agency that may obstruct the lymph stream provided dermal infection follows in the wake of lymph stasis. We have now come to realize that whatever the cause of the lymph edema may be, the element of infection is the one essential and determining factor in the production of true elephantiasis. In fact, if we accept the views of many writers, such as LeDantec, Sabouraud and Unna, the progressive fibromatosis which we recognize as Elephantiasis nostras, may occur independently of any stagnant state of the lymphatic or venous circulation, and solely as a result of repeated attacks of a streptococcal infection, which has been regarded by many as identical with the erysipelasoccus of Fehleisen. Moreover, the streptococcal infection of elephantiasis presents all the characteristics of the classical cutaneous erysipelas, with the exception that in elephantiasis it is usually limited to one particular region in the lower extremity, the eruption rarely extending beyond the groin. It is rarely ambulatory or migratory as is the case with the well-defined type of erysipelas.

This association of a streptococcal infection of the erysipelatous type is, we repeat, almost an inseparable and constant feature of elephantiasis, no matter what the original predisposing cause may be. It is also this association of the erysipelatous attacks, with the progressive hyperplasia of the dermal and hypodermal connective tissue of the affected region, that distinguishes true elephantiasis from the elephantoid states. Sabouraud, who has given much attention to the bacteriology of elephantiasis, Unna, LeDantec, Bockhart, and others, agree that the micro-organism is a distinct Streptococcus which cannot be morphologically distinguished from the Fehleisen coccus of erysipelas.

[The writer then gives the history of lymphangioplasty with Handley's operation and quotes Madden, Ibrahim, and Ferguson on the inefficiency of the older procedures as follows.]

Clinically, it is abundantly evident that lymphangioplasty fails to effect anything but a very temporary improvement in elephantiasis of the legs. The swelling is very markedly reduced within 48 hours after the operation; but the improvement continues only so long as the recumbent position is maintained. Within, at most, 21 days after the operation, or as soon as the patient begins to walk, the
swelling invariably returns and no permanent improvement results." For a short time the threads, by virtue of their capillary action, drain the surrounding tissue of the lymph contained in them. The threads in the tissues soon excite a definite cellular reaction which in 14 to 21 days leads to the formation of a dense and progressively contracting fibrous tissue. These fibrous changes, occurring around the ends of the threads as well as along its whole length, completely isolate it, and it may then perhaps be compared to a long wire lying within an impenetrable sheath. The thread itself is later penetrated by a mass of cells running along its fibres, which must eventually lead to its complete disintegration, and the formation of a solid column of a dense fibrous tissue along which no absorption of fluid of any kind can possibly occur.

But even before the accumulated evidence of the clinic and the laboratory had discredited lymph-angioplasty as a remedy for lymph stasis, and elephantiasis, other surgeons had thought of draining the obstructed lymphatic areas — by other methods which, without leaving a foreign body in the wound to set up reactionary tissue changes, would open up new avenues for the lymphatic circulation by establishing a communication between the superficial and the deep planes of the lymphatic stream and thus providing an exit for the pent-up fluids. The deep aponeuroses which envelop the extremities and other parts of the body with a resisting sheath, constitute an almost impenetrable barrier which separates the superficial from the deep lymphatic and venous circuits.

[The writer here describes "Lanz's" operation and then takes up Kondoleon's operation in detail.]

Kondoleon's Operation.—In two recent articles, Kondoleon continues to support the favorable impressions of his first experience which was published in the Münchener medizinische Wochenschrift of March 5th, 1912. In these later contributions, he still further simplifies the procedure which he originally adopted on the principles underlying the Lanz technic. In his latest practice he insists on the free excision of the fascia lata in the thigh and leg by removing large sections of aponeurosis. He believes that in this way new anastomotic channels will be created between the supra and the infra aponeurotic lymph spaces in a permanent way, and the several cases of elephantiasis which he has treated in Athens by this method, certainly appear to support his contention. The simple longitudinal incision of the aponeurosis recommended by Lanz will do well enough in incipient or mild cases; on the other hand, they are ineffective and are followed by recurrence in the chronic and aggravated cases. In these, according to Kondoleon, the fibromatosis also involves the fascia itself. He lays stress upon the changes which occur in the fascia. The fascia becomes thicker; sometimes it is 2 or 3 mm. thick; it is infiltrated and adherent; it loses its normal aspect and assumes a grayish-white color. The microscope reveals a disassociation of the fibrous layers by combined edema and cellular proliferation. A simple incision in such cases will not suffice. Kondoleon satisfied himself on this point when operating for the second time on patients who had relapsed after the first operation. He found that the incision which he had made in the fascia had been entirely closed by cicatricial tissue. In consequence thereof, he argues that it is necessary to excise large sections of the fascia in the segments of the limb involved, if a cure is to be obtained. Kondoleon, therefore, makes two longitudinal incisions, corresponding to the length of the thigh and leg on each of the lateral aspects of the limb; he then retracts the edges of the incision, exposing a broad area of the subcutaneous elephantiasic tissue and denudes the aponeurosis. This is now cut out for a length corresponding to the cutaneous incision and to the extent of three or four fingers in breadth. In this way, when both sides of the limb are included, nearly half of the fascia enveloping the limb is excised. The gap is allowed to remain open, exposing the underlying muscles, which remain in contact with the skin which is sutured over them. Kondoleon has operated by this method upon 6 cases of elephantiasis of the lower extremity: 2 were due to long-standing
suppuration of the foot; followed by a white swelling of the knee with infection of the popliteal space; an atypical elephantiasis caused by repeated attacks of erysipelas; another was a sequel to an extirpation of the lymph nodes of the groin, and in the last, the origin of the disease was unknown. Some of these cases had been elephantiasic thirty to thirty-five years, and had relapsed after other operations. In all these patients, the results appeared to be very satisfactory; the edema had disappeared, the circumference of the limb had diminished 5.7, 10, and 19 cm., respectively. The skin had regained its elasticity and normal mobility. The weakness of Kondoleon's report lies in the fact that the period of observation following the operation is too short (two months the longest) to justify final conclusions, no matter how encouraging the immediate post-operative results may appear to be.

It is well to add as a further caution that the results appear to be less satisfactory in cases of the brawny arm or lymph edema of the upper extremity, caused by a spreading cancer of the breast. Kondoleon applied his method to a patient of this class and obtained a diminution of the edema, but the pain and numbness of the arm remained unchanged.

[Dr. Matas then reports a case of his own and one of Dr. Herman Gessner's in which marked improvement followed the Kondoleon operation, the report in one case being made five months after the operation.]


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**Correspondence.**

CANTON, China, Oct. 10th, 1913.

To the Editor of

"THE CHINA MEDICAL JOURNAL."

DEAR SIR: Number eight of the Chinese Journal has at last appeared, having been delayed by the general unsetlement in Canton during the summer.

This number should be of interest to medical men in northern China especially, for three of the articles deal with the Medical Schools at Mukden, Peking, and Tsianfu.

One of the most important articles is that by Dr. K. C. Wong, which gives a very interesting account of Cox's method of intra-venous saline injections in cholera.

Dr. Cousland forwarded some proof sheets of Roys' Pharmacology and Pharmacy, which we have inserted. An article by Dr. J. M. Swan emphasizes the great need of preserving high ideals in the practice of medicine. The other articles treat of the Etiology of Disease, Ankylostomiasis, the Treatment of Rheumatism, and Diet in Typhoid Fever.

For Chinese physicians and students, we believe there is much food for thought in the current number of the Chinese Journal.

I remain very truly yours,

WM. W. CADBURY.
The Physician.

Glorious your aim—to ease the labouring heart,
To war with death, and stop his flying dart;
To trace the source whence the fierce contest grew,
And life's short lease on easier terms renew;
To calm the frenzy of the burning brain,
And heal the tortures of imploring pain;
Or, when more powerful ills all efforts brave,
To ease the victim no device can save,
And smooth the stormy passage to the grave.

—Crabbe "The Village."

Personal Record.

BIRTHS.

At Leicester, England, July 25th, to Dr. and Mrs. C. C. Elliott, C. I. M., a son (William Proudfoot).
At Paoningfu, August 3rd, to Dr. and Mrs. W. T. Clark, C. I. M., a daughter (Edith Muriel).
At Chungking, August 25th, to Dr. and Mrs. Irwin, M. E. M., a daughter (Helen Grace).
At Kuling, September 12th, to Dr. and Mrs. F. J. Tooker, A. P. M. (North) a daughter.
At Nyack-on-Hudson, N. Y., U. S. A., July 12th, to Dr. and Mrs. R. H. Glover, C. and M. A., Wuchang, a son (Robert Prentice).
At Kuling, September 26th, to Dr. and Mrs. Paul Wakefield, a daughter (Catharine Frazer).

ARRIVALS.

July 5th, Dr. and Mrs. J. MacFayden and family, S. P. M.
September 7th, Dr. and Mrs. Lincoln and family, A. C. M.
September 10th, Dr. and Mrs. Keeler, M. E. M.
October, Dr. Adrian S. Taylor, Southern Baptist Mission.
October 5th, C. W. Freeman, M. E. M.; L. F. Heimberger, A. P. M.; Anna Humphries, A. P. M.; Dr. Reid, Yale Mission; Dr. Caroline Merwin, A. P. M.; Wallace Crawford, Can. M. M.
October 24th, Dr. and Mrs. C. F. McKenzie and child, A. B. M. S. (ret.).

WANT DEPARTMENT.

Dr. Miller of Edinburgh is very anxious to obtain a copy of his father's Lectures on Surgery which were many years ago translated into Chinese, the copy which he formerly had having been lost. Information regarding the possibility of obtaining the above translation will be welcomed by Dr. R. M. Gibson of Hongkong.