PRELIMINARY INVESTIGATION OF THE CAUSES OF INFANT MORTALITY IN KOREA.*

RALPH G. MILLS, M.D., Seoul, Korea.

It is a well recognized fact that a high infant mortality rate indicates the existence of evil conditions in the home and that there is in some way an intimate connection with the social life of the people. No one can come into close contact with the Orient without realizing that the death-rate must be high considering the unsanitary conditions under which most of the people live. The more intimate the contact, the more serious does the problem become and the more difficult does the carrying into effect of successful measures appear. It is encouraging, however, to realize that great interest is being manifested in this problem in Europe and America and that investigations of all kinds are being conducted for the purpose of conserving that most important commodity—human life. It is hoped that we may be able to avail ourselves of the benefits of these experiments and be able to apply them to the conditions which we are constantly meeting. But it is necessary for the success of the propaganda that we thoroughly understand the conditions which we are called upon to meet. In order to get at the subject in detail, a blank was made out covering the subject fairly well, and then it was subjected to trial to determine which lines of investigation were worth following up. The purpose of this paper, then, is to reproduce the blank, note some of the more evident facts, and suggest modifications in the form which it is hoped will be used extensively in various parts of the country.

The women whose answers form the basis of this preliminary report are mainly those who have presented themselves at the Kennedy

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Dr. Mary H. Fulton, and some of the Faculty of the Backett Medical College for Women, and this Year's Graduates, Canton, China, 1912.
Hospital, Kangkai, Korea, for one purpose or another, chiefly as patients or friends of patients. There has been no effort to make any selection as to who should be interrogated, but women were asked the questions as occasion presented itself. The middle and lower classes of society are of course pretty well represented, there being very few of the so-called "yang bans" or aristocrats. About thirty-five records were also secured from women from the country during a Bible-class, who had no relation to the hospital.

The information sought from each woman was as follows:

1. Name.
2. Residence.
3. Age.
4. Occupation.
5. Age of marriage.
6. Age at which first menstrual period began.
7. Time from marriage till birth of first child.
8. Number of living children, male.
9. Number of living children, female.
10. Number of dead children, male.
11. Number of dead children, female.
12. Concerning each dead child, the following:
   Age.
   Sex.
   Disease.
13. Was any child born during the past 12 months?
14. Did a child under 1 year of age die during the last 12 months?
15. Abortion, at what month, cause?
17. Gonorrhea, husband, self.
18. Syphilis, husband, self.
19. Does husband read Korean, Chinese?
20. Does she read Korean, Chinese?
21. Do they own the house they live in?
22. Do they own other property besides, much, little?
23. Number of rooms in the house.
24. Number of members of the family.

RESULTS OF THE INVESTIGATION.

1. Name.—It was soon noticed that the women became somewhat suspicious when their husband's name was attached to a slip of paper so this was soon given up.

2. Residence.—Although this was not used very much here because conditions in town are so similar to those obtaining in the country round about, it is probable that in cities of any size a sufficient difference would be noted to justify the distinction between city and country dwellers.

3. Age.—In computing ages according to foreign count, a year must be deducted to allow for the Korean method of counting, i.e., calling the
time between birth and New Year a year, even though it may be no more than a few days, and also the time since last New Year is considered a year. No woman married less than a year was questioned and no one was considered too old, the extremes being 17 and 76, and out of the 200 examined 41 were past the age of 45. The total number of children born to these 41 was 245 giving a "ratio of fertility" of 6. Out of the 41 there were three who had borne no children and one of these was known to have been a former dancing girl.

The age of 45 was taken arbitrarily as a minimum limit in the above calculation because it was believed that no Korean woman older than that bears children. However, the statement has been repeatedly made by patients that the menstrual period often lasts for several years longer. Apparently the maximum limit of the child-bearing period is reached long before forty-five, perhaps in the thirties somewhere. If this be true it is the result of the operation of natural forces uninfluenced by any deliberate intent, as abortion and attempts to prevent conception are unusual. Excessive venery seems to be the rule with very little respect for menses, pregnancy or sickness, prolonged lactation being the only physiological process modifying the frequency of pregnancy. Malpositions and inflammation incident to sexual abuse, unrepaired perineal tears, short period of rest after labor and venereal insults have seemingly united in abnormally limiting the child-bearing period.

4. Occupation.—Four occupations are recognized in the Korean mind and they are in the order of their honorableness,

- Student or teacher class.
- Farmer.
- Profession or artisan.
- Merchant or shop-keeper.

In addition, work like day labor, butcher, soldier, etc., is considered so low as to be beyond classification.

The effect of the occupation of the husband upon the wife and children is rather that of residence in the town or the country, in crowded or ample quarters and the presence or absence of servants to do the house work, washing and water carrying. The notable exception is the wife of the farmer who does her share of work in the field in addition to the cooking and washing. Children raised under these latter circumstances, however, escape to some extent the usual effects of city crowding, contaminated water supply and disease-carrying flies. For practical purposes then the distinction narrows down to a comparison between the farmer class and all the other classes com-
bined, although a careful comparison of the city-dwelling classes using a very large number of records would probably be valuable. Of the 200 women questioned 97 were farmers' wives and they had lost 198 children, an average of a trifle over 2, while the remaining 103 belonging to all the other occupations had also lost 198 giving an average a little below 2. It is believed that venereal infection is less common among the country people.

5. Age of Marriage.—This is reckoned from the time the bride goes to the bridegroom's house, for then the marriage relation really begins. The custom of early marriage is universal in the Orient, although the average age seems to be older here than in many countries. The extremes noted were 11 and 21 with an average of 15.85 years, Korean count. It might be well in this connection to call attention to the custom that has prevailed among the wealthier classes of marrying a son to a girl somewhat older than himself. Ordinarily the difference in ages between bride and groom is but three or four years, the groom being older.

6. Beginning of the menses.—The question of the age of puberty is vitally connected, or should be, with the age of marriage. A priori it would seem unwise for a couple to assume the marriage relation before the bride at least should be physiologically fit, and apparently the appearance of the first menstrual period is not a criterion. The menses began at the average age of 16 years with extremes of 12 and 20 years. Of the total, 77 were married from 1-9 years before menstruation commenced, 44 the same year and 61 from 1-8 years after. Particular interest centers in those 77 to see what effect the early marriage may have had upon them. So many influencing factors are present, however, that nothing short of extensive statistics will be of much avail. The average age of these women is naturally somewhat below the general average and a few more than half came from the farmer class. When compared with those married after the menses began there were more than twice as many sterile women among them whose sterility could not be traced to venereal infection and there had been almost three times as many accidental abortions. Gonorrheal sterility was the same in both classes, and the infant mortality was practically equal. The average number of children living is slightly greater in those married after menstruation had begun, and the percentage of girl babies is possibly slightly increased. It was impossible to determine whether there was any tendency to pelvic disease aside from that incident to the more frequent sterility already mentioned.
7. Time from marriage till the birth of the first child.—The figures in this column are perhaps a little more inaccurate than in the others, on account of being given only in round numbers. They are relatively correct, however, when one year is interpreted to mean that conception took place within a couple of months after marriage, 2 years indicating a delay of a few months and 4-6-11 years suggesting the presence of some special condition. In all cases where the marriage took place before the menses began the figures should be changed accordingly. Even this correction is apparently not sufficient, as is suggested by the following consideration. Several of the records of those married before the menses commenced, when corrected as above, apparently indicate that conception and even birth occurred before the first menstrual period. For the time being, these records were considered too inaccurate to be counted and it is unfortunate that the discrepancy was not noted in time to inquire more definitely into the question. Those of this class which remain, 54 in all, averaged a birth in 2.75 years after the first menstrual period. Those married the same year as the beginning of the menses averaged a birth in 2.33 years after marriage, while those married after the menses had been established had an average of 3.11. These figures are the reverse of what would be naturally expected, and it is hoped that further investigation will clear up the difficulty.

8, 9. Number of living children, male and female.—These figures are of value in relation to problems arising elsewhere and not of especial interest in themselves, although it might be mentioned that 29 out of 200 had never had any children and that not more than half a dozen of these had come to the hospital on account of sterility.

10, 11. Number of dead children, male, female.—There were 33 women out of the 200 whose family can be safely called complete on account of their age, and not counting those who had never borne any children. These had lost a total of 136 children below the age of 6 years (Korean count) or an average for boys and girls of 2 and 2.5 respectively. It is almost axiomatic in the Orient that sons are much more desirable than daughters, and this difference in the mortality makes one wonder whether there is such a difference in the amount of care they receive during childhood. When considering the number of children of these parents who are still living, the corresponding proportion obtains, i.e., 44 sons and 34 daughters.

12. Cause of death.—The record of the causes of death of 359 children born to 128 women is here tabulated and excludes 16 children
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who were past the age of 6 years at the time of death. The diseases are taken up seriatim, and explanations given as far as possible, but there remains a great deal to be learned about them.

(i.) Kyung Took. 女孩 風邪, Parum Pyung 바람 병 病, meaning literally "wind disease," and Kyung Poong, 女孩 風風, which is defined by Gale's dictionary as meaning "convulsions." These terms are apparently used interchangeably and denote the terminal stages of a large number of obscure internal conditions usually associated with an advanced degree of meningeal irritation, the eyes roll upward, the arms and hands twitch and jerk, and sometimes the whole body takes part in a general convulsion. These cases are seldom seen except late, after the parents have become alarmed by the upturned eyes. Many of the cases are probably pulmonary in origin, showing marked dyspnoea and rapidity of breathing, constant thirst, hot dry body and suppression of urine. During the winter months these conditions prevail extensively. Other cases are probably gastro-intestinal in origin, but not associated with diarrhoea, although abnormal stools are often seen. In summer this condition often intervenes as a terminal stage of diarrhoea or acute gastro-enteritis. Worms play the role of irritant in many cases and it is surprising how young a child may be severely infected. Early stages are described as being quite variable in character, some children being very sleepy, others crying a good deal, and some jerking violently in severe and repeated convulsions. The Korean doctor makes the diagnosis of this severe condition by carefully cleansing the palmar surface of the metacarpo-phalangeal joint of the index finger of the left hand in males, and of the right hand in females; a blueness of the veins indicates the existence of the disease. If this sign is of any value it would probably indicate a beginning cyanosis. There is a popular theory to account for the existence of the disease in children, it being believed that when a mother, while pregnant, commits indiscretions of diet, such as eating cooksu and pork, or exposes herself in unhygienic ways, that the child will inherit a weakness called "wind" or parum, that will manifest itself during childhood. Unfortunately ignorance and disregard of this principle are so prevalent that the results of it are only too evident. 142 children under the age of 6 years were stated to have died from these diseases, of which 64 were males, 52 females and the sex of 26 was not stated. 5 of these children were born to women known to have syphilis. The distribution as to age is here given and in addition 6 more ranging in age from 7-23 years were said to have died of this disease.

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<tr>
<th>Age</th>
<th>2 days</th>
<th>1 month</th>
<th>2 months</th>
<th>1 year</th>
<th>24</th>
<th>4 years</th>
<th>7</th>
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<td>5</td>
<td>3</td>
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<td>6</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>26</td>
<td>6</td>
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<td>3</td>
</tr>
<tr>
<td></td>
<td>1 month</td>
<td>27</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>11</td>
<td>(7 , and above 6)</td>
</tr>
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</table>

(2.) Associated with the last is another condition called Sawk Pyung 今病 風 or “internal disease,” just as delightfully indefinite in its etiology. These cases are usually slower in running their course and are practically without the spectacular parent-alarming symptoms that characterize the "wind disease." The child is sick, that is
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evident to the family, there is no appetite, some restlessness or listlessness, is willing to nurse almost constantly and finally without any special struggle usually dies. Twenty-seven have died with this symptom complex.

(3.) Two children were stated to have been sick a long time with some protracted internal disease, possibly tuberculosis.

(4.) Chyung Nee, 紅色痢 is a diarrhoea with bloody stools and mucus, and it claimed 6 as its victims.

(5.) Nee Chil, 脾炎 is a general term for dysentery, and is further sub-divided into Chyung Nee or Pulgan Karp 紅色痢, indicating bloody stools, and Paing Nee 病色痢 or Hin Karp 氷痢, 色痢, a mucous diarrhoea. Seven children died of this trouble.

(6.) Sul Sah, 腳上泄瀉, a still broader term including undifferentiated diarrhoea, was responsible for the death of 20.

(7.) Taw Sah, 腹吐 or Koo Taw Sul Sah, 腹泄瀉是 the Korean name for cholera infantum and has practically the same symptomatology and course. Ten children had this disease.

(8.) Cholera is called Quay Chil, 痢疾 or Chwee Pyung 痢病 and carried off only two children. Cholera has not been epidemic in the North for a good many years.

(9.) Tay Gee, 膈氣 or Tay Chung, 膈格症 is a condition usually found in older children and adults and apparently comes from over-eating of difficultly digestible food. The chest is said to be “stopped up suddenly” and “food won’t go down any more.” There is a good deal of belching, and vomiting may be quite protracted. If the patient survive, diarrhoea may set in later. This is probably equivalent to acute gastritis following a chronic gastritis with dilatation, and only one child under 6 years died of it, although note was made that two more aged 7 and 18 also had it.

(10.) Yul Pyung, 烈病 or 烈病, Yaum Pyung 烈病, or fever of any kind that is not recognized as epidemic is very common, and was present in 59 cases. A great many diseases in which fever is the most evident symptom are probably included under this caption, typhus and typhoid being the most common.

(11.) See Gam, 시열 is defined by the first edition of Gale's dictionary as “a general term applied to epidemic native fever, of which there seem to be several varieties” and by the last edition as “an epidemic, accompanying the season.” Only one child died of this disease. Closely related terms are 시열時疫, See Whan, 시열時疫 See Cheel, 염열時疫 Yaum Cheel, the latter being also stated as synonymous with No. 10, Yul Pyung.
(12.) Fevers of a shorter duration than is implied in See Gam are called Yune Tawk, 上■ 运毒 and from a limited observation this seems akin to influenza. 10 children were said to have had this disease.

(13.) Fever of a short duration, perhaps a day or so, is called Kam Gee, 감지感氣 or Mawm Sahi, 몽 살 and is equivalent to our “cold.” As such it apparently has no special mortality, although one child is said to have died of it, cases which might become more serious would probably be classed under the next heading. Kam Whan 감한感患 (honorific) and Kawk Pool 곷 물 (the cold of a child) are synonyms.

(14.) Kee Chim, 지침喉咳嗽 or cough; a group of pulmonary diseases of which the cough is the most prominent symptom. It is quite possible that the term “wind disease” includes some of the lung cases as well. This was the cause of death in 16 cases. Bronchitis and broncho-pneumonia are probably meant by the term, although many cases of whooping cough are also undoubtedly included.

(15.) Hyoung Kyul, 협금胸結 and Kyul Leem, 협립結症 are applied to a form of disease of the chest usually found in older people characterized by great thoracic pain and soreness as would be the case if the arms were raised after the body had been severely beaten. Pain in the back is also complained of. It is quite likely that this is a form of pleurisy. One child died of it at the age of 2 years.

(16.) Small-pox or the “Honorable Visitor,” Sawn Nim, 순상 also called Yawk Sin, 역선疫神, Ma Ma 마 다 and 朴구별성 Haw Goo Pyul Sung has claimed only 2 victims. This is the more surprising since small-pox is prevalent every winter in the mountains and everybody seems to know the disease so well.

(17.) Hong Yawk, 홍엽紅疫 and Hong Jin, 홍전紅疹 measles, is also called the “Little Visitor” to further distinguish it from small-pox. It is probable that nearly if not all the common eruptive fevers of childhood are included under this heading. One child only is stated to have died of the disease although the real mortality is probably confused with that of its chief complications, “cough” and “diarrhoea.” Noma is well-known under the name of Ah Goo Chang 아구강鵝口瘡 and its seriousness recognized. After an epidemic of measles in Kangkai in 1910, several hundred were said to have died of gastro-intestinal complications and 6 known to die of noma.

(18.) Diphtheria is probably represented by Een Hoo, 엔후咽喉 or sore throat, there being 2 cases attributed to it. It is the custom here to stick the long needles deeply into the tissues of the neck in cases of this kind and this has been observed on several occasions to materially increase the dyspnœa and hasten death. The special mortality of this condition would probably be included under “wind disease.” A similar condition in older children is treated by repeatedly applying a swab of boiling dog-grease to the throat until the mucous membrane is more or less destroyed.
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(19.) Erysipelas is called by several names, Tan Chung, 탄 중
丹症 Tan Pyung, 탄병 丹病 or Tan Tawk, 탄독 丹毒. 9
children died of this infection. Several conditions are probably
confused under these terms for two cases said to be erysipelas were
peculiar non-suppurative chronic white oedemas of the entire arm,
sharply delimited at the shoulder. They lasted a month and gradually
disappeared. Another similar case developed anæmic necrosis of the
skin in great areas and finally died of secondary sepsis. Practically
typical cases of erysipelas have been observed in adults, however, but
all ran a very chronic course.

(20.) Syphilis: Mai Tawk, 밀 독 梅 毒, Chang Chil.
or 病結 诊疾 Tang Ch'ang, 病結 唐診 was not stated to be
the cause of death in any case, but the symptoms described were
sufficient to lead to the diagnosis in 4 deaths. The two mothers were
known to be syphilitic.

(21.) Tai Tawk 태 唐 毒 is applied to extensive sores
on the head of a nursing infant. One syphilitic mother had 2
children afflicted with this trouble. The appearance is that of eczema.

(22.) Malaria or Hak Chil, 恙結 傷疾 was said to cause
the death of 2 infants. It might be said in this connection that
malaria is quite uncommon here in the mountainous districts.

(23.) Kan Chil, 坎結 疡疾 or epilepsy, was given as the
cause of death of 2 children.

(24.) If a child vomits or passes a large number of worms
during a sickness that has nothing more striking to characterize it, the
death is said to be due to Whay Dong 허 독 亀動 or "worm disease."
This does not necessarily mean that worms were the cause of death.
Two children were thus affected.

(25.) Tam, 남 病 or lymphadenitis may affect the glands
of the body anywhere. It is further qualified by the terms Nyum
fu Chang, 남주 須 病 長, when there is a beaded arrangement
of the glands of the neck and by Nal Yawk, 라 러 鬆癱 when a single
gland is greatly enlarged. Pee Tam, 피 唐 皮病 refers to the
presence of a cellulitis honeycombed with numerous sinuses. Two
children died of tam.

(26.) Ham Chong, 한 종 顕腫 probably refers to a unilateral
sub-maxillary abscess beneath the cervical fascia and above the hyoid
bone. Several have been seen in infants and young adults, and all
agreed in greatly limiting the ability to open the mouth and move
the tongue. Evacuation yielded a thick greenish pus and with tubular
drainage uninterrupted healing took place. One case is reported.
Another name sometimes applied to this condition described is Tank
Kaw Ree, 탕 قال리 but this refers to a similar swelling produced
by glandular enlargement in this locality.

(27.) Any soreness of the lips would be called Eep Tal, 입 알
口 癒 and one child is said to have died of such an affection.
(28.) *Pawk Kak* is another indefinite condition characterized by "hardness" (muscular rigidity) in the epigastrium.* The long needle is used for the treatment of this condition, and two who died, are, with some hesitation, included under this heading, rather than under deaths caused by the needle.

(29.) *Hoon Day* means any kind of an ulcer, boil or abscess, and its mortality is stated to be one.

(30.) *Pee Chung* is a headache or hotness of the head in which the veins are very prominent. It is especially common among old people and may be likened to congestive headache. The short needle is repeatedly used over the enlarged veins and efforts are made to encourage a free flow of blood. One child was thus affected.

(31.) Any condition which causes enlargement of the scrotum is called *San Chung*. Gale's dictionary defines the condition as "hernia," but it is probably wider in its application. One child is said to have had this disease.

(32.) One child affected with scabies or *Awm,* died probably as a result of the extensive ulceration. Infantile eczema is also a possible explanation.

(33.) *Poo Chung* is defined by the old dictionary as meaning a generalized oedema said to result from starvation, while the new edition attributes this particular variety to *Poo Gee* making *poo chung* to mean merely a general term for dropsy. One case only.

(34.) Blood issuing from the mouth is called *T'aw Hyul* or *Sang Hyul*. No distinction is made as to whether it is vomited or coughed up, except that *Hyul Tam* is a special term applied to a mixture of sputum and blood.

(35.) Accidents.

A. Burned. Usually by charcoal braziers and death resulting from mistreatment of the sores, 5 cases.
B. Bean lodged in the trachea, 1 case.
C. Birth injury, 1 case.
D. Use of the Chim, 3 cases. One said to have had an abscess after its use and another "swelled up greatly."

Detailed comments on the results of these few figures would be utterly useless, but one fact stands out in appalling prominence. In the statistics of America, diarrhoea and other diseases of the digestive system represent about 35 per cent. of the total deaths among infants, and 23 per cent. are due to impure air diseases, making a total of 58 per cent. These two classes comprise fully 85 per cent. of the mortality in Korea.

*Dr. Shorrocks of Syenchyun reports that the liver and spleen were enlarged in cases of this kind which he has seen.*
13 and 14. Stating whether a child had been born during the past 12 months or not, and whether a child under the age of 1 year had died during the same period, were intended in a large series of statistics to give an approximate birth and infantile death rate. In the absence of regular birth and death registration this is perhaps the next best thing. It is only possible to state that to the first 200 women examined there were 14 children born and that they lost 6 by death during the past 12 months.

15. Abortion and its Causes.—Abortion is surprisingly uncommon among this people although conditions would lead one to expect it very frequently. Thirty-eight women had a total of 49 abortions, the most in any case being 4, and those caused by syphilis. The computation as to months is based upon the Korean Calendar considering a pregnancy as 10 months in length. The cases by months are as follows:

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<tr>
<th>Months</th>
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<td>8</td>
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The attributed causes of the abortions were few, 4 were said to have resulted from fever, 3 from minor accidents, 1 from working in the cold and 1 from taking quinine. The other 40 cases were definitely said to have occurred "by themselves," although two of the women having 5 of the abortions, were definitely known to have had syphilis. It is more than likely that syphilis played a much more important part than is apparent. 22 of the records show that disease of some kind was present in one or both parents, usually pelvic in nature. A little more than half of the women definitely stated that they were married before the menses began, the remainder being married the same year or later. The average death-rate was somewhat increased in these cases as compared with the general average.

16. Still Births and their Causes.—There were only 10 children born dead in this series and the causes assigned were difficult labor, fall and fever one each, with the remaining 7 unaccounted for. Syphilis was not incriminated in any case, though many infections must have been overlooked.

Disease in the Father and Mother.

17. Gonorrhoea.—Account was taken of these conditions chiefly in the hope of being able to throw some light upon the causes of abortion and sterility. The results are believed to be inaccurate to quite an extent in underestimating the real condition. The women in many cases seemed to be ignorant as to whether their husbands had ever
had gonorrhoea or not, and were surprised that anyone should expect them to know. Many were as uncertain as to whether they had ever had the disease, some believing that any leucorrhoea they may have had was *Nim Chil*, 냉질과 and others only recognizing it by the name *Aw Jum Saw Tai*, 오종소디 환경 (difficult urination.) Confusion must exist in their own minds when in 38 out of 49 cases the definite statement was made that one of the parents, but not both, was affected with gonorrhoea. Here among all the people just as at home among a certain class gonorrhoea is considered of no more severity than a common "cold." Stricture of the urethra in the male and specific endo-cervicitis in females are fully as common as elsewhere. There is no connection in the popular mind between difficult urination, sterility, infantile blindness and any venereal infection. It is for the medical profession to teach the people the seriousness of the infection, even though the patient thinks, because the discharge has nearly cleared up, what little remains is of no consequence. For the sake of the rest of the family it is incumbent upon us to teach venereal prophylaxis.

18. Syphilis.—There is a very serious erroneous idea in the popular mind regarding syphilis. For any sore on the genitalia the native treatment of inhaling volatilized mercury is usually resorted to. In some cases it is said to be rather heroic treatment, there being a few deaths and some cases of extensive salivation attributed to it, but the important thing about it is that the patient considers himself completely cured. When interrogated on the subject he will invariably answer that he does not have syphilis, and will not volunteer the information that he used the *Shoon Yack* 수존약, although he will readily admit it when definitely questioned. The women very rarely realize that they ever had an initial lesion and usually deny it even when to the physician the signs are positive. They only occasionally know that their husbands took the inhalation treatment. In this series no women acknowledged the disease, and in the husbands of five its presence was ascertained from outside information. In this trial no physical examinations were made and the uselessness of the subjective method alone fully demonstrated. In further series the questioning should ascertain the presence or absence of falling of the hair, sore throat and whether or not they or their husbands ever used the *Shoon Yack*. An examination of both elbows for the presence of epitrochlear glands is of great importance, and its rapidity and ease of execution are not hampered by the Korean sleeve. It is safe to say that this method will produce much greater and more nearly accurate results.
19. Education of the Husband.—In the Western countries ignorance and poverty are very important factors in the production of high infant mortality. The Korean standard of education, the knowledge of the Chinese character was adopted here, but often the claim to scholarship was based upon the mere recognition of a few characters. The native Korean script which was formerly held in contempt by scholars, is stated to be familiar to 77 per cent. of the men, while 62 per cent. claimed Chinese as an accomplishment. Of those who admitted an ignorance of either script 20 were farmers, a dozen were laborers or those without work, and only 3 were merchants. There being no good method of caring for children which an educated man would know and an ignorant man would not, this phase of the investigation was of little avail.

20. Education of Women.—This question took still a different turn. Formerly it was considered a disgrace for a woman to be educated, learning being practically denied to all but the dancing girls. Christianity is completely revolutionizing this custom and curiously enough of the eighty-nine women who could read the native script, every one was a Christian. This has undoubtedly come about because of the requirement of the reading knowledge of the Bible before being admitted to baptism. Three of this number, one a Christian girls' school teacher, were conversant with the Chinese character also. Education among women when judged by this standard, then, is a matter rather of adherence to Christianity or Heathenism. As yet the ideas of hygiene, sanitation and care of home and family are practically the same whether heathen or Christian, and will remain so to the great detriment of Church and race until the leaders of the Faith, evangelistic and educational as well as medical, unite to strengthen this plastic constituency by first reaching the home.

21 and 22. Financial Status.—Do they own the house they live in, and do they own other property besides? All attempts to get an adequate idea of the relative poverty of the people was without much success; they all seemed to have little enough of this world's goods. There was fear of committing themselves about taxable property on the part of some, others had an indefinable fear and distrust, while some who knew the purpose of the investigation were inclined to greatly exaggerate. The chief difference between rich and poor after all was a supply of clothing for the children a couple of weeks longer each year, and a larger house in which to live. The latter advantage was frequently offset by the greater number of family "adherents." A difference in cleanliness or maternal care was not specially noticeable.
23. **Number of Rooms in the House.**—Although the ordinary house is built upon the principle of two sleeping rooms and a kitchen, yet circumstances vary this somewhat. Extreme poverty may reduce the sleeping apartments to a single room, while as a rule farmers' houses are larger than this and less crowded. The houses in the country averaged about three sleeping rooms each, which was a trifle less than the average of the remainder, not including the rooms used for the business of many merchants and artisans, part of which were also used for sleeping purposes. Detailed studies of the various occupations in this connection would probably be very instructive.

24. **Number of Persons constituting a Family.**—Knowing the average number of rooms in a house and the usual amount of available air-space in each, the size of the family including family "adherents" is of value in estimating the amount of air allotted to each person. It has been claimed in the past that there is a noticeable tendency of the people in the north to huddle together on account of the great cold in the winter, and the following figures apparently bear out the accuracy of the claim. The official census of May, 1911, gives the total number of dwellings in Korea as 2,742,263 and the population as 12,934,282 or an average of 4.72 to each house. The same census gives for North Pyöngan Province, in which Kangkai is located, a higher ratio of 5.26. Kangkai county alone gives an average of 5.3 while these meagre figures based chiefly on this county and adjacent parts of neighboring counties amount to 5.8. The northern half of this province reaches 6.21, while Chasung and Chosan, counties to the north and west of us bordering on Manchuria, average 6.45 and 8.19 respectively. It is interesting to note in this connection that in Chosan county the female population is almost double the male, while in Kangkai county there is a partial reversal of these figures. These are sections of the country where this tendency to crowding is still more pronounced than here. Reports come from one who has travelled extensively in the interior of Manchuria whence have gone great numbers of political and other refugees with the pioneers of a new country that conditions of squalor and crowding in miserable houses are almost unbelievable. The mortality among them is said to be proportionately increased.

Counting the air-space in a Korean room exclusive of that occupied by the household effects as being about 250 cubic feet* and three rooms to a house, the average air space per person would be about 150 cubic feet, or one-fourth the usual hygienic requirement. The usual factors

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* This figure is much too large as an average for the south of Korea where building material is more expensive.
Infant Mortality in Korea.

that greatly vitiate this limited amount of air are only too well known, and their influence upon infant mortality self-evident.

RECOMMENDATIONS.

This investigation, if it is to be of any great value, should be conducted in various parts of the country over some length of time. A more intimate knowledge of the problems that we are called upon to face can be thus gained and great good result. The blank to be used in the future should be somewhat different from this trial one and the following is suggested:—

1. Age.
2. Occupation.
3. Number of living children, male, female.
4. Number of dead children, male, female.
   Age, foreign count.
   Sex.
   Cause of death.
5. Abortions, at what month, cause, (examine for syphilis).
7. Age of marriage, foreign count.
8. Age when menses began, foreign count.
9. Number of months from marriage till birth of first child, (watching for cases of premenstrual conception or birth).
10. Disease in husband, especially gonorrhoea and syphilis.
11. Disease in self, (asking questions and making examination).
12. Number of sleeping rooms in the house.
13. Number of persons comprising family.

In the beginning of an investigation it would be decidedly premature to draw conclusions that should only come as the result of prolonged study, but regarding a few things there is a fair degree of certainty.

The wisdom of setting the minimum age limit for marriage within the Christian church at sixteen years is well supported by facts. It would be wise also to add one provision to the rule that would prevent the marriage of those who at sixteen had as yet not begun to menstruate until that function shall have been established. It is easy to see that such a provision makes for future happiness and health in the home, and when the reasons are well understood by the people would meet with hearty approval. The action of the Government in setting a minimum age limit is very commendable and should accomplish great good.

There is great need of careful work which will correlate the vocabulary of Western medicine with that in common use among the people. The removal of this obstacle of uncertainty is a big step
toward accuracy in diagnosis and therapeutics. In the rush of dispensary hours there is a constant tendency to treat patients by the "job lots," to jump at conclusions without realizing the exact significance of the few important words among the "unnecessaries" of a patient's history and to be wholesale dispensers of pills. Our graduate Korean doctors can also be of great service in this work, and by carefully noting the detailed symptoms and course of the various diseases can make valuable contributions to the medical literature of Korea.

The infant mortality rate in Korea is very high, and to partially account for this there are several factors that are evident to every one. Constant and continual nursing, eating anything, anytime, anywhere, no matter how indigestible, worms and uncleanly habits are the most important of these, and we are now launching a definite campaign against them by means of our medical tracts. This method will help us reach a certain class of people, but there is still a greater field for activity in this direction. As a part of the evangelistic policy in Korea, there are held Bible classes in the important centres, attended by leaders and other workers, both men and women, from all over the adjoining districts. Every one of these people can read the native script and they represent the life and talent of the church. They are also the most progressive and are ever alert to pick up new and better ideas; they come for that purpose. When the classes are over they return to the church from which they came and repeat over and over the things they have learned. Who would be better prepared to receive and put into practice practical hints on hygiene, sanitation and the care of the home and the family? A graded course of study, a special topic each day, in booklet form, embracing the subjects for each course, would be gladly welcomed by all who have these classes in charge. It was thought that a number of our tracts would be useful in this connection combined with other matter to suit the special needs of men and of women. These should be written so simply that they can be studied by anyone knowing Korean and be taught by native or foreigner other than those medically trained.

In work of this kind great care must be exercised that we know our subject thoroughly and do not propose a lot of impracticable plans in our enthusiasm over our ideas of hygiene. Let us rather go about it in a careful painstaking way, each man doing what he can until many of these problems are cleared up, but not forgetting to act vigorously as far as our information will allow.
The Chinese and the Red Cross.

All Korean terms for which no Chinese equivalent is given are strictly local names used among the common people.

The three recommendations have all been taken up by the society; blanks printed and bound have been distributed to all who wished them, a medical dictionary is in preparation and a committee has in charge the writing of the graded course of study.

THE CHINESE AND THE RED CROSS.*

By Edward M. Merrins, M.D.

The year that is now drawing to a close has been a most eventful and troubled one for China. In the spring an epidemic of pneumonic plague raged in Manchuria and the north, and threatened to spread over the whole empire. Since then there have been floods and famine with outbreaks of typhus fever. At the present time the nation is in the throes of a revolution which may end in the overthrow of the Manchu dynasty, and this district is the vortex of strife and bloodshed. Our schools, hospitals, and other forms of institutional work are necessarily closed, and our Christians are scattered. Let us hope and pray that the new year may bring peace and prosperity to China under a good and strong Government.

As the president of our local medical society in his retiring address usually deals with a subject not strictly medical or surgical, but with our work as medical missionaries in its larger aspects, it may not be uninteresting on the present occasion to consider some of the difficulties of Red Cross work encountered during the revolution, as the discussion may be helpful to all who may be called on in the future to form Red Cross organisations in this country.

When war is waged between the nations of the West, or between one of them and a nation so advanced as the Japanese, there is, or should be, no great difficulty in carrying on Red Cross work in strict accord with the rules laid down by the Genevan convention. But China has as yet no generally recognised place in the comity of civilised nations, and although she was one of the signatory powers at the last convention, her people are not familiar with such a peculiarly Western institution as the Red Cross Association. Moreover, we were confronted, not by warfare between nation and nation where each

* An address prepared for delivery before the Central China Branch of the China Medical Association, November 15th, 1911.
side claims and is granted the full rights of lawful belligerents, but by a local rising complicated at the outset by a hideous massacre of many of the ruling class; and we were uncertain whether the rising would end simply as a local disturbance quickly suppressed, or spread until it became a national and successful revolution. In these circumstances, peculiar difficulties were encountered both in the formation and in the working of the society.

With regard to its organisation, the initiative came from the Chinese in Wuchang. A few days after the outbreak of the revolution, when it was feared the city would be bombarded, several gentlemen of the literary class approached Drs. MacWillie and Paterson, and asked for their assistance in forming a Red Cross Society. Later, the merchants of Hankow made a similar request to Dr. Booth. Eventually a local Society was formed with Dr. MacWillie as President: Dr. Paterson and Professor Tsao, Vice-presidents of the Wuchang Branch; Dr. Booth and four Chinese, Vice-presidents of the Hankow Branch. All the foreign doctors in the district promised their hearty cooperation, with the use of the hospitals of which they were in charge, and as soon as there was need, the other foreign residents, one and all, gave most valuable assistance in various ways.

In the first place, even the formation of the Society was not without its difficulties. In Wuchang the Chinese members belonged to the literary class, in Hankow they were merchants, and between the two there was little sympathy and desire to cooperate, even though the object of the Society was purely philanthropic. It is still doubtful if they would ever have worked together harmoniously, unless foreigners had been in the organisation. The arrival of contingents from other districts also complicated matters considerably. By stamping all the badges with a common seal, and by each contingent taking charge of a particular field, the dangers of friction, overlapping and confusion, which are apt to follow when several independent bodies are engaged in the same task, were reduced to the minimum.

It was also difficult to get the Chinese to understand the limited purpose and scope of the Society's work. While it is true that its badge of a red cross on a white ground was adopted as a compliment to Switzerland where the movement originated, yet the cross in the minds of all Christian people has the most sacred and inseparable associations, and it hallowes, or should hallow, all that is done under it. In China it has no such sacred meaning for the great mass of the people. They know it principally as the arithmetical sign for the numeral ten. The literal translation of the name of the Society 赤十字
The Chinese and the Red Cross.

The Red Ten Character Society," is therefore not very illuminating. Yet the cross as a symbol is in common use. In the city of Wuchang, there are benevolent societies which do some good work in burying the dead and relieving the very poor, but which exist mainly for the mutual protection of their members, who put the red cross over the doors of their houses. Similar societies probably exist elsewhere. In Peking, if fighting takes place, refuges are to be opened under the red cross flag, for the shelter of women and children, and it is expected that the male members of the families will defend these refuges. Consequently, it is not to be wondered at, if the Chinese here started off with the notion that membership in our Society conferred protection even though no Red Cross work was actually done by them. One native gentleman offered three hundred dollars for the protection of himself and family by the association; another wanted his grandson to be a nurse, but himself to wear the badge; others, who were actually members, wanted their families to live in Red Cross quarters. By argument, appeal, and more forcible measures they learned—at least some of them did—that the Society existed mainly for the relief of the sick and wounded, not for the private advantage of those who belonged to it.

Further, the Chinese had to learn the full meaning of the word "neutrality," especially in its application to Red Cross work. Originally, in their own language, they had no such term, therefore it would seem the conception itself was wanting. The term now in use, tsung li, (中立) was passed on to them by the Japanese. The ambulance corps of the Imperial army conceived their duty was to remove from the field of battle the dead and wounded of their own side only. They wanted to treat their wounded enemies not as prisoners of war, but as "revolutionaries" with all that such a designation meant as used by them. Indeed there is little doubt they gave the coup de grâce to many of their wounded opponents left lying on the field. On the other hand, the country people in sympathy with the revolutionaries, were guilty of exactly the same heartless conduct. On each side soldiers of the ambulance corps carried arms, and many of them took part in the actual fighting*. Strange to say, on the revolutionary side was a society called the Kan Sz Tei, 死死隊 the "Dare Death Company,"

*In the present struggle in Tripoli, between Italians on the one side and Turks and Arabs on the other, it is said that for the first time in the history of warfare, all the members of the Red Cross Society (attached to the Italian army), even the priests, carry arms. If members must thus protect themselves because the badge of the Red Cross is not respected, surely it would be better for them not to wear the badge at all rather than let non-Christian people acquire their earliest knowledge of Christian Red Cross workers by seeing them armed as combatants. How can it be expected that peoples ignorant of the proper work of the Association will report its neutrality in such circumstances, or can be made to believe that it is indeed neutral?
consisting of men ready to welcome death fighting for the revolutionary cause, who wore the red cross as their distinguishing badge. In the hospitals, emissaries of one side came to bribe or otherwise tamper with the wounded of their opponents. A Red Cross contingent from the north, simply because their badges had been stamped by the Imperial side as required by the convention rules, were regarded as spies by the revolutionists. Much has been done, not altogether without success, to lift the Chinese generally to a true appreciation of the humane and neutral work of the society. More than once, after severe fighting, it was a fine sight to see Chinese of all classes voluntarily engaged in removing the wounded to the hospitals, gentleman in their silks and satins carrying stretchers with the coolies; and when the revolutionary inmates of a hospital in danger of fire were carried away, the Imperialists, though they did not help very much, at least remained neutral. As probably happens in all wars, there seemed to be occasional violations of the respect due to the Red Cross flag itself, and the institutions over which it was raised, but these mishaps were generally due to ignorance or accident rather than to bad intent, and apology was subsequently made.

The revolution began so suddenly and the Government was so unprepared, that several days elapsed before it was able to place its own troops in the disturbed district. Consequently, the Society had to be formed and prepare for its work before it was possible for it to be officially recognised by the commanders of each side. For various reasons it was by no means certain that the Imperialists would accord to their opponents all the rights and privileges of those fighting in a good and legitimate cause. In the first place, from the Government point of view, they were rebels who had forfeited all the rights of citizenship; secondly, they had slaughtered in cold blood, hundreds of defenceless Manchu men, women and children, and the soldiers of even highly civilised nations under such provocation often exact terrible reprisals; thirdly, the Chinese connected with the Red Cross movement were many of them known to be in sympathy with the revolutionists; lastly, the Red Cross hospitals in Wuchang, were in the zone of fire if the city were besieged. Fortunately, Yuen Sz-kai and Admiral Sah of the Imperial forces, and General Li, the commander of the other side, all expressed approval of the work of the Society, and it was given generous financial support.

There were many other difficulties on which we cannot now dwell, such as those due to the unpreparedness for the great and sudden demand upon our hospital resources, the lack of a sufficient number
of trained Red Cross workers, the inability to hire coolies to bury the dead, and the absence of proper supervision of the sanitation of the cities and camps affected by the war. Notwithstanding that its work was so uphill, all must admit that the Society has coped very successfully with the various and numerous demands made upon it, and it has been the means of giving the Chinese a very good and liberal education in the methods of warfare between the civilised or partially civilised nations of the West.

In conclusion, the following suggestions are submitted for your consideration:

(1.) As the Genevan Convention recommends the formation in each country of a committee which in time of peace shall occupy itself with preparing supplies of hospital stores, training nurses and other workers, etc., would it not be well, in compliance with this recommendation, to form a skeleton Red Cross Society here as a permanent organisation? Such a society might consist of foreign and Chinese physicians, Chinese merchants and others who have acquired practical knowledge of Red Cross work during the present revolution, and the foreign consular, mercantile, missionary and other interests should also be represented. On the outbreak of rebellion or of hostilities with another nation, this society could immediately bring itself up to its full strength, without waiting for inexperienced Chinese to take the initiative. Cordially welcoming the support of all foreigners and Chinese alike, such a society would command the full confidence of the contending parties, of the consuls, of merchants and others in the business world, and of the missionary societies, and it would be able to weld together contingents of Red Cross workers from other districts. Being well prepared, its work, when the time came, would be carried on much more effectively and smoothly than if everything had to be done on the spur of a great emergency.

(2.) Because of the need of a central directing organisation, ought not steps to be taken to form a National Red Cross Association for this country, to which all local societies could be affiliated? If some of its officers were high Chinese officials, and the administrative duties were almost wholly in the hands of foreigners, such a society, on obtaining the recognition of the Genevan Convention, might well be invested with considerable directing or governing power over its affiliated societies, especially in time of war.

(3.) The original purpose of the Red Cross Society was simply to succor the sick and wounded of armies engaged in war. The widening
of its work, as in America, so as to include all kinds of benevolent enterprises in time of peace, is a confusing departure from the original plan. Hence the suggestion has been made recently, and it will be laid before the next convention, that some other title, such as "The Green Cross Society," should be adopted by those who are working on the peaceful lines of the American organisation. In order to present the main purpose and neutrality of Red Cross work unmistakably before the Chinese, and to clearly distinguish it from the work of all other benevolent societies, should we not follow this suggestion, and confine Red Cross work to its proper field? Whether this will mean the formation of two distinct societies, or of one society with two names, one for peace, and the other for war, is a question that can be debated when the proper time comes.

(4.) In addition to forming and training ambulance corps and other bands of Red Cross workers, as part of its duty in time of peace, might not the society circulate among the soldiers throughout the country, tracts and other literature describing its purpose and work? This would not only have the direct result of informing the Chinese of all that the society represents, it would also teach them to be more merciful and humane in their methods of warfare, and so prevent, perhaps, such barbarities as the massacre of Manchus, the killing of the wounded on the battlefield, and the burning of nearly the whole of a large and populous city, an appalling military measure which has ruined thousands of non-combatants, and has doubtless caused the death of many aged, infirm, blind, and other helpless people.

(5.) Indeed, might it not be well to suggest to all missionary brethren the necessity of being more concrete and practical in the ethical instruction of our Christians, for "tell it not in Gath, nor publish it in the streets of Askelon," very few of them anywhere seem to have been outspoken in condemnation of the massacre of the Manchus. That it was planned beforehand and executed calmly in the belief that it was the only way by which the country could be delivered from Manchu misrule, is not sufficient justification from the Christian standpoint. But we must be gentle and charitable in our judgment of those who were silent, for the Chinese have had many urgent and difficult problems presented to them of late, and when executions were frightfully common, it is not surprising if many of our Christians shrank from assuming the rôle of a prophet of national righteousness.
RULES OF THE GENEVA CONVENTION.

Article 1. Ambulances and military hospitals shall be acknowledged to be neutral, and, as such, shall be protected and respected by belligerents so long as any sick or wounded may be therein. Such neutrality shall cease if the ambulances or hospitals should be held by military force.

Article 2. Persons employed in hospitals and ambulances comprising the staff or superintendents, medical service, administration, transport of wounded, as well as chaplains, shall participate in the benefit of neutrality while so employed, and so long as there remain any wounded to bring in or to succor.

Article 3. The persons designated in the preceding article may even after occupation by the enemy, continue to fulfill their duty in the hospital or ambulance which they serve, or may withdraw in order to rejoin the corps to which they belong. Under such circumstances, when these persons shall cease from their functions, they shall be delivered by the occupying army to the outposts of the enemy.

Article 4. As the equipment of military hospitals, the main subjects of the laws of war, persons attached to such hospitals cannot, in withdrawing, carry away any such articles but such as thereby their private property. Under the same circumstances an ambulance shall, on the contrary, retain its equipment.

Article 5. Inhabitants of the country who may bring help to the wounded shall be respected and shall remain free. The Generals of the belligerent powers shall make it their care to inform the inhabitants of the appeal addressed to their humanity, and of the neutrality which shall be the consequence of it.

Any wounded man entertained and taken care of in a house shall be considered as a protection thereto. Any inhabitants who shall have entertained wounded men in their house shall be exempted from the quartering of troops, as well as for the part of the contributions of war, which may be imposed.

Article 6. Wounded or sick soldiers shall be entertained and taken care of, to whatever nation they may belong. Commanders-in-chief shall have the power to deliver immediately to the outposts of the enemy soldiers who have been wounded in an engagement when circumstances permit this to be done, and with the consent of both parties.

Those who are recognized, after their wounds are healed, as incapable of service, shall be sent back to their country. The others may also be sent back, on condition of not again bearing arms during the continuance of the war. Evacuations, together with the persons under whose direction they take place, shall be protected by absolute neutrality.

Article 7. A distinctive and uniform flag shall be adopted for hospitals, and ambulances and evacuations. It must, on every occasion, be accompanied by the national flag. An arm badge (bras-sard) shall also be allowed for individuals neutralized, but the delivery thereof shall be left to military authority. The flag and the arm badge shall bear a red cross on a white ground.

Article 8. The details of the execution of the present Convention shall be regulated by the commanders in chief of belligerent armies according to the instructions of their respective Governments, and in conformity with the general principles laid down in this Convention.
TEMPTATIONS AND DISEASES COMMON TO STUDENT LIFE.*

J. J. MULLOWNEY, M.D.

Everyone who has gone through the interesting and fascinating period of school and college days or any one who has had anything to do with students knows that there are certain temptations, which, while all men are heir to them, are much more apt to attack the student class. The causes of this state of affairs are evident to every thinking man:

1. Wherever men are placed together shut off, for the most part, from the nobler and finer characters and influences of mothers and sisters, the coarser nature of the male becomes more or less dominant.

2. The sedentary life of the students is conducive to the excitation of the animal phase of their nature.

3. Students, as a class, are of the comfortable, fairly well-to-do middle class of society, and they are therefore well nourished, and usually eat food in which the proteids predominate, that is, they eat considerable meat, eggs, etc., and this kind of food seems to excite the sexual organs more than other classes of foods.

4. The work of the students is preeminently mental work, so that perhaps the higher inhibitory powers of the brain become fatigued, while the physical or animal parts of the body are strong and virile.

5. While it may be true that a few students work very hard during their college days, a large majority of them have considerable time on their hands, especially at night, and this idleness leads to temptations of various kinds.

6. The grouping together of so many young men full of life and energy, in the attempt to be sociable, and the attempt of some to show off, and of some—who have more money than brains—to make a display, leads to the drinking of too much wine among students.

Wine not only excites the sexual organs, but it also deadens the higher inhibitory powers of the brain, so that we here have a "vicious circle" set up, and the young men do things under these conditions which they would not think of doing if they were in their right mind.

I believe that this is a very important cause here in China, especially, for more and more of European and American liquors are being imported, and as these wines and spirits are more powerful than the

* Address delivered July 9th, 1911, Western Hills, Peking, at a Conference of Government College Students.
old Chinese spirits, and the young men not being used to these kinds of drinks, they stimulate them very markedly.

Now, as reasonable beings, endowed with thinking powers, having got at the causes which lead so many to wreck and ruin, it is our duty to try to seek means by which we can avoid these things or conditions which lead men to do those things which we all know are not right, and which may, and often do, bring disease and even death, not only to us personally, but also to our offspring even "to the third and fourth generation."

HOW TO AVOID SOME TEMPTATIONS.

I think that we can find a remedy, at least for a large number of the temptations that are peculiar to students, if we will carefully consider the causes that we have enumerated and use our God-given will-power to get away from them, or as many of them as we can:

1. Let as many of you as can bring yourselves under the purer and finer influence of your mothers, sisters and other female relatives. If you cannot be in your own homes while in your student days you can all write home and thus keep in communication with home relatives, and I think that we do not realize the psychological value of mother's love in helping us to withstand temptation. When you are tempted to do anything unclean, think of your mother.

2. Make it a point to get some part of each day in working off the surplus physical energy by taking exercise in God's great out-of-doors, and thus offset the evil effects of the sedentary life.

3. If you find that your sexual organs are unduly excited and you have been eating too much meat, why, the reasonable thing to do is to eat less of that particular kind of food.

4. In regard to mental fatigue, of course, it is impossible to avoid using our brains, but I believe that no one is called upon to continue using his brain to the detriment of the other parts of his body. Indeed I believe that God has given us our bodies as sacred gifts. We owe it to Him, to ourselves, and to our posterity not only to keep them in a good state of preservation but also, I believe, that in as much as lieth in us, we should endeavor, in every God-given way, to improve both our minds and our bodies. And it is well-known now that the mind works to its utmost capacity, only when all parts of the body are normally developed and exercised.

5. If you find that you have so much time on your hands that you are drifting away with evil companions, again the reasonable thing to do is to get some occupation that will keep you busy. And those
of you who are studying in large cities should have no difficulty in finding plenty to occupy your minds and hands. There are always a great many good books to read. There are now, in nearly all the large cities, the Y. M. C. A. night schools which always need helpers, and I cannot think of any way in which you, as students, can work off your surplus energy, occupy your minds in a more benevolent work, gain more valuable experience, and be of greater value to your fellow-countrymen, during your student days, than in devoting some of your spare evenings in this way, making better citizens of those who have not had the educational advantages that you are enjoying. There is no better way to help one's self than by helping others.

6. There is only one preventative against the many and insidious temptations into which the drinking of alcoholic drinks leads one, that is *never drink them*.

7. Avoid reading sensual books, and do not brood over sensual pictures, but whatsoever things are good, whatsoever things are pure, think of these things.

Some of you may say you will agree with me that the foregoing are the most important causes of the temptations and the diseases common to student life, and that when once the will is used, knowing what the chief causes are, the results can be avoided. Yet, you will say, these are not all the causes, and even though you had used your will-power, that because of some peculiar circumstances, or because of some inherited weakness, you have been unable to resist temptation and, perhaps, some of you or some of your friends have in some way contracted one of the venereal diseases. And what you want me to do now as a friend, your fellow-man and a medical man, is to tell you what you should do to be restored to health.

**CLASSIFICATION OF VENEREAL DISEASES.**

There are practically three distinct diseases known as venereal diseases. For a long period in medical history, these three were all believed to be manifestations of one and the same disease. This confusion of ideas continued until the identification of the specific causative micro-organisms of the diseases. The venereal diseases are: gonorrhoea, syphilis and chancroid. These diseases are practically always contracted by persons having impure sexual relations, or by some person who has at some time had impure sexual relations giving it to another person.
We will speak of gonorrhoea first for that is by far the most frequently seen by the medical men. For many years physicians did not know the specific cause of this disease, they simply knew that the disease attacked the sexual organs of human beings, and it was not till 1879, that Neisser discovered the specific micro-organism; as it is usually seen in pairs, it is called the *diplococcus gonorrhoeae*. Neisser found that the discharge of pus from the sexual organs of persons afflicted with this disease contained these micro-organisms; which, he proved by experiments, caused the disease. This has been confirmed many times since.

The chief dangers of this disease are its frequency, and the power it has of lying latent for many years in an individual. Dr. Neisser says, that about seventy-five per cent. of all males have had the disease, and about forty-five per cent. of all females. Neisser thinks that about thirty per cent. of the females have been infected through their husbands. The chief danger to the nation of this disease lies in the fact that very few men realize the seriousness of the disease. Young men, especially, think that nearly every man has had the disease as a matter of course, and that it is of no more consequence than "taking a cold," which is inconvenient and perhaps unpleasant, but that it will be over in a few days. If they could only see some of the results of this disease, such as the physician sees every day, they would have a very different idea about it. If they realized that the disease may not only become deep-seated in their own sexual organs, sometimes causing terrible pain and trouble, but also that it may cause the narrowing of the passage through which the urine passes out so that it is almost impossible sometimes to pass urine, thus causing a whole train of complications. Moreover it may render a man sterile. Neisser regards gonorrhoea as responsible for more than forty-five per cent. of sterile marriages. One specialist found thirty cases of male sterility in ninety-six sterile marriages, while the statement is made by Morrow that men are ultimately responsible for from fifty to seventy-five per cent. of all sterility in married life. I say if young men realized how serious a disease this is, they would think of it in a very different way from the way they do now.

If the results of a man's folly and lack of self-control remained with him it would not be so pitiful, but not infrequently the man carries the disease to other people, often to his own wife. And
when the disease becomes fully embedded in the female generative organs it is much more serious, if that were possible, than it is in the male. For the female generative organs being more extensive and being placed more deeply internally, the results are terrible. It may not only cause her fearful pain but even her death from peritonitis. Should she live herself the danger does not stop here, but may even affect the offspring, if she be fortunate enough to retain her reproductive powers. Many a little innocent child is blind because of the sins of his parents. It is not that the child is born with the disease, it does not inherit this particular disease, but it is that if the mother has the disease in her external sexual organs at the time of the birth of the child, and the child's eyes come in contact with the pus found in persons afflicted with this disease, unless the attending physician takes immediate precautions to wash the child's eyes out with the proper remedies the chances are that they will become infected, and the child will have to go through life blind. Gentlemen, you may think that this is a rather dark picture, and you may say that you have known of several cases that have not ended so badly. Quite true, I will grant you that not all cases end so sadly. Well, we have only to thank God that not all cases end disastrously, but remember men with these diseases are not telling the public all about themselves. It is only the medical man that knows the darkest side of many of these cases, and I assure you that scarcely a week goes by, but what sadder pictures of the results of this disease than the one I have depicted to you come to the attention of the active practitioner. And this may be the result of any case of gonorrhoea.

We have now seen the cause and followed the course of a possible case of the disease. What is to be done in case a young man contracts the disease? Needless to say he should immediately consult a reliable physician. I beg you, in the name of your best welfare, in the name of your country, and in the name of all that is good, don't let the thing run on without asking proper medical advice, don't go into solitude and remorse, or become the prey of the hundreds of "quack doctors" and manufacturers of patent medicines. This has been the ruination of hundreds of bright lives. In a straight-forward way go and tell some reliable physician about your trouble. Don't, I beg of you, try to deceive him, for you cannot fool him, and it only takes away his respect and sympathy for you, for he knows only too well the symptoms of the disease. What is the use of trying to deceive him? You want his help and advice and how can you
expect him to treat you intelligently if you do not deal honestly and frankly with him? Although we cannot say absolutely that we can cure all cases of gonorrhoea, even if they should come for treatment immediately, we can say that if the case comes under the proper medical treatment, as soon as the first symptoms show themselves, a great number of the cases can be cured, while if allowed to go on to the chronic stages, wherein the bacteria burrow down into the deep tissues, it is almost impossible to cure the disease.

**SYPHILIS.**

The second venereal disease is known as syphilis. Syphilis, like gonorrhoea, is caused by a micro-organism. This micro-organism has only recently been discovered, it is known as the *spirochate pallida*. While this disease is not seen as frequently as gonorrhoea, its prevalence is estimated at from five to eighteen per cent. of the populations, some countries having a worse record than others. It is more dangerous than gonorrhoea because of its insidious onset and from the fact that it attacks all systems of the body, and, especially, because of its attack on the great and important system known as the nervous system. I need not tell you young men that this is the master system, the regulator of our bodies, and that when it fails there is no coördination, no usefulness in us.

**COURSE OF THE DISEASE.**

I have said that the great danger of this disease is its insidiousness. In about three weeks after sexual intercourse with a person afflicted with syphilis, a very small insignificant looking pimple or little elevation of the skin appears at the point where infection has taken place. This little pimple or papule is usually so small, having no pain, and is altogether so insignificant, that it often escapes the notice of the patient, and this is its chief danger. In this stage of the disease it has not become a blood disease, it is still a local disease. This is known as the *first stage*. If proper treatment is not undertaken at once, it begins to spread through the body, and in about three months a general rash of various types covers the whole body, and other manifestations are noticed by the trained medical eye. This is called the *second stage* of the disease, and shows clearly that the disease has now entered the great blood system and has been spread by that means all over.

From this time on the disease, if not treated properly, goes on with its work of devastation, entering the vital organs of the body,
such as the blood-vessels, the heart, the bony structure, and the great nervous system, and even the brain itself. It is estimated that syphilis is the cause of from 80-90 per cent. of dementia. When the disease has gone on to this degree it is said to be in its tertiary or third stage. So insidious is the working of this disease and so deep-rooted does it become and so latent may it be that the man may have forgotten all about his immorality; and he even may have become a good moral man before the disease appears in this stage, sometimes five, ten, or even twenty years after the original infection took place. I don't know of any disease that has such tenacity, nor any disease which is so persistently destructive. We talk about hell, but can you imagine anything or any condition that could more stubbornly punish a man for his wrong-doing than the way nature or God seeks revenge by inflicting a man with these diseases? Young men, don't forget, as your own sage has said: "If you sow sin, you will reap calamity." Or again, "The virtuous are sure to live long, the wicked are sure to die early."

I have briefly given you a picture of what this disease may mean in the individual, but like gonorrhoea, this disease does not confine itself to the individual originally afflicted, but may play terrible havoc on innocent women and children. A man having this disease should never marry. For he may not only infect his wife, but if he has children, the chances are that they also will be afflicted, and may be born either as idiots, or at some later time, may become insane, thus becoming a danger to the nation by causing crime and immorality, or by becoming paupers. For this reason several of the States in the U. S. A. have passed laws forbidding a person having this disease marrying till he has a medical certificate showing that he is free from it. I haven't time to go into the terrible results that may come to the poor innocent women, and what blackness may cover the homes into which this awful disease comes. I can only give you one example, the like of which medical men see over and over again.

AN EXAMPLE.

A young man, who had fallen in with bad companions during his university days, one night under the influence and excitement of too much wine, joined a little group of his class-mates, who were also under the influence of the wine cup, in a visit to a house where immoral women sold their bodies for the animal gratification of the male public. The young man became infected with syphilis. He took treatment for about three months, and thinking that he was cured, for there were no
external symptoms of the disease, he got careless and stopped taking treatment, much against the advice of the physician. Shortly after this he married a noble, pure, innocent woman, who in the course of time was made glad with the anticipation of motherhood, which anticipation, I need not tell you, is the greatest joy of every true woman. But alas, in the course of three months she was taken ill and in some mysterious way (to her) the undeveloped baby in her womb was born—she had had a miscarriage! And let me say, in passing, that syphilis is the cause of a large per cent. of all miscarriages. Morrow says: "No disease has such a murderous influence upon the offspring." This innocent woman did not know the cause of her miscarriage, but the attending physician knew only too well that the disease, though latent, was still in the husband's system and that he had transmitted it to his wife or to his offspring, or to both. For syphilis, unlike gonorrhoea, is an hereditary disease; it is transmitted from the parent to the offspring. Finally as time went on the wife became pregnant again, and this time the pregnancy went on to the sixth month, but again she had a miscarriage, this went on for two or three times, each time the pregnancy going further until at last the pregnancy went on to term and both husband and wife thought that their great hopes of having a son were to be realized. But this time, although the pregnancy had gone on to term the child was a wizened, withered-up little thing, that looked more like "a little old man with a cold in his head" than like a good normal well-nourished baby. Despite the careful and anxious care of physician and mother the child died when six years old, and the husband died of despondency and melancholia soon afterwards, leaving a poor sickly widow, who herself died of the effects of the disease and of a broken heart. Gentlemen, you say that that is a dark picture. I grant you that it is a dark picture, as dark as hell itself, but it is not too extreme; medical men see such cases all too often, and such a picture may follow any case of syphilitic infection.

You are ready to ask me if medical men have not some treatment to offer for this terrible disease? Yes, there is treatment for this disease and sometimes there have been cures or, at least, apparent cures, but it is not always certain. There is now a new treatment for the disease, known as "606" or "Salvarsan." Some medical men are getting very good results from this new remedy, but it is not without its drawbacks. It is very expensive; several cases are already on record of grave complications following its administration; and being a new remedy we have not had enough time nor data to say that it is a sure and permanent cure for syphilis. I have spoken more in detail of this
remedy because I find that some of the Chinese young men have heard of its fame, and unfortunately it has had the effect on some of making them more reckless, because they think that should they be so unlucky as to contract the disease that they have a sure cure for it in "606." Young men, don't be too sure, and don't let the "quacks" and the commercial "sharpers" make fools of you, and ruin your pocket-books, your homes and your bodies.

CHANCROID.

The third venereal disease under consideration is called chancroid. The identity of the specific micro-organism of this disease is still uncertain. However, a strepto-bacillus known as the "bacillus of Ducrey" has been found in the discharge from the sore, which is the characteristic of this disease, and which gives it its other name of "soft chancre," but it has not been proved that this micro-organism is the sole specific cause of this disease.

Chancroid is by far the simplest and least dangerous of the three venereal diseases under consideration. If treated promptly it is readily curable, though, if neglected, very serious complications may ensue, and cure becomes a very difficult matter. The first thing noticed by the patient is a small nodule which very rapidly breaks down into a very painful ulcer. The discharge from this ulcer is very infectious. The ulcer is deep and irregular, and it has a very marked tendency to spread and to become multiple. Indeed herein lies the danger of complications. Neglected ulcers may involve the glands and other tissues in their vicinity with much consequent destruction, but if the disease has the proper medical treatment from the outset, from four to six weeks suffice for cure.

TUBERCULOSIS.

There is another disease I wish to say just a word about here, not because it is a venereal disease, but because there seems to be an impression in not a few Chinese minds that it has some relation to immorality. I refer to tuberculosis. Let me say that this disease is not a venereal disease. I think the impression has made its way into the Chinese minds from the fact that persons afflicted with tuberculosis are sexually easily excited. This is a symptom of tuberculosis rather than the cause of the disease. And it is our duty rather to help and to protect those afflicted with tuberculosis than to look askance at them as though their disease were the result of some immorality.

I wish I had time to give you some pointers on how to detect tuberculosis and how to avoid it, but I can only very briefly allude
to a very few general directions. In a general way one may say that
the best prevention is to live a normal, clean, pure life with plenty of
out-of-door exercise and to eat good nourishing food without going
to excess in either direction. As soon as one suspects that he is
afflicted with the disease one should begin to live and sleep out-of-
doors, eat even more than the usual amount of easily digestible
nourishing food.

**MASTURBATION.**

There is one more matter which I must bring to your attention,
which, while it is not classed as a disease, it surely is a symptom of
disease, and is one of the temptations which many school boys have to
fight against—I refer to masturbation. There is nothing that is more
insidious, that saps away the life out of a person, if persisted in, and
nothing that is so evident a symptom of insanity, as masturbation.
Indeed some go so far as to say that it is a cause of insanity. This
habit is the greatest of evil sins. It clings to a man with a terrific
tenacity. One can not be a true manly man and continue to practise
this enervating, impure habit. Shakespeare once wrote: “To thine
own self be true, and it must follow, as the night the day, thou
canst not then be false to any man.” When the great God judges us he
looks at more than our actions and the externals. He looks at the
secret thoughts. Let us seek, as far as in us lies, to keep our thoughts
pure, and it must follow that our actions will be pure.

**THE GREATEST DANGERS OF CHINA ARE INTERNAL.**

Now there are some dogmatists and hot-headed politicians who
would make you believe that the greatest enemies of your country are
the European nations. They would have you believe that they are
going to divide this grand ancient empire, and eat you down piece-
meal. They tell you that the Japanese and the Russian military powers
have a design on your domain, but I tell you that the greatest
enemies of China are from within. I have it from my own somewhat
limited experience, and from medical men whose experience and
authority are undoubted, that the venereal diseases among the student
class, especially, are greatly on the increase. I know that the
conditions in some of the educational institutions are absolutely rotten.
I repeat it, the greatest enemies of China are from within . . . . . the
provincial divisions among you, the lack of central federal organization,
the lack of a stable monetary system, the lack of a proper national
hygienic department, and the lack of a pure high religion that will
compel men to live lives of purity and honesty and helpfulness, and under this comes the problem of immorality among your student class. . . . These are the internal weaknesses of your country, and perhaps no one of them is more vital to the welfare of your nation than this question of the spread of venereal diseases among your students. It is most vital because it not only destroys the prospective leaders of your country, but it will destroy your very homes, the family life, and eventually produce a weak and enervated population. How can you expect to build up strong characters and become worthy leaders of your countrymen, if you allow yourselves and fellow-students to become broken in morale and rotten with disease while in your student days? So long as a nation can produce a population which is physically and mentally and morally healthy and strong it need not fear its external enemies, but just as soon as the population becomes diseased and enervated, that nation will meet the fate of Greece and Rome. Nature will avenge herself. The natural law has not changed one iota.

OUT-PRACTICE AMONG THE CHINESE*

By A. M. Wang, M.B., (Toronto).

It is with great diffidence that I consent to speak on the subject assigned me as follows: "Out-practice among the Chinese."

All of you have had more experience than I ever had in my few years' practice. There is hardly anything new and interesting for me to say to-day. I will simply mention a few points which I have observed in dealing with our people as a Chinese practitioner, together with some of its difficulties.

First and foremost in practice among the Chinese is to gain the patients' confidence, which means constant effort to break down prejudices, and, in order to attain this, the practitioner must have:—

1. Tact.
3. Patience.
4. Kindly feeling towards patients.

I shall first take up the subject of Tact. Questions concerning the diagnosis and prognosis are often asked by the patients or members of their families. The reply of "You are not a doctor," would be too blunt and even offensive.

* A paper read before the Shanghai Medical Society, January 10th, 1912.
On the other hand, it is neither wise nor necessary to tell them the scientific truth. For instance, in the case of latent syphilis, proved by premature labors with macerated foetus, frequent miscarriages, etc., one cannot be too tactful in answering questions to satisfy the patients: I find that the patients will have more faith in the doctor, if he or she can give the diagnosis. But on the other hand one's correct diagnosis often causes family trouble, all through want of tact in dealing with patients.

If the diagnosis be uncertain or prognosis unfavorable, it is better to tell the family about it and get their consent to securing a consultant as soon as possible, but this does not mean to give up the case, nor turn it over to a new hand. The majority of the Chinese would appreciate frankness and realize that it is all for the good of the patient. One must not use the word dok or “poison” for infection. The Chinese would take it to mean syphilis or specific trouble, which is not a very desirable expression. They use the word fung or “air” for infection. I mean, in surgery, if the wound be infected, it is believed to be caused by exposure or the entrance of air.

2. Knowledge of Chinese.—If one has some knowledge of Chinese and a little of their phraseology, one can accomplish a good deal towards professional success. As you all know, according to the Chinese philosophy, there are five elements, gold, wood, water, fire, and earth, and the human body is made up of a harmonious mixture of them. As long as the right proportions are maintained the body remains healthy, but if any of the elements be in excess or in deficiency, physical derangement follows. For example, eczema or scabies is due to an excess of water, whereas fever and ulcers of any kind—including syphilis—are due to an excess of fire, and the liver is one of the principal internal organs that catches fire readily.

Therefore, in case of dyspepsia, flatulency, or gastric cancer, they speak of it as arising from liver-air or liver-fire, caused by mental depression, over-work, lack of sleep, and mal-diet. In specific diseases, they think that the excess of fire element in the system requires cathartic and some medicine to counteract its effect.

Now, in order to explain the symptoms of any disease to a Chinese patient—which is as necessary as the feeling of the pulse—one must have some knowledge of Chinese and of the quaint phraseology, or else he will fail utterly as a practitioner among the Chinese. Of course foreign doctors are excusable to a certain extent, if they do not speak the language at all.
3. Patience.—Physicians should listen attentively to what the patient has to say with regard to subjective symptoms. They should make physical examinations carefully and gently. In the treatment of either surgical or medical cases, physicians must feel the pulse of both wrists, or they will be put down as greenhorns in the art of healing. It seems absurd and a waste of time, but while one is thus engaged, he can use his power of observation, and he may be able to obtain a good deal of information, more than what the patient can ever give. Physicians should also give out directions or instructions carefully, and explain beforehand some unpleasant physiological actions of the drugs if any, because slight nausea or vomiting or coloured stools, etc., may cause suspicions in the patients, thereby losing their confidence. Let me mention a case for example which happened recently—I was told by a relative of the patient.

A prominent Chinese merchant was ill with fever (supposed to be typhoid), he had native doctors in the beginning but with no effect, then some of his friends recommended one of the leading physicians in this city; well, his medicine caused him deafness and even a somewhat delirious effect within two or three days. He was in a very critical condition, the whole family suspected foreign medicine, so they sent for a native specialist for typhoid fevers, and he cured him in the course of three or four days' treatment.

One of the chief drawbacks in practice among the Chinese is the lack of trained nurses. In case of fever, fresh air, warm room, light bedding, comfortable clothing, liquid or nutritious diet is unknown to them. They think an almost air-tight room, heavy bedding plus wadded clothing are the best diaphoretics, and salted cabbage, ham, and congee are essential diets for the patients, so it is necessary for physicians to explain about the nursing to some extent.

In ordering a hot or warm sponge bath, it would be well to order a decoction of Hangchow-lake-willow instead of plain water; I find the majority of Chinese will carry out that order very readily.

4. Kindly feeling toward patients.—Above all things, the most important is to show kindly feeling toward the patients under any and all circumstances. Kindly actions will certainly bring their reward, particularly in the treatment of obstetrical patients, as their gratitude forms the best kind of capital for medical practitioners.

It is very natural for people to think that the native scientific practitioners have less trouble and it is easier for them to deal with the Chinese, but to speak from my own experience we have more difficulties to endure and more bitterness to swallow.
As a rule the Chinese show more respect for foreign doctors, and they are willing to pay a more satisfactory fee. As to native physicians, especially a woman doctor, it is rather difficult to place her.

She may be considered as a superior amah, common midwife, jewel-seller or anything under the sun. Sometimes on the first visit one would be received by a number of inquisitive women with suspicious and doubtful looks. Fortunately, this is not a frequent occurrence; but they expect the native practitioners to do more and charge less than foreign doctors.

I wish to mention a few cases which might be of interest to you:

Case I. Puerperal eclampsia is rather uncommon in China; I only came across one case in Nanking.

The patient, 21 years of age, primipara, previous history unknown, was in labor for twelve or more hours. I was called at 11 p.m.; she was in convulsions during each pain for several hours.

The patient was small and delicate in appearance, no dropsy, face flushed, pulse rapid, and complete unconsciousness. On vaginal examination the head was rather high, dilatation completed, but being an only daughter of a wealthy family they refused interference; so I left. At 6 a.m. next day they sent for me again, I found her in a comatose condition and the fetal head was down in the perineum. The child was delivered with forceps without any difficulty (still-born of course); I gave her saline enema, hypodermic injection of ergotin, etc. Her uterus contracted well; she seemed better toward afternoon, no more convulsions. I continued saline enema for a few days and ordered nutritious liquid diet every 2 hours, but they stuffed her with Chinese medicines behind my back and were afraid to give her milk, broth, etc., only a little rice-water every now and again. She remained unconscious, her pupils never responded to light, no rise of temperature, pulse regular and rapid, between 100 and 110. Bladder was emptied by catheter first 2 days; afterward she wet the bed 2 or 3 times a day. She died from exhaustion or starvation on the twenty-second day. I often wonder if she had been in a hospital under proper care, whether her life could have been saved or not. As a rule, in puerperal eclampsia if the patient survive after delivery she gradually regains consciousness and recovery takes place. I want to call your attention in this case to the fact that she remained unconscious for 22 days.
Case II. Mrs. Zili, age 36, multipara, was supposed to be six months in pregnancy, but her abdomen was not enlarged. She had taken Chinese medicine similar to ergot occasionally. One afternoon there was some haemorrhage, but no pain, and instead of taking a rest, she went out for a walk. About midnight she began to suffer from pain and severe haemorrhage. I was called at 7 a.m., and found a piece of adherent placenta protruded in a well contracted os. The uterus was cleaned out under anaesthesia with some difficulty; it was unusually small, in fact smaller than the cervix. How could that be a six months' pregnant uterus? Could it possibly be the effect of Chinese medicine? She made an uninterrupted recovery.

Case III. Mrs. Kan, age 22, primipara. Transverse presentation. Membrane ruptured for twelve hours; was under charge of a native midwife and a Chinese nurse trained in some foreign hospital.

A hand prolapsed, but it had been reduced by the nurse when I was called. Anaesthetized to surgical degree. On examination right hand presented, the shoulder above symphysis pubes toward the middle, the side of the chest very much stretched and greatly curved up from right to left. The head was high and in the centre a little toward the mother's left. Reached the buttock with much difficulty and the legs away up in the fundus and feet behind the neck. The cord wound around the neck 3 or 4 times. Placenta partially adherent. Transverse presentation is not uncommon in China, but the foetal parts twisted in a manner described above is rather rare. The last two cases were kindly assisted by Dr. Myers. We thought that perhaps due to the shortening of the cord, which wound up tightly around the neck, this child was actually strangled; had it not been for that, presentation might have been normal. She made a good recovery.

To build a practice in China even in a city like Shanghai is not an easy matter, one has to be particularly careful, as once a patient is lost, it will interfere with the practice for a year. It is well to understand that the Chinese have no professional etiquette; they can have or change as many doctors as they please. If one is called and wanted, it is his or her duty to write a prescription and give necessary advice, and one is not supposed to make a subsequent visit unless invited to do so.

I was called to Peking to attend the wife of a high official. Previous to my arrival she had had fourteen native doctors, including one or two graduated from abroad. I was unfortunate enough to
live in the same house and acted as a nurse as well as a physician. During my first few days' stay there were four more Chinese doctors recommended by some officials to see the patient.

They did not criticize or interfere with administration of the medicine, but told her husband the difference between Chinese and Westerners' constitutions was such that the liquid diet would bring about an unfavorable result, so he sent his sister and daughter-in-law and asked me to put the patient on full diet. That was enough to make anyone feel like wanting to "pack up and go." Had it not been for their apologies, and even down on their knees, I would have done so the next morning. Fortunately the patient made a good recovery, but slow convalescence. What is true of a high class is true of every other conservative family. I mention this towards the last, but it is not the least important point for a medical practitioner to bear in mind, for, on the correct understanding of the peculiar custom in China, depends the success of a medical profession in different parts of the Empire.
DEAR MR. EDITOR: We report the following case in the hope that some of your readers will be able to help us as to the diagnosis, or at any rate be able to tell us of similar cases occurring in their own practice. The condition is one which we have never met with before, either in China or in the homeland. Moreover, we can find nothing in the textbooks which at all fits the present case.

The patient, a man aged thirty, came to the hospital with the following history:

Eight months previously he commenced to have pain and a swelling in the right lower jaw. At that time he had the full complement of teeth on that side and none of them were decayed. The swelling increased steadily and became somewhat red and hot. At the end of three months the tumour broke down externally and discharged pus for a few days through two holes. Since then there has been very little pus. Two months later the second molar tooth, which had become very loose, was extracted by a native doctor. Two weeks before admission to hospital the tumour broke through the mucous membrane of the alveolar margin for the first time.

The patient declares that at no time did any pieces of dead bone come away. He was bled by a native doctor on more than one occasion. Native plasters had been applied to the external sinuses. Patient had lost weight.

State on admission. Patient looked ill and had obviously lost flesh.

Externally, there was a tumour of the right lower jaw. The surface of the tumour was broken by two circular ulcers each about the size of a twenty-cent piece. The edges of the ulcers were raised but not hard. The floor was composed of a number of pointed, fibrous, white filaments from \( \frac{1}{4} - \frac{1}{2} \) inch in length, imbedded in an unhealthy granulation tissue. A probe could easily be passed through the floor of the ulcer into the mouth. There was only a very slight discharge of pus, and the ulcers were covered with scabs.

Internally, a considerable portion of the alveolar margin was absent at the seat of extraction of the second molar tooth. The cavity, which was very offensive, was lined with a mass of the white filaments described above. These filaments reminded us very much of the muscles of the crayfish. There was no dead bone. The whole mouth...
was in a very foul condition and pus could be squeezed out of the gums. The mucous membrane of the alveolar margin in the neighbourhood of the first molar and two bicuspids was much swollen and showed two or three white points, where the growth was beginning to break through.

The patient remained in hospital about three weeks. A considerable quantity of the filamentous mass was removed with forceps. It came away easily and bleeding was practically nil. The patient's general condition improved considerably under tonics, and the local condition was much improved by free use of a weak carbolic mouth wash. Potassium iodide was given a good trial, but had no apparent effect.

The growth continued to spread along the alveolus until it reached the midline of the jaw. White points would appear and the mucous membrane seemed to be gradually worn away exposing a compact mass of these white filaments. Two loose teeth were extracted. Many of the white filaments came away with the teeth and were found to be adherent to the roots. A radical extirpation of the tumour—if necessary removing a portion of the jaw—was suggested to the patient, but the operation was refused. Since leaving hospital he has paid one visit to the dispensary. The growth continues to extend, but with regular use of a mouthwash there is very little foetor. Microscopical examination of the pus showed nothing abnormal.

We shall be very glad if any readers of the Journal can give us any light on this somewhat obscure case.

We are yours very sincerely,

ALFRED. W. HOOKER,
B. RANDALL VICKERS.
The China Medical Journal.

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Any 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.

IF THE COAT FITS.

Owing doubtless to the chaotic state of affairs existing in various parts of China the editor finds himself at the beginning of the new year with number one to his credit and very little in the larder, so if "constant reader" expects a feast and gets a cold lunch he must commune with his own conscience and refer to the last year's table of contents to see where the trouble lies.

Would it not be acquiring merit for some of the brethren who are at present on enforced leave and have not departed for the Fatherland, wherever that may be, and are by chance temporary residents of Shanghai, to get in touch with the editor, whose address by the way is St. John's University and not 4 B Minghong Road, and see if they cannot do something to increase the interest to themselves and others of their own publication which they have pledged themselves to support, not by subscription alone, but by what is even more valuable—coöperation?

It is the men in the field who supply the material, not the man that sits at the desk, who really make a journal of any kind worth reading. It is his part to do the best he can with the material in hand, to offer, as well as receive suggestions, read proof, and collect matter of interest to the rank and file of its readers: much more than that he cannot do.

To all those who have the interest of the medical profession in China at heart, to the friends and contributors to the Journal, wherever you may be, if you cannot be all of these at least be
contributors. The great sorrow of the editor is that so few mem­
bers of the Association feel any real responsibility for the success
of the Journ al.

RED CROSS RULES.

The regulations of the Geneva Convention (Red Cross) are
published as an appendix to Dr. Merrius' article in this issue. Dr.
MacWillie writes that he had great difficulty in obtaining these,
and that the original rules were amplified by the Convention in
1906. If any of our readers have revised copies or know where
they can be obtained we should be very glad to republish them.

REPRINTS.

We are so often asked the rates for medical reprints of articles
sent for publication to the Journ al that we gladly insert the follow­
ing notice sent us by the publishers, the Presbyterian Mission
Press.

"These rates for medical reprints will hold until further notice.
(Numbers include complimentary copies, and blank pages are
counted.)

25 copies @ 17 cts. per page.
50 ,, @ 25 cts. ,, ,, 
100 ,, @ 35 cts. ,, ,, 

After first 100, extra 100s @ 15 cts. ,, ,, 
If two pages or less add 20 per cent. to above prices.
Each illustration to count two pages."

THE NEW EDITOR OF THE NEW YORK MEDICAL
JOURNAL.

It is with sincere pleasure that we receive the announcement
that the publishers of the New York Medical Journal have
elected Dr. Charles E. de M. Sajous of Philadelphia to the posi­
tion of supervising editor in place of the late Dr. Frank P. Foster.

Dr. Sajous has behind him a long and distinguished career
both in Europe and America and needs no introduction to his
professional brethren.
As a writer, editor, and teacher, he has for many years been an honor to his profession; and, we believe, was also one of the pioneers in the profession in recognizing the importance of the internal secretions to the physical economy.

Under his guidance the New York Medical Journal will be ably edited, and we extend to the publishers our hearty congratulations on their choice for such a responsible post.

ASSOCIATION NOTES.

MEDICAL MISSIONS AND MEDICAL EDUCATION IN MANCHURIA, 1911.

The work of Medical Missions was commenced in Manchuria about thirty years ago, and from the beginning it has done much, not only in relieving physical suffering, but in removing prejudice and misconception, and in gaining the friendship and goodwill of officials and people alike. The first hospital was established in Moukden, where its influence soon showed the wisdom of strengthening this agency. Now there are twenty-four medical men and women working in connection with the three missionary societies represented in Manchuria, the United Free Church of Scotland, the Irish Presbyterian Church, and the Danish Lutheran Mission.

The policy of the Missions has been to plant hospitals and dispensaries in large cities, and in towns which are centres for populous districts, thus influencing extensive areas and large numbers. Itinerating has been more or less confined to the early years of a station, as hospital work is found much more fruitful, medically and spiritually. In the governmental cities, such as Moukden and Kirin, the literary and official classes have been reached, and their appreciation of the work is shown by the substantial financial help given to it from year to year. Throughout Fengtien, the southern province, and to a lesser degree the Kirin province, there are few villages where the name of one or another of the hospitals is not known. Everywhere the work has been manifestly fruitful, many of those now Christian having heard the Gospel first in hospital, and several flourishing stations owe their existence to hospital patients.

The many calamities of war, flood, famine, and plague, which have overtaken Manchuria, have afforded opportunities of showing practically what Christianity means. During the early months of 1911, many of the medical missionaries were occupied in fighting the epidemic of pneumonic plague. Their presence and help were largely instrumental
in controlling and stamping out the epidemic, and this was very warmly appreciated by the authorities. The heroic death of Dr. Jackson from plague made a deep impression, and the passing of that terrible scourge leaves the people more conscious than before of the value of that Ministry of Healing which is a part of the Gospel of Christ.

The configuration of Manchuria causes the population to be congregated largely in the great plain which stretches from the sea northwards, and up which runs the railway line. Here are the cities and large towns; here, therefore, are the hospitals also. Patients frequently have to travel hundreds of miles to be treated. Within the last few years medical work has been started among the Eastern hills and valleys, where the population is increasing rapidly as new land is brought under cultivation. In the Heilungchiang or northern province, there is, so far, only one medical mission, for the population is scant and scattered.

It will, manifestly, always be impossible for foreign missionaries to serve the needs of the mountain districts and the scattered villages in the east, the far north, and on the Mongolian borders; and it is equally out of the question to expect that they will permanently be able to adequately meet the medical requirements of the cities and closely-populated districts. This can only be done by training Chinese, who can go out as Christian doctors and medical missionaries.

In every hospital the need of qualified help is also urgently felt. Much effort has been expended by individual men in training assistants. In Moukden a good many students have been carried through a systematic course, theoretical and practical, and are now doing good work in the hospital and in private practice. A few years ago a union scheme for training dispensers was agreed upon by the medical missionaries in Manchuria. Young men are sent in from the different hospitals for six weeks' lectures in Moukden, the course lasting two winters, and the practical instruction being given in the various hospitals.

It has, however, long been felt that partial training does not meet the needs, and that a thoroughly equipped medical college for Manchuria is urgently needed. Want of money and men made this impossible, but in 1908 the way began to open for the realization of the desire. A site was presented to the Moukden Hospital by the Chinese officials "for medical teaching," a Government grant of Tls. 3,000 a year was made for the same purpose, and other friends in China contributed. The members of the various missions took up the matter heartily and urged the establishment of a thoroughly efficient medical
school. An appeal was made in England and Scotland, and sufficient funds were raised to enable a beginning to be made. Two specially qualified men were appointed, but one of these, Dr. Jackson, died of plague only two months after arriving in Moukden,—an irreparable loss to the College.

Of the permanent resident staff, only three are as yet in Moukden, but a successor to Dr. Jackson is hoped for soon, and the Danish Lutheran Mission is likely to appoint a man of experience to help in the College. In addition, courses of lectures will be given by men from the various missions, and a Chinese qualified teacher will assist in the first year work.

The College building will be completed before the end of the year, a handsome block in a commanding situation, consisting of three storeys and basement, with the necessary class-rooms and laboratories and accommodation for from forty to fifty students. It is heated by steam, lighted by electricity, and has a water supply throughout. Next door is the Moukden Hospital, whose 110 beds will afford ample scope for clinical teaching. Additional buildings will be needed, dormitory block, dining-room, dissection room, etc., as soon as there is money to build them.

The first Entrance Examination is announced for January 1912, and the opening of the classes for February. The aim of the College is to give to all its students as thorough a knowledge as possible of medicine and surgery, and an intelligent understanding of the Christian faith, and thus to send forth men able and ready to join in medical missionary work, and to fill positions of influence in the service of their country and of their fellow-men.

Moukden, November 11th, 1911.

SHORT GENERAL ACCOUNT OF MEDICAL MISSIONARY WORK IN FUKHIEI PROVINCE.

Medical Missionaries and Hospitals.—Medical Missionary work in Fukhien Province is carried on at thirty main centres by forty-one medical missionaries, men and women of seven different societies, including two American-trained native women doctors. In some of these centres the work is only in an initial stage, while in others it is fairly well developed. Some of these centres consist of men's and women's hospitals combined or in separate buildings, sometimes having a male doctor in charge of the men's side and a woman doctor in charge of the women's side, or a male doctor in charge of both, assisted by foreign nurses.
Medical Assistants.—The native medical assistants, male and female, have hitherto for the most part been trained by the medical missionaries themselves in any spare time they could give to this work. There is, however, a general consensus of opinion in favour of a more systematic and thorough training. To meet this need students have gone to schools in other parts of China, Japan, Hongkong or America. Now, however, an attempt is being made locally to meet this requirement in the Foochow Medical School, established at the beginning of this year.

Building Progress.—There has been considerable building progress in connection with hospitals during the past year, and there is a continual endeavour to bring equipment and methods as nearly as possible up to home standards, consistent with available financial resources and local requirements.

Hospital Working.—A good deal of useful operative work is done at many hospitals, but it is not easy to get consent to operations which involve serious risk to life. Most hospitals realise a fair sum annually from fees and contributions of patients, and some are practically self-supporting in everything except the salaries of the foreign doctors. Most medical missionaries have their hands so tied that, in the midst of a wealth of material, they find it difficult to do any special research work. The medical centres often have outlying dispensaries connected with them where useful work is done by a trained nurse or a native doctor, the foreign doctor exercising a general superintendence. In practically all these hospitals and dispensaries systematic efforts are made to influence the patients spiritually by services or bedside talks, or by the distribution of suitable literature.

G. Wilkinson.

C. M. S. Medical School, Foochow.

For over thirty years students have been trained by C. M. S. missionaries in Fuhkien, but such training has been to a great extent elementary. About six years ago it was decided to request the parent committee to open a medical school for the more advanced training of such men, and to set aside European medical missionaries for this special purpose.

Though the parent committee consented to do so, yet, chiefly on account of the want of men and money, the opening of such a school has been delayed till the beginning of this year.

It was hoped that other societies working in Fuhkien would see their way to join in with the C. M. S. in this school, and though the missionaries in the field were willing to do so, the Home Boards of the
societies represented have had so far to decline joining in on account of want of men and money. We hope, however, due to a revised basis on union, that in the near future they will see their way to permit certain of their agents to devote a special part of their time to teach, in the hope that later on they may be in a position to appoint men permanently to the staff, and also to aid in the funds of the school.

Due chiefly to the exertions of Dr. Mackenzie and a grant from the C. M. S., we have now a large building, situated in the city of Foochow, capable of holding twenty students and two unmarried missionaries, three lecture rooms, and a museum; and we are about to start on the erection of a residence for a married missionary, to be situated in the school compound.

The C. M. S. has also well equipped us with models, diagrams, books and a couple of microscopes with slides in histology, pathology and bacteriology.

As in Fuhkien there are a number of different dialects, the question in which language to teach the students has been a difficulty, but to start off with we have adopted English as the medium of instruction. I may say that the students are very keen to be taught in English.

This fact, in addition to a rather stiff entrance examination, has limited the number of students entering to six, although the number who applied for entrance was large.

Of these six five had been students at Anglo-Chinese Schools; one had been trained privately.

We have found teaching in English to be rather slow work. It has required on my own part a special preparation of lectures, that have had to be typewritten, copies of which have had to be given to the students. By this means I have been able to use language a little less technical than is used in textbooks, whilst at the same time space has been allowed for the students to insert their own Chinese terms.

But by continual questioning and going over back work we have been able to feel certain that they have fully grasped the subject in hand, and are assured that they are making steady progress.

Of course as we proceed and become better known we hope to get a class of students who have had a further training in the schools before entrance. Our present plan is to keep them with us here in this building for three years and then draft them out into hospitals for two years where they will receive special training in medicine and surgery; or allow them to remain on here and to attend the C. M. S. Hospital which is situated within five minutes' walk of the school, and which the
students will have an opportunity of attending, when thought advisable, during the three years they remain with us.

At present we are, to a great extent, feeling our way in this new development of our work.

I have only to add that the conduct of the students has been all that we could have desired.

The lectures in the school are given by Dr. Mackenzie and myself, but Dr. Wilkinson is also on the School Board.

B. VAN SOMEREN TAYLOR, M.B.

THE HACKETT MEDICAL COLLEGE FOR WOMEN.

The tenth annual commencement was held last month in Canton and nine young women received diplomas. This makes more than fifty young women who have graduated from the College since its foundation. The recent graduates are from several provinces.

From this time on the college year for the entrance of new students will begin in September instead of in March as heretofore.

Students from other provinces should come several months earlier in order to become accustomed to this dialect, as all lectures are given in Cantonese.

The foreign Faculty consists of Dr. Mary W. Niles, Dr. Edward Machle, Dr. Henry W. Boyd, Dr. Charles Selden, Dr. J. A. Hofmann, Dr. Mary H. Fulton; beside these there are seven Chinese professors. We hope this year to add Dr. Ruth Bliss Boggs and one or two new physicians from home.

Our students are from all denominations. So please bear in mind that the Hackett Medical College for women is just as much a union college as a college can be union. Kindly hereafter include it as such.

MEDICAL WORK IN SHANTUNG.

Medical work is carried on in Shantung by seven Boards and Societies, four American and three British, in seventeen or more centres; the total attendances annually amounting to over 150,000, and the hospital in-patients to over 2,000. Besides the regular hospital and dispensary work, conducted at the mission stations, there is considerable itinerating medical work carried on among the villages of the province, itinerating having always been a prominent feature of mission work in Shantung.

In addition to the above medical mission work, there is a Government Hospital in Tsinan, with both a Chinese and a Western depart-
The China Medical Journal.

ment, at which the attendance is very large at the daily dispensaries, amounting at present to forty or fifty thousand a year in the Western department, and half that number on the Chinese side. The hospital side of this institution has not, however, been so largely developed.

There is a Union Medical College in Tsinan, the capital of the province, which is in its second year, and in which there are seventeen students enrolled in the two regular classes, with eleven more in the preparatory year in the Arts College in Weihsien, where they study physics, chemistry, and biology for a year before coming to Tsinan for their five years' medical course.

American Presbyterian Mission.

This Mission has the largest medical work in Shantung, with hospitals and dispensaries in seven centres, namely Chefoo, Tengchowfu, Weihsien, Ichowfu, Yihsieh, Tsining, and Tsinan. The total annual attendance is about 70,000 with over 1,000 in-patients. It also has an equal share with the English Baptist Mission in the conduct of the Union Medical College, in whose hospital there is an annual attendance of over 14,000.

English Baptist Mission.

The English Baptists have medical work in three centres, namely Tsingchowfu, Tsouping and Choutsun, with an annual attendance of about 22,000 and hospital in-patients numbering nearly five hundred. They also share equally in the conduct of the Union Medical College.

Southern Baptist Mission.

Three cities have hospitals belonging to the Southern Baptist Mission, each one being a modern-built, well-equipped plant with not only a foreign physician in charge but with a trained nurse also attached thereto. These cities are all in central Shantung and within easy reach of each other, namely Hwanghsien, Laichowfu, and Pingtu. The annual attendance is somewhere near 20,000.

American Board Mission.

The A. B. C. F. M. has two hospitals in the province, at Lintsing and Pangchuang, the latter carrying on a large work among the villagers of the surrounding country, the mission station being situated in a small village. The Mission, however, has decided to remove the station to Techow, a large and commanding city on the Tientsin-Pukow railway, in the near future. The attendance amounts to about 11,000 a year, including over 450 in-patients. At Lintsing the annual attendance is about 3,500 per year.
The remaining three Missions are represented by only one hospital each, so far as known, or rather each has work in only one city, the China Inland Mission carrying on work in Chefoo, the Methodist Episcopal in Taianfu, and the United Methodist in Wutingfu.

**REPORT ON KIANGSU PROVINCE.**
**DR PARK.**

For the amount spent upon them mission hospitals probably do more work and better work than any other hospitals in the world. The mission hospitals of China treat their thousands and tens of thousands every year and do surgical and scientific work, first-class in every respect, and yet many of them did not cost in building and outfit as much as the operating ward in some of the first-class hospitals of Europe and America.

Radiating from Shanghai, north, west, and south, within a distance of say five hundred miles, are many large cities and a great many large towns, and in all of the cities and some of the towns there are mission hospitals and dispensaries, and in nearly all cases the foreigner best known among the Chinese is the medical missionary. Reports to hand from these hospitals, including of course those in Shanghai, show no discouragement along any line, but a succession of encouraging features, increased confidence, increased surgery—notably major operations—and above all an increase in the numbers becoming interested in Christianity. In some cases sickness among the foreign doctors has led to the closing of wards and of smaller hospitals in some of the towns for the time being, but they will soon be reopened and the work will go on with increased zeal and earnestness. Such things show that our work is under-manned and there is need for more doctors.

As these words are being penned (November 14th, 1911) the Revolution is upon us and what the upshot is to be no one can tell, but of this one thing we can be certain, when it is all over the demand for medical missionaries and properly trained Chinese doctors and nurses will be greater than ever, and this leads to the next topic:—

**MEDICAL SCHOOLS.**

From the beginning medical missionaries in this region, notably in Shanghai, Hangchow, Soochow, and Nanking, have run medical schools because they had to have trained help in their hospitals and could get it in no other way, and also because they saw the need for
qualified doctors among the Chinese people and hoped to help supply this need. These small schools have done and are doing good work, but the time has come for larger things, and larger things are coming. In Shanghai St. John's proposes to unite with Harvard; the Church of England is enlarging its medical school in Hangchow, and eight American missions, namely the Methodist Episcopal, the M. E. Church, South, the two Presbyterian Missions, the two Baptist Missions, the Christian Mission and the Friends, are uniting to make a great medical school out of the East China Union Medical College in Nanking.

Training schools for nurses are being established in various places, and in Soochow the Southern Methodist mission is maintaining a school for women with the hope of uniting with some other missions in the near future to run a large Woman's Medical College, possibly in Shanghai.

If philanthropists ever expect to aid medical education in China now is the time to begin, and the men to locate, build, and run the medical Colleges are the medical missionaries.

1911 FINANCES.

The China Medical Journal account, as presented by the Presbyterian Press appears below.

The Publication Fund shows a good balance to its Credit, but Dr. Cousland still being absent it is impossible to produce an accurate balance sheet. This will be done later.

Meanwhile all that is in hand is needed; and to continue the Publication work we shall probably have to incur extra responsibilities with regard to the editor's expenses, before very long.

The Treasurer.

PUBLICATION COMMITTEE.

Skin Diseases, Fourth Edition, 1912. In this new edition of Dr. Neal's well-known work a few changes and additions have been made in the text, while the book has been practically re-illustrated. Among the new illustrations are 15 coloured plates from Dr. Mracek's "Atlas and Epitome of Diseases of the Skin," (Saunders' Hand-atlas series) with accompanying translations of the descriptive letter-press. Through the kindness of Mr. Lehmann these plates were printed in Munich. As good illustrations are a sine qua non in works on dermatology and
### C. M. J. FINANCIAL STATEMENT.

C. M. M. A. in Account with the Presbyterian Press.—For the Year 1911.

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The ordinary black and white cuts leave much to be desired, it was thought that these fine coloured plates would be welcomed in spite of the increased price of the book. Those wishing the cheaper book can purchase the third edition from the Chung Mei Drug Co., Canton.

The Presbyterian Press has no copies of Rose and Carless' Surgery, Vols I and II, nor of the Obstetrics and the fourth edition of the Physiology. These can be obtained from Canton, and in the case of the Obstetrics from Peking. The addresses of these bookshops is given on our advertisement page. The C.C.M.M.A. Nursing Manual can also be obtained from these stores.

Dr. W. H. Venable has been elected to fill the vacancy in the Committee owing to the lamented death of Dr. G. Stuart.

Dr. Mary H. Fulton of the Hackett Medical College for Women, Canton, notifies the editor that the first volume of her translation of Holt's "Diseases of Children" is ready for the press.

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**Book Reviews.**


Through the courtesy of the Department of Education of the Sudan Government we have received from the publishers the above volume edited by Doctor Andrew Balfour, Director of the Laboratories.

The report is one of the most interesting that has come to our notice and covers a number of subjects of the greatest importance to physicians, veterinarians, and sanitary officials working in tropical and sub-tropical countries.

Unlike the commentaries and digests which are so familiar a feature of the scientific press, these volumes contain the actual record, at first hand, of new contributions to the solution of problems of deep and world-wide import.

Their value is further enhanced by the superb manner in which the knowledge, so laboriously gained, has been presented and illustrated. The expansion of the work of the Laboratories and the amount of new material collected during the last few years have rendered it impossible to issue the Fourth Report in one volume, and the subject matter has therefore been divided into two parts. The first part (Volume A), now issued, deals with the medical aspects of the work of research. Volume B, which relates to general science, is in the press and will be issued shortly. The Two Volumes of the Report (A and B) together contain 738 pages of letterpress and illustrations, many of the latter, which number some 360 in all, being in natural colours.
Volume A. presents the results of the work of the bacteriological section of the Laboratories. Pathological and other specimens from a wide area and illustrative of many forms of endemic disease have been the subjects of investigation. Important papers have also been contributed on the work of the Sleeping Sickness and Kala-azar Commissions. The fallacies and puzzles met with in the course of blood examination in the Tropics form the subject of a very practical and well-illustrated article. An extended research on fowl spirochaetosis has demonstrated the important rôle played by the 'infected granule' in this disease. Other papers include records of work on trypanosomiasis, human spirochaetosis, kala-azar, forms of cutaneous leishmaniasis, veldt sore, diphtheria, human botryomycosis, veterinary diseases, etc. The interesting notes contained in the previous reports on sanitation in the Sudan are continued.

The price fixed for the Reports is as moderate as is consistent with the great cost of production, and any profit made will be devoted by the Sudan Department of Education to a special fund towards the cost of future publications of the Laboratories.

In order to place the reader completely in touch with the latest phases of the whole subject, a third volume has been added as a supplement. It is entitled 'A Second Review of Recent Advances in Tropical Medicine, etc.,' a title which is amply fulfilled in the contents.


BOOK NOTICES.


All orders and remittances should be sent to the Business Manager of the Philippine Journal of Science, Manila, Philippine Islands.

P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia, report the following new books:—

**Binnie.** Operative Surgery. A Manual for Practitioners and Students. By John Fairbairn Binnie, A.M., C.M. (Aberdeen); Surgeon to the General Hospital, Kansas City, Mo., Fellow of the American Surgical Association; Membre de la Société Internationale de Chirurgie, etc. New Fifth Edition in one handsome octavo volume. Thoroughly revised and enlarged. 1,365 Illustrations, some of which are printed in colors, over 100 being new to this edition. Octavo x+1,153 pages. Cloth $7.00.


Medical Progress.

For the Peitaiho Branch of China Medical Missionary Association by Dr. N. S. Hopkins, Methodist Mission, Peking.

To the Peitaiho Medical Association.

Dear Friends:—When Dr. Keeler asked me to tell you something of the impressions received in the hospitals and Colleges of the U. S., I knew that it would not be an easy thing to do, but being a guest at his home I did not find it in my heart to say no; and as soon as I had said yes I regretted it. The regrets are deeper now that his kindly reminders are coming in saying that he knows I will not disappoint them and that I was rash enough to say that my subject would be vaccines. I am sure that many of you have had wider experience with vaccines and have followed the literature on the subject more closely than I have. There may be others who have not fully made up their minds as to the utility of vaccines as a remedial agent, and will be encouraged by this to undertake larger things in that line.

To the busy missionary physician, it may seem next to the impossible to take up the routine necessary to carry out the opsonic treatment, but when these are once mastered and the apparatus is in hand, many of the difficulties will, I am sure, vanish. We should guard against the Mei-fa-tzu microbe of the East. It will mean much when a serious case confronts us to feel that there is a door of hope for our patient, and if we can spell HUSTLE, it may open to them.

Many of us have put the vaccine treatment in a class quite by itself, to be called on when all other remedies have failed, a forlorn hope as it were, and it has always continued a forlorn hope to us. I am sure there is a field for its use, not as an occasional experiment, but as an agent that may be definitely selected and in which we can have the greatest confidence.

Dr. R. W. Allen in his latest book on Vaccine Therapy says:—“During the first few years of the practice of vaccine therapy, the opinion prevailed that the especial scope for this method of treatment lay in the domain of chronic infections. This opinion must, I think, be abandoned, despite the fact that it is obviously an easier task to arrive at a just appreciation of results in cases which have resisted other methods of treatment,—i.e., which have become chronic—for it is quite impossible to say whether an acutely infected case would or would not have recovered had any given line of treatment not been followed. Sufficient has, however, now been done to incline me to believe that in acute infections will the most striking results of vaccine treatment be obtained, and that more especially will this be found to be true in the case of septicaemias. During the past year I have had experience of three such cases due to pneumococcus, the typhoid bacillus, and the staphylococcus infection. Each of these cases made a complete recovery, and made the impression on my mind, that no acutely septicaemic case should die if subjected to the vaccine treatment, provided that this has been begun sufficiently early. It matters little what the
温度，或如果患者为严重中毒。重要的预后点是：（1）存在无法触及和治疗的感染灶。 （2）患者的总体状况，包括心脏、肌肉和中枢神经系统严重中毒。这两个因素可能使成功的结果完全不可能。”

他说，一般情况下血液感染的病例之所以能很好地对疫苗治疗作出反应，是因为血液中的病原体数量相对较少；但因为血液中没有保护性物质，这些病原体没有能力激发这些保护性物质，这些缺乏保护性物质。在皮下注入一个死培养物，这种效果，这些物质被迅速地带入血液中。

说明在病例中使用疫苗的使用，他说：“一个11岁的男孩，八周前患了猩红热。假象的康复后，又有新的发作。在两个星期内，他处于低姿态的昏迷状态，脉搏为128，温度为104°F。两个鼓膜穿孔，正在自由地排泄。从耳朵和血液中都分离出金黄色葡萄球菌和溶血性链球菌。24小时内，准备了疫苗。体温和脉搏几乎立即开始改善，最后的结果是完全康复，两侧的听力都正常。”

另一例几乎同样令人印象深刻的病例是一个男人，腿部有静脉曲张和发烧104°F，发烧持续了三个月，偶尔有寒战和夜间出汗。从血液中分离出的纯种金黄色葡萄球菌。1100万单位的注射在几乎立即得到改善。在第10天，血液是无菌的，不再需要进一步的治疗。奥伦对这类病例的乐观态度非常令人鼓舞，无疑会使许多人想起我们在护理下，以及在很短的时间内就已经超出我们护理范围的病例。

在应用疫苗治疗结核病组疾病时，他提出了同样值得我们注意的陈述。他说：“结核菌素治疗不可能影响混合感染，这总存在于只有轻微发热的病例中，并在许多没有发热的情况下有作用。就我个人而言，我认为，排除次级感染，结核病患者的每一例肺结核病都会在合适的条件下恢复。”

在尝试简单的实验，种植结核菌在两瓶甘油肉汤中，向一瓶中加入白葡萄球菌，发现经过一周的培养后，装有结核菌纯培养的瓶子几乎没有生长，而另一个瓶子，装有白葡萄球菌，结核菌生长得极其丰富，他说，“这些白葡萄球菌肉汤已经起作用了...”
a manure to the tubercle bacilli and promoted their multiplication. In the diseased lung this mixed infection softens and breaks down the tissues, and creates conditions favorable to the growth of the tubercle bacilli.

Those who have had the longest experience with vaccine therapy uphold Dr. Allen in these statements, and make the strongest plea for the use of autogenous vaccines in pulmonary tuberculosis with mixed infection. A case treated by Dr. Watters of the Mass. Hospital last year is full of interest. Although she was his private patient, we were able to follow his treatment of the case. He found her in bed with profuse expectoration, high fever, night sweats, and extreme emaciation. This extremely unpromising case recovered so fully under autogenous vaccine treatment, that at the end of a month she was able to be up, and seemingly on the highway to full recovery.

Surely vaccine therapy has opened to us a big field that should be called to our aid when needed. Would it not be possible to have a central laboratory in N. China under a trained man, where this work could be done? It would, I am sure, be a great boon to many, and make us all feel that we have access to the latest and best. With kindest greeting to your Association,

I am cordially yours,
N. S. HOPKINS.

FAR EASTERN ASSOCIATION OF TROPICAL MEDICINE.

CONGRESS AT HONGKONG.

The deep interest which is now being taken in all matters relating to tropical research is symptomatic of the times. Men are no longer content to take the accidents and illnesses incident to residence in a torrid zone as though these things were the unalterable decrees of fate. It is recognised that the conditions of life, both for native and white races, may be improved enormously and the chances of longevity increased greatly by taking due thought and making proper provision for the crop of diseases which, like weeds in a dank soil, flourish luxuriantly in the tropics.

A congress which will have the effect of disseminating much information concerning this very important and practical subject is being held at Hongkong (January 20-27th) under the auspices of the Far Eastern Association of Tropical Medicine.

Among the most useful and prominent of the exhibits to be seen in the St. Andrew's Hall, which is being utilised for the occasion, is that of Burroughs Wellcome & Co., who have for many years specialised in the art of producing exact and portable medicaments suitable for all climates.

Quinine may be regarded as the medicine of the East; it has a place of its own in regard to malaria and other tropical fevers. The 'Wellcome' Brand Quinine which is here exhibited achieves an unusually high standard of purity, surpassing even the requirements of the British Pharmacopoeia.

‘Tabloid’ Quinine hydrochloride is an extremely soluble product issued in suitable strengths of from 1 to 5 grains, and is readily tolerated even where large doses are necessary. Several preparations which are the outcome of the research work which is constantly being carried out by Burroughs Wellcome & Co., were shown. These include ‘Epinine,’ a synthetic substance allied in properties and in chemical constitution to the supra-renal active principle, but capable of being purified more
readily and giving a more prolonged rise of blood pressure.

'Soamin,' an arylarsionate of definite composition, possessing only one-fortieth of the toxicity of arsenious acid, has aroused considerable interest owing to its utilisation in cases of syphilis, malaria, and trypanosomiasis.

The assemblage of 'Tabloid' Medicine Chests and Cases and 'Tabloid' Brand First-Aid Equipments is very interesting and attractive. Much has been accomplished in the direction of rendering medical supplies available under all circumstances and conditions. The most comprehensive dispensing outfits for the physician's use and containing all the usual medications are here presented in most convenient chests, handbags, and even pocket cases, while the needs of the traveller, sportsman, and motorist are well provided for in a special series of first-aid equipments, elegant in design and well-devised as to contents and arrangement.

There are thirteen Chinese students studying medicine in Edinburgh at present. Amongst those who have recently obtained the 'Varsity M. B., Ch. B. are the brothers C. V. and C. C. Wang, sons of a pastor in the L. M. S. Church at Hongkong. Another brother is at the head of the Yangtze Iron Works, Hankow, and another is Secretary for Foreign Affairs in the Provisional Republican Government. Two of the students are ladies—one from Demarara—and one man is preparing to work in the Wesleyan Mission in Central China.
Correspondence.

TELOK BUKAN ESTATE,
DARVEL BAY,
B. N. BORNEO.

December 31st, 1911.

To the Editor of
"The China Medical Journal."

DEAR MR. EDITOR: I am anxious to procure copies of leaflets and handbills on elementary hygiene and on the prevention of the commoner serious maladies, such as tuberculosis, cholera, dysentery, leprosy, etc. Several of your members have such instructions in the vernacular posted up in and about their hospitals, and I should like to have similar notices printed for our hospital and coolie-barracks, kongsis, here.

Further, are there any useful handbooks of conversation shewing the pronunciation of the dialects spoken in the southern coast-ports, —handbooks after the style of the "Hospital Dialogues in Mandarin," by Jefferys?

Our coolies come from anywhere between Chefoo and Macao, and being mostly unable to read or write would puzzle a sinologue with their descriptions of symptoms. More or less efficient interpretation into the Esperanto of these regions, Malay, is available, but as often as not the Chinese who undertakes to interpret is hopelessly at sea as to what his countryman is trying to say, and has to cover his ignorance by jeering or swearing at the patient. Are there any vocabularies published which collate the words in common use in the different parts of S. E. China with pronunciation under the English equivalents? Such a pocket book would be of inestimable service to doctors and others who have dealings with Chinese from different coast provinces.

It may interest you to hear something of the conditions of work in the East Indies, and in this less-known island in particular.

Doctors working in China are perhaps liable to forget how many thousands of Chinese emigrate every year from Swatow, Hongkong, etc., to Sumatra, Java, the F. M. S., and Borneo. To the Philippine Islands so far, I understand, the Chinese coolie has been refused admission, but for the sake of that fertile country it is to be hoped that the embargo will be removed.

West of Singapore, in the F. M. S., much of the imported labour comes from India, but it it not unlikely that, with a Chinese metropolis growing so rapidly in Singapore, there the Chinese may come to predominate also.

You may be aware that the Tamil coolie immigration is conducted under an elaborate code of regulations framed by the Governments of India and of the F. M. S., and designed primarily for the protection of these same coolies. But, if one may argue from some recent notorious reports, this "protection" is of more than doubtful value, and the quarantine system in particular has at times been more of a death-trap to the unhappy immigrants than a safeguard to them or to those already on the estates.

But with a Chinese it is different. He is not accustomed to being protected like his Indian brother against either epidemics.
Correspondence.

or grasping employers. His bodily
and mental constitution for the
most part renders him singularly
well fitted to take care of him-
self and of his worldly interests.
Therefore it is with not a little
misgiving that we, in this hitherto
little known colony where tobacco
and rubber estates are now begin-
ning to be opened on a larger
scale, observe the same tendency
on the part of the authorities in
Singapore and Hongkong to enact
Immigration Laws which, of ques-
tionable value to the gentle Tamil,
are positively alarming and dis-
couraging to the self-reliant
Chinese.

Indeed it is easy to understand
that any legislation that has as its
object the regulation on a large
scale of so natural a social move-
ment as emigration in search of
work is bound to be unfair at one
time to the employer and at an-
other to the workman.

For example instead of emigra-
tion at this season flowing freely
from the afflicted provinces in the
Yangtse valley, it is proceeding in
its old slow routine fashion from
the same ports as during the last
twenty years.

The planter offers good wages
and conditions of work and is cry-
ing out for more men to work his
growing estates, while hundreds
are dying of hunger and cold a
few hundred miles north-west of
Swatow and Amoy. Are there
none in Anhui or Kiangsi or Hupeh
just now who would gladly accept
the chance of work on the terms
offered in Amoy or Hongkong?

Each coolie costs the planter be-
tween sixty and seventy Singapore
dollars to bring from Hongkong,
and of that sum about half is
supposed to pass into the coolie’s
pocket as advance money for the
purchase of clothes, etc. His
wages on the estate are not less
than ten dollars a month. (The
Singapore dollar is worth just
over two shillings and fourpence.)

During the tobacco planting season
when work is at its height each
coolie has his allotted “patch”
and is given seed and shown how
to utilise it. Thereafter it rests
with himself what profit he makes,
for the mature tobacco is bought
from him when he harvests it and
brings it to the drying sheds.

His tobacco crop usually brings
him a return at the rate of at least
sixteen to twenty or more dollars
a month for about four months,
after which he reverts to the steady
ten dollars a month working in the
fields or in the sheds.

The Chinese coolies here are
a healthy, cheery lot, living in
bongsis of about forty men each
in different parts of the estate.

Except for the purchase of stores
they mix not at all with the
Malays, Javanese, and natives.

The estates generally find it to
their advantage nowadays to pro-
vide adequate and often more than
adequate medical staff and super-
vision for their employees; and
indeed some estate managers make
quite a hobby of building model
barracks, wash-houses, hospitals,
etc., and of seeing that they are
kept in apple-pie order. (I fear
often to the chagrin or amusement
of the coolies concerned.)

In hospital work we have of-
course the one advantage over you
workers in China that we get our
sick men early, and that there is
no question as to their stopping
in hospital until they are fit for
work again, however long that
may be. As they have all been
“inspected” before leaving China,
they are usually a fairly fit lot on
arrival; but in every batch of new-
comers we find four to six per cent
anaemic and suffering from hook-
worm disease. These we presume,
must have passed the coolie-doctor
when his eyes were shut!
The temperature is constant here all the year round at an average of about 77° F. swinging daily from 70° or just under 70° to 83° or 85° F. With no cold season to provide for, the houses can be made simply and cheaply, and yet healthy.

Yours truly,
A. H. Skinner, M.D.,
(formerly of Hankow, China).

To the Editor of
"The China Medical Journal."

Dear Mr. Editor: An article in the September Journal quoted from the Indian Medical Gazette raised the question of the preservation of rubber gloves in tropical climates. A short note of a very successful method we have used here may be of interest.

Two years ago we returned from furlough, bringing with us a large number of pairs of rubber gloves, and the question rose at once, how to preserve the gloves not immediately needed for use.

Mrs. Maxwell as matron of the hospital took the matter in hand, and devised the following very simple plan:

A seven pound Huntley and Palmer's biscuit tin was taken and the bottom thickly spread with powdered boric acid, the gloves were taken from their original boxes, powdered boric acid was freely sprinkled inside each glove which was then put separately in the tin and a little more boric acid sprinkled over it before the next glove was put in, and finally another thick layer of boric acid was spread at the top of the tin. The gloves kept perfectly well through two hot and wet summers.

Now I have the best of all proofs of the truth of this last statement. We were new to rubber gloves and our choice of sizes was a very unhappy one, practically all the gloves we got being two or three sizes too large for comfortable use. We therefore took the opportunity a couple of months ago of sending all that was left of our stock of gloves back to the firm from which we purchased them, asking the firm to let us have as much as they could on exchange for gloves of a smaller size.

The reply we got was that the gloves were in as good condition as when they left the firm's premises and they would allow us the full value on exchange. I think no better proof is needed of the success of this method of preservation.

The only note is that boric acid must be used very freely. This is of little importance as boric acid is very cheap, while gloves are unfortunately a fairly heavy item.

One more word on the use of rubber gloves. We always employ two kinds of gloves. For the operator and his first assistant gloves of the ordinary thin rubber, whose life is, as we know, fairly limited. For any other assistant who may be employed in handing pads, holding retractors, etc., we use a heavier rubber glove whose life is practically unlimited. We believe this to be a real economy.

Finally a confession. We have not yet acquired that dexterity with gloves that makes us feel operating with them as easy as without. But for cases needing strict asepsis, as joint operations, wiring bones, and filigree implantation, the use of gloves is certainly an extra safeguard.

Note. My gloves I bought with other instruments from James L. Hatrick and Co., 70 St. John's Street, Clerkenwell, Loudon.

The ordinary ones at 2/- per pair, the heavy ones at 3/- per pair.

James L. Maxwell.
Taiwan, Formosa.
Correspondence.

To the Editor of
"The China Medical Journal."

Dear Mr. Editor: I send you the following for what it is worth. Please feel quite at liberty to publish it or to throw into your waste paper basket as you think best. I have no personal knowledge of the worth of the remedy advised; I simply pass it along to you.

With kind regards and best wishes,

I am, sincerely yours,

J. B. Neal.

Tsinan, November 2nd, 1911.

Extract from a letter received from a friend in America.

I am much interested and troubled at the reports that our beloved missionaries suffer seriously from bites of insects. If they will take one ounce of Epsom Salt and dissolve it in one pint of water, wet a bath cloth wet enough that it will not drip and rub their bodies well all over, and not wipe afterwards but dress, I am very certain that flies, gnats, fleas, bedbugs, mosquitoes, or the famous African fly (I forget the name) will never touch them. If they are exposed more than usual, being near water, or in a forest, they may make a somewhat stronger solution, wet a cloth and rub the face, neck, ears, and hands well, do not wipe, but allow it to dry; it will leave a fine powder over the surface that the most bloodthirsty insect will not attack. Besides, the solution is healing and cleansing; it will heal the bites; subdue the consequent inflammation, and cures many diseases of the skin.
Personal Record.

BIRTHS.

AT Canton, November 5th, 1911, to Dr. and Mrs. H. J. Howard, University of Penn., Medical School, a daughter (Margaret Strobel).

AT Tientsin, December 9th, 1911, to Dr. and Mrs. Francis J. Hall, A. P. M., a daughter (Virginia).

AT Taptieng, Trang Province, Siam, January 5th, to Dr. and Mrs. L. C. Bulkley, A. P. M., a daughter (Katherine).

AT Shanghai, January 13th, 1912, to Dr. and Mrs. F. J. Tooker, A. P. M., a daughter.

AT Foochow, January 19th, to Dr. and Mr. J. E. Gossard, a daughter (Marion Ethel).

AT Chenchow, Hunan, February 4th, to Dr. and Mrs. W. L. Burnt, A. P. M., a daughter (Evelyn Grace).

DEATH.


ARRIVALS.

December 8th, Dr. and Mrs. Norman B. Stewart and family, E. P. M., at Wukingfu.

December 23rd, Dr. Emma E. Robbins, M. E. M.

December 24th, Dr. E. S. Fish, C. I. M.

March 1st, Dr. E. Reifsnyder, W. U. Mission, Shanghai.

DEPARTURES.

January 6th, Dr. and Mrs. G. H. Huntley and family, A. B. M. U., for England and U. S. A.

January 20th, Dr. and Mrs. C. W. Freeman, M. E. M., of Chungking.

February 2nd, Dr. and Mrs. A. P. Laycock and child, C. I. M., for England.

February 3rd, Dr. J. H. Baldwin, M. E. M., Taianfu, Shantung, for America.

February 5th, Dr. F. A. Keller, C. I. M., for America.

WANT DEPARTMENT.

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

Dr. Stanley, Curator of Shanghai Museum, will be greatly obliged to anyone who will kindly send him specimens of Reptiles (snakes, lizards, and tortoises) addressed c/o Municipal Laboratory, Shanghai. The animals are best sent in 75 per cent. alcohol or strong samshu, or if they have remained one month in the preservative fluid they may be sent by post, just wrapped in a cloth moistened with alcohol and placed in a tin box.