DO THE NINETEENTH CENTURY MEDICAL MISSIONS FULFIL THE NEW TESTAMENT IDEAL?

By Rev. David Hill.

In comparing the medical missions of the present day with the New Testament ideals, so often quoted as their basis and pattern, one cannot but be struck with the different plane on which they respectively move. The difference indeed is so wide both as regards method and result that in some aspects we seem to see more of diversity than affinity between them.

The works of healing, both of our Lord and of His apostles, dispensed almost entirely with the aid of means and the help of time. Except in a very few instances He simply sent His word and healed them. The apostles worked largely on the same lines. The consequence was that medical ability and surgical skill were thrown into the shade, were probably never once thought of, whilst the marvellous Healer Himself came prominently to the front, and the interpretation generally put upon these acts was that they were manifestations of Divine power. Fear, wonder, amazement, fell upon the people, and they glorified the God of Israel. On more than one occasion what we should call conversion resulted from them; a nobleman whose child had been healed believed, and his whole house; a beggar also on another occasion at once followed Him in the way.

Similar results ensued in the case of the apostles' healing of the sick. They are sent forth, in the first instance, a few poor fishermen, with no more knowledge of medicine than they have of the laws of gravitation, yet they are told to go and heal all manner of disease and all manner of sickness, and to say as they go, "The kingdom of heaven is at hand." They have manifestly nothing to rely on except the word of command, the assured authority of their Master; and yet from all we can gather from the records handed down to us, in the matter of healing disease, there is no sign of failure, and but once an inability to cast out a devil.
After the Lord had ascended to heaven, though no further commission as to healing the sick had been given, there is no cessation in the exercise of this power, and in the very first case on record the people were so filled with wonder and amazement that they were evidently inclined to honour the apostles as they previously had honoured the Lord Himself; a result which Peter immediately resented, stoutly protesting against the honour being rendered to them, as though by their power or godliness they had made the lame man to walk. So too, Barnabas and Paul, when the Lycaonians were about to offer divine honours to them for the healing of a cripple, rent their garments and sprang forth among the multitude, crying out, "Sirs, why do ye these things? we also are men of like passions with you." With a marked consistency they turned the attention of the people from themselves to the Great Healer, whose instruments they were content, nay proud, to be.

And this was the very object intended by these acts of healing. They were meant to be a Revelation, and they fulfilled their purpose. And to what did that Revelation amount? Did it tell of a skilful practitioner, whose diagnosis and treatment of disease demonstrated the superiority of his medical training, or of a surgical ability which dazzled on-lookers and eclipsed all they had seen or known before? Nothing of the sort; these things were never thought of. The Revelation was of a Person and a Kingdom far other and far higher than those ruled by the laws of nature, where effect follows cause in an orderly succession, determined from within the scheme of nature itself, the links of which succession may be traced one by one till the chain is complete. The Revelation was of a kingdom, not of this world, a kingdom of heaven, a kingdom of God, in which temporal limitations are unknown, and where material laws are subordinate and subservient to the higher laws of a spiritual realm.

The Person too was not that of some skilful professor of one of the noted schools of medicine of the day, abreast of its most advanced teaching and aware of its most recent discoveries. He was the Revelation of God. The kingdom was Divine, and the Person not less so. The kingdom was indeed His own; His wisdom had framed its laws, His hand held its forces. He was the one great Imperator, at whose fiat diseases came or fled. True these works of power told of a tenderness more humane, a compassion more pitiful, than ever the world had seen or known, but their meaning reached further than that. To humble, honest hearts it said in language they could not mistake, "The kingdom of God is come nigh unto you," and they themselves bore witness, "We beheld his glory; glory as of the only begotten from the Father, full of grace and truth." By them the meaning was grasped, to them the kingdom of heaven had come down, and to its King they bowed in loyal and whole-hearted allegiance. Thenceforward there was to them a new
creation, all things had become new; the whole movement was lifted up from the plane of natural law to that of immediate contact with the Divine; a new world was opened, the kingdom of God was with men, and in these acts of healing they were led to see God acting from without, directly and immediately and independently of the intervening links of orderly succession in the chain of cause and effect. No ordinary diagnosis of disease, no skilful application of remedies, no patient oversight for days or months; He spake, and it was done, He commanded, and it stood fast: the voice was the voice of a God, and not of a man. The Word had become flesh, and now dwelt among men. And as it was in the days of Christ and His apostles, so it continued to be in later times when the gifts of healing were bestowed upon the Church; they also were as avowedly divine in origin, operation and intent, as those entrusted to the apostles themselves. All these wrought the one and the same Spirit, testifying alike that it is the same God who was working all in all; and as in the case of the gift of prophesying, so in these cases of healing also, the result doubtless was, that men would fall down on their face and worship, declaring that God is in you of a truth, so that all through the apostolic age there was a distinct demonstration of Divinity, an unhesitating attestation that the work of healing was the work of God.

Now let us span the eighteen Christian centuries, and from this unveiling of the heavenly kingdom with its majestic powers, its resistless forces, its unworl'dly bearings, as seen in the new creative energy of these New Testament healings of disease, let us turn to the medical mission work of the present day, the offspring and direct descendant of those N. T. works of Divine power and mercy, and let us inquire what have we corresponding to, or supplying the place of, these overwhelming attestations of Divinity!

First then, we are confronted with the fact that the bodily presence of the Great Healer Himself is still withdrawn, and the lapse of eighteen centuries appears at the very outset, though only to outward seeming, to be a great disadvantage: then the gifts of healing, such as those exercised in the apostolic age, if indeed still bestowed, are exceedingly rare; and further, the final command of the risen Lord has so centred the thought of the Church on the discipling of the nations and the preaching of the Gospel to every creature, that the healing of bodily affliction has largely retired into a subordinate place, though it is still appealed to as a divinely instituted agency, which, as we have seen, derives all, or almost all, its meaning from its Divine bearings,—its relation to and revelation of God.

But how different is the impression made by the medical missions of to-day from that of the healing of the sick in New Testament times!

In the place of illiterate fishermen we have cultured and qualified medical practitioners; instead of homeless and penniless evangelists we have
resident doctors and noble edifices; in the place of the utterance of one life-giving word we have the employment of the most potent medicines known, and the use of the most perfect instruments that can be had, and the long and patient ministry of kind and able men. Variations so wide cannot but produce a widely different impression. And if we may judge by the evidence of the tablets and scrolls which adorn our hospitals, and which tell of the surgeon's skill or the doctor's ability, as much as, or more than, of the power of God and the blessing of heaven, we should conclude that the first impression is that of the vast superiority of Western ability, learning and skill, and the second that of foreign kindliness and Christian charity, and the third that of the dazzling abundance of Western wealth.

But on every count the impression is that of a human, rather than a Divine, agency. The witness borne is to man rather than to God. The thought of man spontaneously comes to the front, whilst that of God falls into the back ground. The entire plane on which the healing moves has been changed. In the New Testament man was nothing, God was all in all. In the work of the present day man is to the front, and God too often a secondary consideration. In all this we cannot but recognize how it falls in with a prevalent, though subtle, tendency of the times. I refer to the exaltation of physical science and the hardly restrained worship of natural law. These must have their way, whether the interposition of God be sought or not, and so the living God may almost unconsciously be subordinated to His own ordinances. The question is thus forced upon us. Is the evidential value of medical mission work to be limited entirely to that of human benevolence? Is it the Divine plan that the work of healing the sick co-operate harmoniously with higher and more spiritual forces, but itself be relegated to another and less immediate relation to God than it held in apostolic days in the work of extending His kingdom in the world? These inquiries, combined with the general trend of scientific thought, at any rate suggest the need of a guard, a strong and watchful guard, lest this department of our work should lapse into a merely humanitarian benevolence and lose its original force as a witness to the living God; and if it be no longer within our power, by means of bodily healing, to make such striking and immediate display of the power of God as in the apostolic age, let us by all means see to it that our medical missions do make it abundantly clear, that, beyond the human instrument, and above the laws of nature, this whole department of missionary work is still one unmistakable expression, both of the wisdom and the love and the power of God.

In apostolic days it was rarely, if ever, disassociated from the work of evangelism. It was indeed not only an aid to it, but itself an integral part of that great evangel, which the earliest Christian missionaries were sent to
A Chapter in Chinese Surgery.

A Chapter in Chinese Surgery.

By J. Dudgeon, Esq., M.D.

The Golden Mirror of Medicine describes briefly eight manual methods for the treatment of fractures of the bones, injury to the sinews, dislocations, etc. These are the moh (摸) or feeling method, the chiek (接) or uniting method, the ts'wan (端) or supporting method, the t'í (提) or elevating method, the anmoh (按 摩) or pressing and rubbing method, and the tui-na (推 拿) or the method of pushing and taking hold of (so as to place it in position.) These various hand methods may fail or require to be supplemented by apparatus. Ten different forms are given by which the broken may be joined, the
slanting made straight, the elevated made even, the depressed raised, the
dangerous made benign and peaceful, the severe made light, together with
the administration of medicine and a nourishing diet.

1. The first is termed *kuo-shai* (裹带) by the use of bandages of white
cloth; the length and breadth according to necessity.

2. The *Chen-ting* (振挺) or use of splints; length 1½ feet; in roundness
the size of a cash or like the baker's roller (mien-chang.) The blood and
air at the part of injury have collected, and the parts are in consequence
painful, swollen and hard; if beaten, above and below, once on each side the
air and blood will be dispersed and the symptoms will diminish. The prin-
ciple of the method is this. The head is bandaged tightly, and the soles of
the feet are clapped to disperse the blood in the heart and cause the air of the
viscera to circulate and expel the superfluous blood from the heart, and
thus the nausea ceases and the body becomes comfortable; but if notwith-
standing this the patient remains unconscious, and the phlegm in the throat
resembles the sound of sawing wood and the body becomes rigid and there is
froth in the mouth, the case is hopeless.

3. The *P'i-chien* (披肩) or shoulder cap is prepared of ox-hide; in length
5 inches, breadth 3 inches, with two holes at the two ends, to be tightly bound
to the injured part with cotton string; the patient to recline. This leather
cap is softer and more movable than the wooden splints. Having used the
various manual manipulations necessary to restore the injured part to its
original position afterwards take bandages and fasten the leather cap to
the shoulder. Then take a board on which to rest the hands, over two feet
long and three or four inches broad, with ropes passed through at the two
ends; and suspend it and let the patient prostrate himself in it so that the
shoulder may hang down. Continue this practice for seven days, and if the
parts have recovered, the bandages may be removed; if not they must
still be worn, and if not continued a permanent defect will be the result.

4. *Suspension* (攀索) from a rope from a high place; the rope to be
grasped by the hands.

5. Three *bricks* (叠 甓) are to be used for each foot, upon which the
feet are to be placed. This is to cure injury of the thorax, abdomen,
axillae and ribs from whatever cause the injury may have been inflicted.
The chest has become depressed and must be elevated. The patient first takes
hold of the ropes, standing on the bricks, and must fix the loins. Then one
brick is removed from each side; the patient straightening his body and fixing
the thorax. This is to be repeated three times, when the feet will have reached
the ground and the air will have circulated and the superfluous air dissipated;
the depressed will have become elevated, the bent will have become straight.
Then use the bamboo screen with which he is to be enveloped and eight broad
Fourth and Fifth Methods. Suspension and Pile of Bricks. See page 60.

Sixth Method. Communicating Board. See page 61.

*Communicating Board.* Front View. See page 61.
Seventh Method. Loin Pillars. See page 61.

Eighth Method. The Bamboo Screen in use. See page 61.

bandages with which he is to be bandaged, and everything is to be made proper and suitable. He then ought to recline on his back, and when sleeping ought not to lie either face downwards or on one side, and a pillow ought to be placed under the loins, and all movements to the right or left forbidden.

6. **The Communicating Board** (通木). Take a piece of wood, three inches in breadth, two in thickness and the length from the loins to an inch above the shoulder; it is even on the outside, but hollow on the inside towards the spine with which in its hollows and elevations it must agree. It is perforated by five series of apertures. The diagram will illustrate its mode of application better than any description. It is so bandaged that the wood is kept from moving, and so advantage to the injured part secured. Soft cotton wool is applied to the side in contact with the body to prevent pain. In the case of injury of the spine, the joints laid open, or the bones elevated,—and as a result spinal deformity—the patient is to lie on his face, and another person is to stand on his shoulders, and the surgeon must closely examine the deformity and decide on the use of the light or heavy plan, whether to use the twan or supporting plan, or the t'ui-na the pushing and laying hold of, or the an-moh or the kneading to make the fissures unite; and then afterwards use the piece of wood as above described.

7. **Loin Pillars** (腰柱). Take four pieces of wood like flat runner poles (used for carrying things) one inch broad and half inch thick; the length according to the injured part; holes to be made through them on the sides at the two ends, and cords passed through uniting them all together. In cases of injury to the lumbar spine, whether of the bones, sinews, or flesh, such as dislocation and curvature, a medicinal powder mixed with vinegar is first applied, then the pillars are applied quite straight on the two sides of the spine; a mattress of artemisia is made to cover the pillars, in order to exclude wind and perspiration, and over all a broad bandage is wound round the body and drawn tightly, and the necessary medicine administered.

8. The **Bamboo Screen** (竹 簾), in size according to the injured part, no matter where. The manual method must first be employed, then the bandages, and last of all the screen, and thus correct what is uneven or movable.

9. The **Dela Paling** (杉 簾) is an auxiliary application. The length, breadth, bent or straight, projecting or depressed condition, must first be examined, then this wooden apparatus prepared; the number of pieces required must be calculated, and the order of their application remembered; holes at the two ends of each require to be made, through which cords are passed, with which they are tied together like a fence, and hence the name. They must not be so closely placed as in the screen. The fence is to be placed outside the screen and tied tightly with cords, and outside this again other cords must be used, with which to give strength and fixity and to prevent the
joints now brought together from getting displaced. The screen alone, it is feared, may not give the necessary and required strength and fixity, hence this fence is recommended, that the parts may unite strongly.

10. The Knee Cap (髌 膝) is made with the object of enveloping the patella. It consists of a bamboo circle with four feet. A piece of bamboo is taken and bent into a circular form and wound round with hempen thread, of which also the feet are made. White cloth bandages are employed and wound round the hoop and feet, and although inconvenient for the knee it gives no pain or trouble. The patella covers the ends of the two bones—femur and tibia; it is naturally very movable, and if injured it leaves its place, being displaced to one or other side; and although it can be replaced by the manual method, in walking, standing and the like, it is liable to return to its displaced position, hence the necessity for the enveloping plan to make it strong, and consequently prevent it from leaving its proper place, and thus prevent any limping defect which otherwise would be sure to arise. The apparatus as figured is placed on the knee, the loop keeps the cap in its place, and bandages are then employed to tighten and secure it firmly.

CASES ILLUSTRATING WHAT MAY BE DONE FOR CHINESE PATIENTS IN THEIR OWN HOMES.

Every one will admit that both for surgical and medical work it is much more satisfactory as a rule to have the patient in your hospital. Some, however, go even further and question the advisability of treating any medical or surgical case in a Chinese home. If it can be done satisfactorily, in my opinion it ought to be done; for in this way we can reach patients who would on no account enter our hospitals.

The following cases were treated in their homes:—

Case I. Mr. C., age 28, a Hunanese, came to see me about a tumour in the region of the parotid gland. He did not wish to come into the hospital, so after seeing the temple where he was lodging I agreed to operate there. Dr. Merrins, of the American Church Mission, kindly assisted me, and the tumour was successfully removed. He was visited daily for about a fortnight. Afterwards he came to the hospital to be dressed, and made a good recovery.

Mr. C. is the only son of one of the gentry in a village not far from Chang-sha. After the wound had quite healed up he returned to his home, and since that time several of his clansmen have called upon me. One of them gave me a pressing invitation to visit Mr. C.'s village, assuring me that under his care I would be quite safe, if I put on native dress.
Tenth Method. The Knee Cap. See page 62.

The Knee Cap in use. See page 62.
Case II. was introduced to me by the father-in-law of Mr. C. Mrs. L., the wife of an expectant official, is also from Hunan and from the same hien as Mr. C. Mrs. L. had been suffering for years from a tumour of the right breast, and the native physicians had exhausted their resources in endeavouring to disperse it. With the kind assistance of Mrs. Bell, of the Wesleyan Mission, the growth was taken away. The wound healed up without any trouble, and since the operation the patient's health has improved very much.

Case III. was introduced by Mrs. L. Mrs. T., a young lady age 22, is also from the same hien as Mr. C. and Mrs. L. She complained of a hard stony-like growth in her left breast. The age and the time it had existed without any involvement of the axillary gland were against cancer, but because of its stony-like hardness I obtained the consent of the husband to remove the whole of the gland if necessary. Mrs. Hart kindly assisted me, and the tumour was removed. On making a section with the knife the peculiar creaking which one gets in cutting through a shirrous tumour was well marked. Feeling in doubt I laid the matter before her husband, who replied very sensibly, "we do not know what ought to be done; we trust you, but if you have any doubt in your mind remove the whole breast." This I did, and the patient made a rapid recovery.

The first of this series of cases came in such an unaccountable way that one feels that it must have been an answer to the many prayers that have been offered up for Hunan. As a result of these operations I believe that three of the most influential families in that hien have been changed from enemies into friends, and the way is being prepared for a visit to their homes.

Case IV. was that of a young lady, Miss W., age 15, who was the possessor of a supernumerary thumb. Mrs. Bell kindly helped me, and the extra thumb was removed. The two thumbs had a common joint, but in spite of an attack of erysipelas the wound healed up perfectly, and when I saw her last the scar was hardly noticeable.

A remarkable feature in the above cases was the readiness with which the patients consented to take chloroform and the perfect trust they showed while it was being administered.

Case V. Mrs. T., a Chinese lady, was first seen when in a state of hyperpyrexia. She was carefully nursed through this period, and with the fall of the temperature the rash of small-pox made its appearance. The late Mrs. North, of the Wesleyan Mission, generously volunteered to take part of the nursing, and to her tender care that Chinese lady owes her life. Not even a single scar was left, and she recovered perfectly.

Case VI. Mrs. T., a mandarin's wife, had an attack of acute bronchitis and asthma. The native doctors had made her a good deal worse, so that for several nights she had obtained scarcely any rest. Having done their best
they retired and said the case was incurable; the patient must die. Some months afterwards Mr. T. told me that he was very much afraid of foreign medicine, and it was only the fact that his wife could not recover, according to native opinion, that induced him to allow a foreign doctor to be called in. Mrs. Bell was good enough to help me with this case.

But it may be asked what about the opportunities for spiritual work? When in the hospital patients have the option of attending the daily services, and while in the wards they can be spoken to at any time. In their homes the opportunities may not be so frequent, but still they are frequent enough, with the additional advantage that you have the whole family instead of a solitary patient.

A. M. M.

PHAGEDENIC PHARYNGITIS,

THE CAUSE OR RESULT OF HIGH FEVER, WITH PETECHIAL ERUPTION;

(OR SIMPLY CO-INCIDENT)?


E. P. H., a Swedish gentleman, age 27.—Patient, who had been complaining for two days of slight malaise (discomfort in his mouth, not throat) and loss of appetite, was seized on Friday, Sept. 14th, 1894, at 7.30 p.m., with an ague-like attack, which we shall describe below. It may be noted here that patient had been resident in this port (Hankow, Central China) for three months, and had been stationed in North China (Shen-si) for some three years previously. The summer was a trying one, and he felt it much, especially the latter half of August, during which the average daily maximum of the thermometer was over 100° F. in the shade, and the average minimum at night over 90°.

Patient, who was formerly a sea-faring man, had suffered from ague for some twelve months together, some eight or nine years ago.

Present illness.—Cold stage of rigor set in at 7.30 p.m. and lasted half-an-hour. It was characterised by chattering of the teeth, violent shivering, aching of limbs and a cramped feeling in the legs, also by headache. Hot stage commenced at 8 p.m., lasting three hours and increasing the headache. Patient at times delirious, vomited freely and had great thirst.

Temperature at 8 p.m. 100.6. Friends gave him antipyrin grs. 10. At 9 temperature was 102.6. Sweating stage began at 11 p.m., and was over at 1 a.m., when patient was given a tepid bath, after which he fell asleep.

Saturday, Sept. 15th (second day).—Patient got up and spent the forenoon reading and writing, but did not go downstairs. At 4 o'clock he took
Phagedenic Pharyngitis.

six grs. quinine. At 6 p.m. had a second attack similar to the first, but less severe. Perspiration in third stage was profuse. Patient had a fairly good night's rest.

*Sunday, Sept. 16th* (third day).—This morning a petechial eruption was found to have broken out on patient's face, limbs, &c. The spots, which were of a bluish colour, were most numerous on the face (perhaps from thirty to forty spots), and varied in size from a pin's head to nearly quarter of an inch in diameter. There were two on the mucous membrane of the lips, the pellicle of which had burst, and blood was oozing from them.

There were spots, similar to those on the face, on the arms and thighs, chiefly on the extensor surfaces, also a few, perhaps half a dozen, on the chest and one only on the abdomen.

It may be noted here that the spots gradually faded from day to day, the blood in them drying up, and assuming a brownish colour before being absorbed. No fresh crop appeared, and no other eruption showed itself during the whole course of the illness.

Patient was spitting a little blood, which he believed came from his lips, and did not at this time make any complaint of pain in his throat.

During this day he had quinine grs. 5 at 10 a.m., grs. 10 at 1 p.m. and grs. 10 again at 4.30 p.m. Fever said not to have returned on this day, but temperature was not taken. During the night patient continued spitting blood, felt uncomfortable, and had troubled sleep.

*Monday, Sept. 17th* (4th day of illness).—Patient awoke feeling exhausted and complained of sore throat, now for the first time.

The above history has been taken down from patient's friends. Owing to my being absent from home I was not called in till this the 4th day of the illness.

*Monday, 4 p.m.*—Found patient in bed, but able to sit up and not looking at all dangerously ill. The temperature had been taken at noon, and was then 100.6. The pulse was 70 and regular. The tongue was slimy and coated with a brownish white fur. The throat was slightly congested, and at one spot on the left side a few bluish veins stood out, and from that part a little blood was oozing. This explained the spitting of blood. The case seemed to me one of ague with petechial eruption (extending to the throat), although typhoid was kept in view as there had been several cases shortly before among foreigners in this port. As the bowels had not been opened for two or three days a dose of castor oil was given, and a diet of milk, soup and arrowroot ordered.

Three hours later (7 p.m.) patient had a motion with blood, also similar motions at 7.45, 9.15 and at intervals during the night.
Tuesday, Sept. 18th (5th day of illness).—Patient passed a restless night. Temperature at 8 a.m. 102.7. Pulse 92. Later on, patient's throat was examined, and slight ulceration of both tonsils was found to exist.

Six grs. each of sod. salicyl. and quinine were ordered to be given every four hours; also a throat wash containing KCl. Oz. The temperature rose to 104°, and the headache became much worse. Ten grains of antipyrin relieved this somewhat for the time being.

The urine voided was 'smoky,' and when examined two days later was found to contain numerous red blood corpuscles. No tube casts were found, but only two slides were examined.

The evening temperature rose to 104.4. Pulse 97. Respiration not noted. Patient was given sod. salicyl. and quinine as above, also antipyrin grs. 10.

Swallowing was now attended with much difficulty, and spitting of blood mixed with mucus continued.

Wednesday, September 19th (6th day).—Temperature during this day ranged from 102.9 to 104.5.

The left tonsil on examination was found to be slate coloured, and the pharynx was of a dusky red hue.

Pilocarpine gr. $\frac{1}{4}$ was administered, after which perspiration was very free, but the temperature still continued high, 103.9. Pulse 124.

Thursday, September 20th (7th day).—The pain attendant on swallowing was now intense. Temperature varied from 100.4 to 104.

A hypodermic of morphia was given at 10.15 a.m. to give rest and some relief from the intense pain. It is interesting to note that this was followed by a marked temporary fall in the temperature. This was 104, at 9.30 a.m. ($\frac{3}{4}$ hour before the morphia was given), and fell to 101.2 at 12.30 and 100.4 at 1.25.

The relief afforded by the morphia enabled patient to take milk without pain. He had a copious brown coloured loose motion, with no blood, at 6. p.m.

Examination of Throat.—Left tonsil was a mass of grey slough, and the right was similar, but smaller in size. Dull red inflammation spreading upwards and inwards from left tonsil. Two patches of yellow colour on the posterior pharynx. Tongue moist and only slightly furred, and not swollen.

Patient quiet. Breathing only slightly laboured. He was alert when talked to, and asked for food (milk, meat juice, etc.) from time to time.

The petechiae on face, chest, etc., had now assumed a dark brown colour were drying up, and could be felt raised above the skin. Some of them were surrounded with a greenish halo. No other eruption was visible. Patient said he had no pain all along, except the pain in the throat and headache.

The temperature at midnight was 104.5.
<table>
<thead>
<tr>
<th>Day of Disease</th>
<th>Sep 14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>M</td>
<td>E</td>
<td>E</td>
<td>M</td>
<td>E</td>
<td>M</td>
<td>E</td>
<td>M</td>
<td>E</td>
</tr>
</tbody>
</table>

**Disease:** Phagedenic Pharyngitis.

**Name:** F. P. H.

**M. 27**

- **42**: 155, 107°
- **39**: 145, 106°
- **36**: 135, 105°
- **33**: 125, 104°
- **30**: 115, 103°
- **27**: 105, 102°
- **24**: 95, 101°
- **21**: 85, 100°
- **18**: 75, 99°
- **15**: 65, 98°
- **12**: 55, 97°

Diagnosis: Morphia ½.

Died at 12:10 a.m.

Not taken.
Friday, September 21st (8th day).—Temperature remained high. Pulse got weaker. Diarrhoea set in, and was very frequent. The condition of the throat got still worse. The gangrene had now involved the soft palate which was perforated to the left of the middle line.

Patient died at 12.10 a.m., Saturday, September 22nd:—eight days from the commencement of the attack. The diet during the illness was milk, meat juice, brandy and egg nog; at first by the mouth and later by the rectum. The medical treatment has been alluded to above. I do not think anything could have saved the patient, who probably died of septic absorption from the sloughing tonsils and fauces.

McBride in his 'Diseases of the Throat, Nose and Ear' says: 'The prognosis of gangrenous pharyngitis, whether primary or secondary, is extremely unfavourable,' and adds in referring to treatment (antiseptic gargles, etc.) that it is 'a disease which cannot be treated with much hope of success.'

Diagnosis.—This seems uncertain. Petechial eruptions occur in the course of typhus, scarlatina, small-pox, relapsing and malarial fevers, acute scorbutus, sunstroke, plague, etc.

The diagnostic rashes of typhus, scarlatina and small-pox were wanting, and in fact there seemed to be nothing to enable us to decide whether the case was one of primary throat affection (cause obscure), or of throat affection secondary to typhoid, malarial, or other fever, with petechial eruption. The symptoms seem to be capable of explanation on either hypothesis.

My apology for publishing the case is the extreme rarity of phagedenic pharyngitis.

MEDICAL MISSIONARY ENTHUSIASM IN THE HOME CHURCHES.

By John C. Thomson, M.A., M.D., Hongkong.

To-day, as never before, the Church of Christ is rising to a realization of the meaning of her existence in the world, and is bracing herself to the task of world-wide evangelization. During my recent visit to England it was my privilege, while acting as Special Centenary Assistant to the Home Secretary of the London Missionary Society, to come into very close touch with the Churches of at least one great denomination, which in respect of missionary interest is but a type of all the denominations; and I return to the mission field cheered and strengthened by the conviction that the spirit of fervent prayer for the work we are doing, and for ourselves amid our work, is widespread, and is rapidly spreading in the home Churches. On all sides such
prayer is having its natural reflex results in personal consecration to missionary service, if God should open the way, and meantime in earnest effort to diffuse missionary information and enthusiasm. In individual congregations, indeed, one found that very much depended on the spirit of the ministers, but taking the Church as a whole there is undoubtedly a great wave of missionary zeal that did not exist even a very few years ago.

On the crest of this wave is the Church's interest in medical missions. Some question their necessity in such a region as India with its comparatively abundant provision for physical healing, but none their desirability all over the China field, and the objection as regards even India is surely ruled out by the fact that medical missions are being established in many of the larger cities of the home lands themselves as recognised helpers in the evangelization of the masses. All the great societies are affording the value of this agency by active efforts to push it to the utmost, and one of them, the Church Missionary Society, has appointed a medical man as medical secretary to give his whole time to the development of this branch of its operations.

No topic is of greater interest to a missionary audience than a description of this practical preaching of the spirit of the Gospel of Jesus, "goodwill toward men." Many who seem untouched by appeals in any other form listen with breathless attention to the story of healing combined with teaching, while not only to the medical missionary, but often to other missionary speakers as well, is addressed the direct petition, "Tell us something of the medical mission work." The apathy that once prevailed is passing away, and the Church having at length aroused herself seems to regard this as one of the most natural, and most likely to be successful, of all missionary methods.

A direct result of this is seen in the increased provision that is now being made for the training of medical missionary students. In Edinburgh, for instance, the Medical Missionary Society has greatly extended its sphere of action by enlarging its premises and its facilities for the acquirement of practical experience, by opening its doors to women as well as men, and by the appointment of a special organizing secretary to arrange for medical missionary meetings all over the country. One might speak at length on this subject both as regards Great Britain and America, where movement along these lines seems yet more vigorous, but confining myself to what has come under my own observation let me mention the Livingstone College in London, recently organized, as promising a large increase of missionary work, medical missionary in nature, though wisely abstaining from use of the name. None recognise more clearly than do its promoters the advantages of complete medical training; but recognising too the fact that many in isolated localities will for a long time to come continue to be faced with the necessity of undertaking healing work without the presence of a qualified medical man, they have
opened this college, offering a systematic curriculum in elementary medicine and surgery, extending over one or two years, for intending missionaries to outlying regions. Its students give their whole time and strength for the time being to medical study, with practical work, under the guidance of able teachers, one of whom, by the way, is Dr. Patrick Manson, of China fame; so that, while for obvious reasons each applicant for admission is required to sign a pledge that he will never with only such training describe himself as a "medical" missionary; those especially who take the longer curriculum will have no unsatisfactory preparation for practical work when that is thrust upon them by circumstances. The demand for such an institution as this, having as its function the spreading of medical missionary operations more rapidly than is likely to be accomplished by more ordinary means, seems to me a very real sign of the times.

Yet again, medical missions as such have claimed and received definite recognition at the great parliament of the medical men of Great Britain. At each of the last three annual meetings of the British Medical Association a morning has been allocated by the Executive Committee to a medical missionary breakfast, provided jointly by the Edinburgh Medical Missionary Society, the London Medical Missionary Association and the medical branch of the Church Missionary Society already referred to, to which all the medical men attending the meetings are invited. Last year at Bristol a thoroughly representative gathering assembled to express by their presence their interest in the subject, when addresses were delivered by Dr. E. F. Neve, of Kashmir, as representing India, and by myself in the name of China.

Over against these illustrations of the advance of missionary interest in general, and of medical missionary enthusiasm in particular, some pessimist will doubtless call to mind the huge deficits shown in many missionary balance-sheets a year ago, and likely to recur in the present year. These deficits, however, were not due to diminution of income, for the reverse is the case, but to increase of expenditure and to a disproportionate increase of revenue. Our leaders at home have gone forward a little faster than the rank-and-file were prepared to do. To these leaders, and to the Church itself, we owe a duty, which we have not in the past fully discharged. Enthusiasm cannot develop on thin air; it must have facts, and we on the field must furnish the facts. Very few medical missionaries are at any particular time at home on furlough to plead with the living voice the cause of medical missions, and it is incumbent on us to supply this lack by a freer use of the pen than we have been making. All of us can tell a tale of doors being opened to the Gospel, of opposition being borne down, of men and women being turned from the worship of idols to the service of the living God, through the powerful instrumentality of medical mission work, and it is a tale that ought
to be told more widely than it has been. Great progress has been made, as I have tried to show, but it is only after all a beginning of what may be looked for; and I want to urge my brethren in the China mission field to join myself in an earnest resolution to do what in us lies by means of communications to our missionary journals, to our various societies, to our particular Churches, to individuals, to foster and quicken medical missionary enthusiasm in the home lands. We are all apt to plead lack of time, and with just cause; but while I have been cheered by what I saw in England I have also had laid on me this sense of responsibility in the matter of the future of medical missions, and while I gladly accepted the editorial invitation to pass on through these pages the word of cheer I cannot refrain from availing myself of the opportunity it affords me of urging more earnest service in this respect than we have hitherto rendered.
We Spiritu Sancto.

Veni, Creator Spiritus,
Mentes tuorum visita,
Imple superna, gratiâ,
Quae tu creasti pectora.

Qui Paraclitus diceris,
Altissimi donum Dei,
Fons vivus, ignis, caritas,
Et spiritualis unctio.

Tu septiformis munere,
Dextrae Dei tu digitus,
Tu rite promissum Patris,
Sermone ditans guttura.

Accende lumen sensibus,
Infunde amorem cordibus,
Infirma nostri corporis,
Virtute firmans perpet.

Hostem repellas longius,
Pacemque dones praeinus,
Ductore sic te praevio
Vitemus omne noxium.

Da gaudiorum praemia,
Da gratiarum numerâ,
Dissolve litis vincula,
Adstringe pacis fœctera.

Per te sciamus, da, Patrem,
Noscamus atque Filium,
Te utriusque Spiritum
Credamus omni tempore.

Sit laus Patri cum Filio,
Sancto simul Paraclito,
Nobisque mittat Filius
Charisma sancti spiritus.

"Popularly ascribed to Charlemagne,
but certainly older."
Whit Sunday, 1895.

That day, so many years ago,
They sat apart,
Wond'ring perhaps, while waiting yet
With faithful heart.

Their faithlessness not once nor twice
Rebuked had been;
They could not doubt the Risen Lord
Their eyes had seen.

"Tarry ye here" had been His word,
"For Power shall come,
"When in your hearts the Comforter
"Doth make His home."

They sat within that upper room
Awaiting still,
When sudden mighty wind from Heaven
The place did fill;

And cloven tongues of living flame
On every head did rest.
—Not less our need than theirs O Lord,
We, too, would thus be blest.

The stormy wind is blowing strong
This morn without,
O come, and thus sweep through my soul,
Dispel all doubt.

Thy gentle Breath, the Breath of Life,
Hath breathed on me,
I live by Thee, but O to live
Abundantly!

O that the living flame again might come
From holy Fire above,
That true and faithful I might witness to
My Saviour's Power and Love.

M. A. P.
BREVIA THEOLOGICA.

"I believe in the Holy Ghost, the Lord and Giver of life." This description of the Holy Spirit was inserted in what we usually call the "Nicene" Creed at the council of Chalcedon, A. D. 451. Its position in the Creed is due to an interpretation of St. Paul's words in I. Cor. xv. 45, which is now generally rejected; some of the early Greek expositors explained the latter part of the verse to refer to the bestowal of the Holy Spirit on Christ. Were a modern theologian required to insert the phrase in the Creed he would probably place it earlier, e.g., "And in Jesus Christ His only Son, the Lord and Giver of life." Still, it does not follow that the phrase as it now stands is wrong. It is a too common practice to think of the Father, the Son and the Holy Ghost in such a manner as to neglect the truth that "there are not three Lords, but one Lord." "What things soever the Father doeth, these the Son also doeth in like manner," justifies us in saying: whatsoever things the Son doeth, these the Spirit also doeth in like manner." Of the "gifts" of the Spirit we may say that He giveth "nothing of Himself," but the things which He "laketh of" the Son, these He giveth unto us.

What is the meaning of the word "life" in the phrase which we have quoted above? The word "became" which the Revisers have had to insert in I. Cor. xv. 45 shows us that that particular reference is to a "life" which our Saviour gained the power to give when He rose from the dead. But although that "life" is most assuredly included in the right meaning of the phrase we can truly say that the Holy Ghost is "the Lord and Giver" of whatever we call "life." In this light how significant is the very second verse of our Holy Scripture. Let the 37th c. of Ezekiel be read over, remembering that "breath," "wind" and "spirit" are the very same word as that used in Gen. i. 2. A different word is used in Gen. ii. 7 for the "breath of life," but in the Septuagint version the Greek rendering of "breathed" is only once more used in the Holy Scripture—it was used of our risen Lord when He "breathed" on His disciples the breath of the new life and said unto them, "Receive ye the Holy Ghost."

To a medical man the word "life" in its physical sense is not merely a medical term; it is the medical term. His appointed duty is to save "life." To a medical missionary it is a matter of no small importance to see whether that word "life" in its physical sense is to him a sacred word or a secular one. A true view will claim that all which bears the name of "life"—physical, intellectual, social, political, moral or spiritual, is from God, who is the living God. "With thee is the fountain of life." A help to such a true view
will be found in Dr. Hort's thoughtful words in his Hulsean Lecture on "The Way, the Truth and the Life," pp. 102, 103.

The Saviour "came as the Anointed King's Son to His own inheritance to deliver a holy land and a holy people from invaders and usurpers, and to bind up the breaches and severences which they had wrought. Sometimes the intruders are diseases or disablements, sometimes they are sins, sometimes they are unclean spirits, in whose working disease and sin are inextricably blended. But in all cases the expulsion is called an act of saving or salvation; and it follows on that homage to the rightful Sovereign above and to Him whom He has sent, which is called faith.

"And so always the precious possession which is rescued out of the hand of the enemies is Life. That one name alone expresses the summed result of Christ's acts of various and limited salvation. The diseases, weaknesses, cripplings, losses of sight or speech or hearing, and losses of the governing reason, whether they had but lately come to pass or were of long standing or existed from birth, were only so many inroads of death, partial assimilations of the living body to the inert mimicry of the corpse. The healings and restorations were but differing gifts of life that had been lost, renewals of some one of those forms or activities or faculties of the united body and soul which make up the single picture of life. Even the restoration of a withered hand is spoken of as a part of what is emphatically called 'saving a soul' as opposed to 'slaying';' of saving, that is, the central and supreme seat of life within the body from the death which in slaying it would slay not one member but all."

Side by side with this let us read Dr. Newman Smyth's words in "Christian Ethics," p. 112. "Personal life is something morally to be desired. Our love of life is a moral love of it. Life, which for us and in our consciousness of it, means not merely existence, but continued personal being, is itself an object of ethical desire; it is a good will of God to be realized in the preservation of His children . . . . To whatever degree life has been as yet realized in personality, to that measurement of attainment it is to be held up; it is not to be suffered to lapse, to fall below itself, to sink from the plane or personality to the level of the mere existence from which it has been uplifted into self-consciousness. Life, personal life, is to be regarded as an achievement of spirit, has itself the achievement of a creative end of being. And this achievement of the spirit is to be preserved in the final good (Luke xxii. 19: the soul is to be won)."

One more extract from the same writer (p. 136) puts very forcibly the contrast between Buddhism and Christianity on a line which the reader will have no difficulty in connecting with the above paragraphs: "In the legends of Buddha he seeks to console the mother who had lost her child by bidding
her go to all other homes and learn that each has its sorrow, and that there are many more dead than living. Jesus comforted the sisters at Bethany by going in the power of the living God to the tomb and proclaiming the resurrection and the life."

Any reader who would like to follow up the suggestions of these fragmentary "brevia" will find much help in other parts of the two works from which these extracts have been taken, especially in the whole of Dr. Hort's third lecture on "I am . . . . the Life," pp. 95-149, and his note on "Life," pp. 189-197; in "Christian Ethics," pp. 331-356 (Section I of Chap. II of Part Second, "The Duty of Self-preservation"). See also Dr. Westcott's note, and additional note, on John i. 3 f. and additional note (2) on I. J. v. 20.

G. G. W.
The “Ti'en Tsu Hui” is a society whose inauguration has been prominently brought before the public quite recently in Shanghai and other ports. With the general object of that Society the supporters of this Journal can but have the deepest sympathy, as we have frequently pointed out the baneful effects of this cruel custom of foot-binding. It may be doubted whether the proposal to memorialise the emperor is a good one; personally we rather fear it may do more to defeat, than to advance, the good cause the promoters have at heart. The non-binding of the feet was the one Manchu custom the conquerors failed to force upon the subject Chinese. More than one emperor, from the days of Yung Tsen down, has tried to suppress this custom, but it has defied all those attempts to kill it, and we quite believe its vitality is sufficient to outlive another attack. At least it seems to us that this is not the time to ask a Manchu emperor to try and put it down, and the smallest evil that will probably follow this memorial will be a prompt and determined opposition to the Society amongst the bigoted literati, which will not only frustrate our effort but undo much of the good work which has already in a quiet way been accomplished. We have always been of the number of those who have steadily maintained that quiet and continuous moral suasion on the Christian converts of the country is the true and only, as it is the Scripture way, of bringing about such reforms. This must not be construed into meaning an occasional feeble remonstrance against the custom: let example and precept be vigorously used and societies formed, but all such action must never step beyond the bounds of persuasion. We do not wish these remarks to be taken as indicating a position of hostility on our part to the new Society, which proposes to work on heathen and Christian alike: on the contrary the Society by publishing useful literature on the subject (and we understand they are willing to meet the wishes of particular missionaries in this respect) will enable us to place the matter more intelligibly before our converts than ever before. The one point on which we do differ from the Society is in its “secular” basis. It is true that the prospectus states that the work is a
Christian one, but it has been particularly stated, both in public and private, by responsible officials of the Society, that they wish their appeal to be in no way on Christian grounds but purely on humanitarian ones. The reasons that have been alleged for the decision are: (1) The fear of sectarian differences causing difficulties in practical working, and (2) That an appeal based on Christian principles would not appeal to the great mass of the Chinese people! As to the first we feel sure the fear is groundless. The two very successful missionary conferences of 1877 and 1890 showed how small were the differences of the Protestant societies and on how many subjects they could combine in common action: we leave it to the Society to say that our Roman Catholic brethren would not join us in such a movement; we would not so insult them as to even suggest such a thing. The second reason advanced can surely only be due to ignorance. In the face of the fact that from Hankow alone during the last seven years the Central China Tract Society and the National Bible Society of Scotland have sold (not given away gratis) "upwards of seven millions of Christian publications" how can any man tell us that reference to God and religious obligation are objected to by the Chinese? We may be permitted to quote from a private letter sent to us: "The non-Christian character of the Society is due to ignorance... The founders are ignorant firstly of human nature, and secondly of Chinese ways of thinking. They have not realised the gulf that exists between seeing a custom to be foolish, injurious and wrong, and having the courage in one's own person to defy public opinion and suffer scorn and ridicule for the assertion of the truth. Only faith will enable the Chinese to overcome this custom... and in deciding to dispense with an appeal to faith they have doomed their effort to failure." If we thought the various missionary bodies of China were going to hold aloof from the Society we should unhesitatingly agree with our correspondent, but we trust and hope, nay we feel sure, they will not—and the Society's success will be due to those very missionaries that some people will not work with and to the power of that very name, the name of our blessed Lord, that they are so careful to keep out of their programme—afraid, forsooth, of "prejudicing a good cause by associating it with the name of God and Christ!!" It needs a Frederic Harrison to keep going a society based on purely humanitarian principles, and even he has had work, but we can assure our friends that they will find it much harder work to rouse any enthusiasm amongst the Chinese on this subject on purely humanitarian grounds. You can appeal to them on Christian grounds; they do recognise the argument that they should not deform the body God gave them; above all they have a conscience, and if you decline to appeal to that what have you to appeal to?

We have faithfully pointed out what we think a vital flaw in the constitution of the Society, but we have good hope that as the work proceeds the
enormity of this mistake will be recognised and rectified. Meanwhile we hope none will hold back from helping this good cause (i.e., so far as they can do so without compromise of principle), because it is not being carried out just as we wish. Let us give the Society our earnest and active co-operation in the name of Him who loved the little children, and under whose banner the Society must work if they are to save these little ones from untold misery.

We publish this quarter an important paper by the Rev. D. Hill, to which we would call especial attention. The subject discussed is not only an exceedingly important one for us medical missionaries but a very momentous one for the Churches who have sent us out. The writer is one of the best known and oldest missionaries in China, a man of wide philanthropy and in hearty and practical sympathy with medical missionary work. If, therefore, his views are somewhat different to what we should expect it is not owing to any hostile attitude to us as a body, and this fact should lead us all to weigh carefully what he has written. It is our intention to return to this subject on a future occasion, and so, for the present, we content ourselves with expressing a hope that many of our members, both clerical and medical, will discuss the question raised.

There lies before us a very interesting booklet entitled "A Descriptive Catalogue of the Clinical Museum," by Jonathan Hutchinson, F.R.S. The museum in question, which is a private one, is situated at No. 1, Park Crescent, London, and is under the curatorship of Dr. Williams. The preface informs us that the museum is "an attempt to show that pictorial representations of disease may be of great use in advancing our knowledge of it, and next to ascertain what are the best methods of displaying them." Mr. Hutchinson acknowledges that the idea is not a new one, and refers to the many museums, atlases of pathology, clinical surgery, &c., which have existed for many years, but adds, "with, however, the single exception of the splendid collection at the Hôpital St. Louis in Paris I am not aware that any attempt has yet been made to illustrate systematically the appearances which disease presents in the living subject." The catalogue is enriched by a number of beautifully executed portraits, and at the end is an account of the more important cases shown, within a period of two months, at the clinical demonstrations which Mr. Hutchinson has instituted. Should any of our members be visiting London we strongly recommend them to avail themselves of this institution, and can assure them that they will find every facility and help in studying any particular disease.

The value of such a museum as this depends largely on the width of area from which its material is drawn; for not only do we need for the
drawing of right conclusions many different portraits of the same disease, but portraits of the same disease as found under every variety of race and climate. It is just here that the collection of photographs, drawings and pathological specimens, with the history of each case, of diseases as observed in various countries, is of the utmost utility. Mutual comparison will often lead to the grouping under one family disease of several minor varieties; the variations being due to racial and climatic differences. Until this is done much doubt must exist as to the real nature of many complaints. This is well illustrated by the malady known as "Yaws." Of three specialists, Dr. Numa Rat, of the Leeward Isles, believes that it belongs to a family of "Syphiloids." Mr. Jonathan Hutchinson's opinion "tends rather in the direction of its being merely syphilis modified by race," whilst Dr. Radcliffe Crocker asserts that it is "not dependent in any way on syphilis." Such differences of opinion can only be settled by many observers in many places and by a combination of clinical and pathological, and possibly bacteriological, investigation. We take it that when the Shanghai Medical Conference of 1890 accepted Dr. Boone's offer to set aside a room for a museum in Shanghai, and voted a sum of money for its maintenance, it thereby recognised the responsibility that rested upon us as a medical association, working in a large country of which comparatively little is known, to contribute what we can to the elucidation both of its own peculiar diseases and of the inter-relationship of disease in general. The museum has, we believe, met with little support; certainly not sufficient to justify Dr. Boone in setting aside a room for it. This is a great pity, and we hope our next Conference will look at the matter and try and fix upon some workable plan. Pathological specimens are but seldom procurable, and need great care and circumspection in obtaining them; but good photographs and drawings of interesting cases are within the possible to nearly all of us, and we urge all our members to make it a matter of duty to forward such to the museum with a careful history (and when possible after history too) of every interesting and rare case. We are always glad to publish such cases in the Journal, but, in addition, copies ought to be kept in our museum. It would be easy to mention several special diseases which need such collective work as we have been describing, but we name leprosy only, partly because nearly all of us see a good deal of it, partly because a good deal of collective work has already been done upon it, but chiefly because of the wide discrepancy of views which still prevails regarding it. Mr. Hutchinson's museum contains "a leprosy globe," "an embossed globe upon which the distribution of leprosy has been marked with as much accuracy as my knowledge permits." "An inspection of this globe will impress the fact that leprosy is a disease almost confined to sea-shores, islands and river-valleys, and that it prevails under the utmost diversity of climate." It is this fact—a fact which in this huge
continent we can verify or dispute—that has led Mr. Hutchinson to strongly advocate the fish theory of the disease. Probably few of us believe in his views, but they have not yet been refuted to his satisfaction. Amongst the general conclusions on leprosy which he draws from his material is one which we believe, from our own observation, is quite wrong. "That tubercles occur only on certain parts of the surface, the face and hands chiefly. No portrait that I possess shows them on the trunk." We believe this could easily be disproved by a number of photographs taken in different parts of China; it is a wrong conclusion drawn from insufficient data. On this, and other subjects, we can, and ought, to supply such missing data.
Evangelistic.

AN EVANGELISTIC TOUR AMONGST FORMER HOSPITAL PATIENTS.

"After being committed to the care and keeping of Him who has promised never to leave or forsake us, we started late one evening, about the middle of October, to look up some of the patients who have been resident in our hospitals and have afterwards returned to their homes. Being actuated by an earnest desire to make a further effort to win them and theirs for Christ we thought the best means would be by visitation. With a view to this the names and addresses of in-patients are invariably registered, but we found that, in consequence of fear and other causes, several of these were either false or of such an intricate nature that it was quite impossible to trace them. We had several disappointments of this kind, finding sometimes after walking, as we did one day, several miles across muddy fields and through heavy rain that the name we sought was unknown. But all were not so, and of such the following instances may prove of interest. For several months a lad named Shu Chu-ngao was the originator of all mirth and mischief possible to one with his leg in splints and able only to sit up in bed. Such an apparent drawback did not prevent him arousing the many would-be morbid ones in the Cotham Ward. With such a genial disposition the lad naturally became a great favourite with all. Being very intelligent and able to read, our interest in him rapidly increased. Although of such a lively disposition, his intelligence and ability to read were used for a good purpose. The Bible was his constant companion, and his inquiries about portions which he could not understand, together with our frequent examination as to his knowledge of the truth, led to a very close study of the Word. A hymn book was lent to him, and his forte at times certainly appeared to be singing, or speaking more correctly making a discordant noise, for whilst prayers were being conducted in the hospital chapel, he, on his bed, would lustily unite with them with such spirit and zest, that it was often much to the discomfort of those upstairs.

When many of our patients are unable to attend worship on Sundays, it is our custom to conduct a service in the large ward, so that the bedridden may not be deprived of the privilege others can more readily embrace. These services he appeared to thoroughly enjoy, listening with rapt attention, and singing with great heartiness.
One Sunday evening, during an illness I had, he had been told that on the next day I was to be taken to the Wusueh hills. He immediately asked and obtained permission to visit me. He was assisted to my bedroom and there sat for about two hours, during which time we had an interesting, and I trust profitable, conversation about spiritual things. Although neither of us could kneel, the Lord hearkened to his simple prayer. That evening is one of the brightest memories of my life. After this the hospital being closed, he naturally became despondent. His father came to visit him and, after promising to fulfil all instructions given, was allowed to take the lad and return to his home.

His uncle being in Han-chwan on business, came to the chapel for medicine. As my intentions were to visit the lad, I returned with the uncle to his home, Chi-ma-k'ao, 20 li beyond Han-chwan. After such an intimate friendship, and three months' interval, our meeting was one of joyful surprise. His parents are poor. As I entered the hut I found him sitting, resting his leg and assisting in preparing the cotton-wool for spinning. It was encouraging to find that all instructions had been carried out and that his knee was much better, and not less so to hear his mother testify of his faithfulness in daily reading the Scriptures and praying to the God of whom he had learned in the hospital. His cheerfulness had somewhat abated, his most frequent question being, When can I return to the hospital? Can I now return with you? The latter request I told him it was impossible to grant, as my journeyings would be far and wide ere I returned, but arrangements were made for his return a little later. Unknown to us, they brought several dainty doughy rolls, floating in a sweet liquid, of which we were obliged to eat. The attitude of the people there was very different from last year, when I was stoned.

Whether God purposes using this lad to undermine the erroneous and evil ideas of foreigners and their ways which now exist we cannot say, but we hope so, as He often uses a lamb to lead.

After eight days' journeying, during which time tracts were sold, sick visited, and the Gospel preached in many places for the first time, we stopped a vendor of sweetmeats whom the village children hail with delight, and inquired if he could direct us to the village of Tsen-kia-nin. "What do you want there," was the inevitable query, for every one appeared to suspect our motives. "A Mr. Tsen, several months ago, was an in-patient at the hospital, Hankow, and we wish to see whether he be better or not. We are also selling good books and preaching the doctrine of Jesus. We have no other business."

He very dubiously replied, "I know him well, in fact I came from there this morning. He is not quite so well now as when he returned."
Among the crowd which had now collected was an old man who was going to the village and kindly volunteered to guide us, at the same time gaining for himself an opportunity of hearing the Gospel.

The man whom we were now on our way to visit, had had a very dangerous and difficult operation performed. It was very successful, and he rapidly became convalescent. He always listened attentively to the "wonderful words of life," and, unlike our young friend, was of a quiet and patient disposition. Friends and relatives visiting the hospital caused him to express a fervent wish to return with them, the journey being difficult and company desirable. Although a longer stay would have been preferable (as was afterwards proved), the wish was granted. Howbeit, he was very grateful for all he had received and left us.

After tramping several miles across fields with our aged guide, we entered a village containing about 130 houses. Mr. Tsen gave us a warm welcome and glad were we to rest. The day being far spent, he asked us to remain the night, an offer we did not hesitate to accept for several reasons; but we could not allow him to leave his bed for us to use, as he wished to do. Much to our surprise, a feast of many courses was prepared, and the one member of the clan who had the most refined etiquette was invited to entertain us. The proceedings evidently interested the large number of onlookers, from the head men to the smallest children, who had forced their way into the guest room to see the foreigners eat. After being soothed and satisfied, and our bedding having been laid upon the ground, we had prayers, in which he, his wife and lads united. Christ was pointed out as the only true and living way; they listened attentively, and then knelt reverently in prayer. But for rats we should have slept well. At dawn we made preparations for the day. By some mysterious means fowls had been prepared, the eating of which we enjoyed. After returning a present and making arrangements for his desired return to the hospital, we thanked God for the entrance gained in such an unlikely place and offered many prayers for their salvation.

At Wu-fen-kia, a village about 20 li from Mr. Tsen's home, lives another old patient. Unfortunately he was at market, but the villagers were exceptionally kind, considering we were the first foreigners they had ever seen. We gladly accepted the invitation to sit awhile in their hut, drink tea and eat eggs; they were anxious to prepare a more elaborate meal. As the patient would not return until evening; and we were wishing to press on, we chatted, gave several tracts away, and left, the whole of the villagers politely escorting us until we crossed the fields. Afterwards our servant told us that the reason the villagers were so kind and polite was because we had assisted the said patient by means of the Samaritan Fund, thus saving him from the unpleasant necessity of walking several hundred li and begging his rice
en route. This had become known for many li around, and undoubtedly accounted for the attitude of the people.

At T'san-ch'i-kang, a busy boat mart on the river Han, we enquired for a boatman who came to the hospital quite incapacitated for his work in consequence of rheumatism in his arms and hands. He remained under treatment for several weeks. On leaving there was quite an outburst of crying among the patients, when they saw him so grieved to leave us; he returned home supplied with medicine and sufficiently cured to resume his work. The numerous boatmen of the place, hearing that we were from the hospital, anxiously sought for a look at us, and I can assure you we had no difficulty in hiring a boat; in fact we could have hired a good many had we wished to do so. The man was away burying his father, but all spoke of, what appeared to them, the wonderful cure, and told us how he was able to resume his work. In many ways did they show their appreciation of the good he had received. Many other cases of equal interest might be told, but this must suffice. When nearing home one of our coolies who has travelled much said, "Many times have I travelled the same route, and know well the character of the people, and I am surprised and delighted at their conduct towards you." Let us remember the words of Solomon: "If thou forbear to deliver them that are drawn unto death, and those that are ready to be slain; if thou sayest, Behold, we knew it not; doth not He that pondereth the heart consider it? and He that keepeth thy soul doth He not know it? and shall not He render to every man according to his works?"—Central China Wesleyan Mission Prayer Union.

An account, or even mention, of evangelistic work, finds no place in the Reports of Medical Missions of the Church of England in Seoul and Chemulpo. A report of steady work in this direction comes from the L. M. S. Alice Memorial and Nethersole Hospitals, Hongkong. "Evangelistic effort and professional work proceed side by side in the Hospitals throughout the whole day; yet all is so arranged that neither in any sense interferes with the other." We like to think how mutually helpful the two departments of work are, the medical preparing the way for the evangelistic, while the latter takes up the task where the other leaves it and offers the only cure for the more deeply seated malady of a sin-sick soul; while both, as when evangelist and physician are combined in one person, are designed to bring a full salvation near to those who sit where the death shadow is only partially lifted, where only here and there the light of the glorious Gospel has shined.
It is good to read in the Report of the Medical Missionary Society of Canton that “visits in the homes have done much to overcome prejudice and strengthen confidence in Western medicine.” This is the privilege of those who, not possessed of a knowledge of “Western medicine,” can yet supplement the work of the medical missionary who, in China, is almost invariably over-worked, and whose sphere must generally be confined to hospital and consulting room, though he may wish he could follow the Great Physician more closely, and mingle with the people in homes where he would be secure of an attentive hearing from those who already believe in his “works.” This Medical Mission Report also tells of “instruction given to out-patients on each regular prescribing day, of Sabbath School, both distribution and private instruction in the homes of those interested.” We subjoin a paragraph referring to the “two schools which” have been for years an interesting feature of evangelistic work in the Hospital:

“The Hospital school has had an uninterrupted year of work. Although for reasons already mentioned the number of pupils during the summer months was less than in former years, yet the daily average attendance has been very good, and the progress in study most satisfactory. Week by week lessons have been heard, instruction in religious truth been given and steady advancement been made by those who in most cases were receiving their first lessons in regard to the Christian religion. The Sabbath afternoon prayer meetings have been exceedingly interesting and helpful. Five of the scholars have been admitted into the Church.”

The workers in connexion with the American Presbyterian Church, Peking, speak sadly of “the usual callousness to appeals to other than material improvement,” and regret that in spite of daily prayers and “much time spent in conversing with the patients as to their need of a Saviour no one has united with the Church from the patients during the year.”

The Report of the Swatow Presbyterian Church of England Hospital contains a full account of evangelistic work done . . . Morning and evening services and reading classes for women and boys, in all six daily classes or services shared between the missionary ladies and native helpers, besides conversation in the wards and sales of Gospels, etc., by the colporteur. It is encouraging to read that a meeting for “examining and instructing applicants for baptism” is held on Sunday afternoons. Says the Report:—

“During the year about one hundred men and women applied for baptism. Some of these we suspect may be insincere, others we fear will yield to the force of village opinion when they go home, but some we have good reason to hope are both sincere, and by faith will stand out against all persecution.”
"The classes and ward work are subsidiary to the preaching at the morn-
ing and evening services, and we have much reason to thank God for two so 
earnest and capable evangelists as the senior assistants. The Christian influ-
ence these two men have exerted on their fellow-countrymen in this region 
during the past twenty years must be deep and widespread."

Would that the number of such was larger! To quote again: "A number 
of old patients were baptized at the country chapels and two or three in the 
Hospital. It is encouraging to know that some of these had not applied for 
baptism here, and yet on going home had destroyed their idols and attended 
service at the nearest chapel." An extract from a letter written by one of the 
ladies of the Mission after visiting a country station will illustrate how the 
influence of the Hospital is multiplied. "The woman who was baptized had 
heard the doctrine in the Hospital when she was there with her son, who had 
his foot amputated. On their return home the husband was quite willing to 
listen, and he and a young son also became applicants. This younger son my 
husband did not baptize, but he had the pleasure of receiving the husband 
and wife, eldest son and little baby, all of one family, as well as another 
young man. We hope this family may be the means of bringing many others 
to worship, as their home is in a village where as yet there are no Christians."

This brings to mind again the need, so deeply felt where workers are 
few, of adequate "following up" of good work begun in hospitals. Happy 
indeed when patients are so truly convinced and so well instructed during 
their stay as to renounce their idols and to seek to know more of the truth, as 
in the case of those mentioned above. Yet not a few will feel sadly that 
opportunities made by medical work are lost, because no one is forthcoming to 
"take" them.

The workers of the Lao-ling Methodist New Connexion Medical Mission 
have been cheered alike by widespread and grateful appreciation of their 
work and also, better still, by results in the changed lives of former patients. 
To quote:—

"As in medical work so in religious work we find the best results in the 
wards. Here not much stress is laid upon preaching, rather do we trust to 
personal influence and conversation with the patients. To those whose 
diseases have required prolonged treatment systematic religious instruction 
has at their own request been given. All have listened willingly, and some 
eagerly, to the Gospel message. Instances could be given in which genuine 
conversion has evidently taken place, and we have since heard of three former 
patients whose changed lives on returning home can be distinctly traced to 
the religious influences of the hospital."

Thus from North and South, from stations here and there, comes news of 
the work of preaching the Gospel, whether by deed of healing or word of
mouth. Trial and triumph are always comingled as one takes a broad view of the field. The Gospel wins its way, though tired, discouraged workers sometimes forget to "lift up their eyes and look on the field" and to rejoice on others reaping, though they do not yet gather in themselves. Let such remember that whenever holy influence is brought to bear even upon those whose spiritual perception is small, the kingdom that comes not with observation is approaching.

M. A. P.
Medical and Surgical Progress.

A PLEA FOR CLINICAL RESEARCH.
(Extracted from Mr. Jonathan Hutchinson's Annals of Surgery. Vol. 17, No. 21.)

In vigorous terms and beautiful language Wordsworth has repudiated the idea that the laws of social morality and well-doing have been left to be discovered by the casuist and theologian—

"Believe it not;
The primal duties shine aloft—like stars;
The charities that soothe, and heal, and bless,
Are scattered at the feet of Man—like flowers."

Although the suggestion may possibly seem strange from the pen of one by profession devoted to the pursuit of scientific knowledge, I may yet venture to admit that I have often thought that a similar assertion is, to some extent, true as regards the relation between common sense and experimental investigation. No one will deny that social-progression has been much indebted to moralists and political economists who have studied questions in detail, concerning which others had been content to accept instinctive feelings and general impressions. Far less is it possible to entertain other than a sentiment of reverent gratitude for the discoveries of the telescope, the microscope and other instruments of research.

We must not venture to follow Wordsworth in his distrust and almost dislike of science. There remains, however, I cannot but think, sound reason for protest against premature attempts on the part of the minute investigator to dominate the whole field of observation. It may still be doubted whether results of general outside observation, conducted with zeal and caution, are not obtainable more quickly, and sometimes even more surely, than those for which we are indebted to the laboratory. It is not necessary to depreciate the one in order to exalt the other. In the present day enthusiasm for the one method has unduly cast the other into the shade. Especially has this been so in the science of medicine. The tendency has been to receive with premature confidence every little so-called discovery of the chemist or the bacteriologist, and to permit them in some instances to supersede, and in others to override, the conclusions deducible from common observation. The latter has accordingly been disparaged as a means of arriving at discoveries, and it has not been cultivated with the industry, zeal and caution which would naturally spring from a further faith in its methods. Now inasmuch as many of the most important problems of medicine are from their nature but little amenable to the exact methods of scientific investigation, it is surely to be regretted that any slur should be cast upon the only kind of research which is really hopeful.

"Common sense" is not frequently very unscientific, or rather it lacks scientific support, but there is no reason why on that account "science" should be permitted to thrust common observation wholly aside. I will endeavour to give some illustrations of what is meant.

The old-fashioned expression, "taken a chill," implies probably a better conception of the causation of catarrhal maladies, including most pneumonias, capillary bronchitis, pleuritis, etc., than do the recondite terms of our modern pathologists. Our forefathers knew and recognised that the exposure of some part of the skin surface to cold or wet, or both, might, and very
frequently did, originate internal inflammations of a dangerous character. We in our refinements of pathological anatomy are too apt to forget their broad and yet very truthful view of the facts. We ignore the recognition of the real cause of one-half of human mortality in our zeal for the establishment of minute distinctions as to results. Nor, however detailed may our future knowledge become, shall we ever advance in practical matters much beyond the primal doctrine of our ancestors that it is dangerous to catch cold, and that independently of either diathesis or contagion a chill is a common cause of death.

In reference to the explanation of the details of the process of contagion microscopic investigation has of late years achieved much. Yet it may, I think, be fairly claimed that clinical observation has, in most departments, preceded it and that in many it might, if trusted and carefully pursued, lead us to beliefs at once more comprehensive and better balanced than those of the histologist. Most surely it was not left for KOCH and his followers to demonstrate to us the laws of the spread by contagion of tuberculous maladies. We knew long ago, as we know now, that consumption is occasionally communicated from one individual to another, but we believed such events to be rare, and we laid infinitely more stress upon the predisposing influences which favoured the development of the disease. Just in proportion as the discovery of the bacillus has by turning our attention to the prevention of contagion induced neglect of the far more important measures which look to the general health has it been a step in a backward direction. The bacillus may play an important part in the tuberculous process, but it is far from being the whole. It may be, and probably is, capable of transference from one person to another, but the conditions which favour its growth are of far more importance than the parasite itself, and all these might have been, and to a large extent were, already known as the result of clinical, I had almost said of domestic, observation.

Our microscopists are now seeking with indefatigable zeal for special elements of contagion in various forms of chronic inflammation of the skin. Much success has already attended their efforts, and more may be looked for. No one more heartily applauds them than myself. We are told respecting rhino-scleroma, sycois, eczema and a host of others, that for each there is its special parasite. I will by no means venture to exclaim, "Believe it not," but this I do dare to contend that clinical observation has already put forward laws which are inclusive of the whole results, and which for practical purposes afford us adequate guidance. It asserts, and it is able to illustrate by a thousand instances, that first almost all forms of the inflammatory process, however originated, are prone to be attended by the development of infective material, through the direct influence of which the process may be spread not only in adjacent but even in distant parts. It asserts, secondly, that this infective material set loose in the lymphatics, or in the blood, does not find its home haphazard, but shows a distinct preference for tissues similar to that in which it had its birth. The emigrant seeks a settlement in a country as much like that of his forefathers as he can find. Thus if perosteum be inflamed it will infect other bones, if a joint other joints, if a finger-nail other nails and so on. Under these two laws the phenomena of a very large group of aggressive chronic diseases may, I think, be explained. What the precise nature of the infective maturies may be the clinician cannot say, but this is a matter only of detail. The really important thing is to recognize its reality and take our measures accordingly. We may guess that it is not the same in all cases, that in some it is as much a stranger and a parasite as a thistle which has sprung up in a farmer's field and threatens to spread about its seeds,
whilst in other its origin may be very different.

The human body is not inanimate earth upon which nothing can originate unless planted. It consists rather of an infinite aggregation of living particles capable of marvellous transformations, and respecting the life history of which we as yet possess but the very beginning of knowledge. It may be that something which at first sight is very like spontaneous origin of organisms is not only possible but an every-day occurrence. There are many facts familiar to the careful observer which would favour the suspicion that contagia, which seem to exhibit almost specific properties, may yet originate de novo in its tissues.

I have often felt surprise that no one has as yet discovered the microbe of cicatrical keloid. Not that I in the least believe there is one, but its laws of growth and certain facts as to its infectivity place it in apparently close relationship with maladies which have been so explained. Clearly it can grow by its own infection, and often, indeed usually, attains dimensions far exceeding those of the scar in which it originates. Sometimes we seem to have evidence that one growth may be the means of inducing others at distant parts, and in this we have a fact which can be explained only by supposing that it sheds germinal matter into the blood. Thus in a case which I long ago published a man who had keloid follow the scar of a scald, subsequently had nodules of keloid develop in some old scars left by cupping. I admit that this infection of distant parts is not very common, but I suspect that it is more frequent than is supposed, and that many cases of multiple keloid are to be so explained. I have just seen a little boy in whom in infancy keloid developed in his vaccination scars. Three or four years later he was severely burned on one forearm, and the result has been the formation of large keloid patches in the scars.

Those after vaccination still persist, and it may be suspected that they furnished material which infected the more recent scars. There can, of course, be no infection unless the patient have other scars, for he has otherwise no suitable soil in which the germs may flourish. What is the nature of such germs? Probably simply representative of the tissues in which they originate endowed with all their qualities.

I might, without much difficulty, find a good many examples of loss to the practical knowledge of disease by an overweening confidence in instrumental methods of research, and a corresponding distrust of opinions based only on observation of purely clinical facts. The tendency of the day is to expect all truth from the microscope and the test tube, and to allow to any announcement of fact from the laboratory a degree of confidence which is refused to the verdicts given on circumstantial evidence. In spite of this it remains as true as ever it was that but a small portion of the problems with which the physician has to deal can be decided by such tests. The greater part need for their solution the careful and very detailed collection of facts of another kind.

I feel obliged to write that there is much reason to believe that the discovery of urate of soda in the blood in cases of gout has been the means of injury to clinical knowledge. Physicians of a former century entertained wider and more correct views as to the real nature of gout than we do now. The discovery of what was believed to be a trustworthy chemical test appeared to give a scientific basis to diagnosis, and was eagerly accepted.

Urate of soda was held to be the one and sole cause of all gouty phenomena, and no conditions in which it was not present were allowed to receive the name of gout. It was thought that we could now discriminate with certainty between gout and rheumatism, and all that was further needed was to find some chemical salt or acid which
Medical and Surgical Progress.

was, to some extent, based upon the creed of infection. I admit that we act much more vigorously now. Many a patient now has his neck-glands, or it may be one or both of his testes, excised instead of being sent on a sea-voyage. This zeal for local treatment may be in itself unimpeachable, but if it has, as may be plausibly expected, been allowed to induce neglect of old-fashioned constitutional measures, it has possibly been allowed to supplant that which was really more trustworthy than itself. It is probably still the truth that predisposition—derived from parents, or induced by personal exposure to debilitating influences—is of vastly more importance than local infection, and that the latter will usually come to nothing if the former be non-existent. There is real danger that, under the influence of contagion-zootrines, we may leave undone by far the more important part of our work.

Turning to the subject of leprosy, I have to urge a similar charge and to insist yet more strongly on its importance. The discovery of the bacillus has rehabilitated the doctrine of contagion which, on clinical evidence of the most cogent character, was fast losing ground. The cry is now, "There is a bacillus, therefore it must be contagious."

Thus one little item of what is held to be "scientific evidence" is allowed to outweigh or to wholly set aside a vast array of circumstantial proof. The disease has died out in England and the greater part of Europe, in spite of the fact that there never was any systematic isolation, and that into the leper houses themselves many patients not lepers were admitted. It could not possibly have ceased so if it had been contagious. Leper patients may now come to reside in England or the United States—they have done so by dozens—and although no precautions are observed the disease never spreads. The nurses and attendants at leper hospitals never catch it. Two English commissions have carefully sifted
the evidence—one of them in India itself, and with the advantage of Indian experts—and have reported strongly against the idea of contagion. In spite, however, of facts such as these the majority of the profession are content to accept the existence of a bacillus (proved only, as yet, in certain stages and under certain conditions) as conclusive demonstration that the disease is caused by contagion, and contagion only. Two evils may possibly result from this. In the first place cruel laws may be passed enforcing an isolation which is possibly wholly needless; and in the second, and probably more important, attention may be diverted from the right direction of search after the real cause.

The doctrine of a pre-cancerous stage of cancer is, I feel sure, of the very first importance in reference to the saving of human life. Once let this doctrine be fully and widely accepted by the profession, and the mortality from cancer of the lip, tongue, penis and indeed of the surface of the body generally will cease. It is scarcely too much to assert that all the cases which end fatally do so because the diagnosis is missed in the earlier stages. Yet I am sorry to say that in this matter our microscopic pathologists not only give us no help but actually hinder. They insist that the microscope can recognise cancer, and that the disease is not cancer if it cannot do so.

The discovery by Dr. Snow of the part taken by water in the diffusion of cholera was entirely the outcome of circumstantial evidence. So far as preventive measures were concerned it covered the whole ground, and the subsequent observations of microscopists have added nothing of importance. The same assertion may be made as to diphtheria. It was abundantly evident to most who had cared to examine the facts that this disease was in all its forms contagious, and that isolation, especially as regards young persons and schools, was the one, and almost the sole, means of preventing it from spreading.

The discovery of Loeffler's bacillus has perhaps added definiteness to our knowledge, and may be thought to have strengthened the hands of contagionists. Clinical observers had, however, fully anticipated it, and it may be asserted that the creed which they had suggested was in some important aspects a much sounder and safer one than that which is now becoming prevalent. Practical men, eager to repose on what they count scientific demonstration (that is, something seen only by the aid of a microscope) now search painfully for the bacillus, or send up a piece of membrane to London and receive by telegram a diagnosis from which there is no appeal. The clinician, on the other hand, cares little or nothing whether the bacillus be present or not, but treats all inflammatory sore throats as possible sources of contagion. The more virulent the case the greater the risk, but on no account, even in the mildest cases, will he forego precautions. If misplaced confidence in a negative diagnosis by the microscope should in the future lead to the neglect of such precautions then it is quite possible that Loeffler's discovery may sometimes prove injurious rather than otherwise to the public welfare.

Not only is it the fact that the discovery of vaccination as a means of preventing small-pox was the result of observation unaided by what is now known as science, but it has happened in these latter days that its value is assailed by some who claim to fight under the banner of science, and that its defence rests with those who can trust to common-place observation.

It is not my role to disparage, in the least, microscopic or chemical observation, and I most gladly acknowledge that in various directions, and especially in the hands of M. Pasteur, experiments of a scientific character have resulted in beneficent discoveries. In thankfully admitting
this, however, I may be permitted to add that Jenner's observation had pointed the way to all that has since been attained in this direction, and to say, further, that the road he took still remains one of the best and most direct towards the goal we all aim at. It is not my wish, were it in the least degree possible, which happily it is not, to discourage strictly scientific work in reference to pathogenic. I wish rather to protest against the feeling of distrust, almost of contempt, for conclusions based merely on circumstantial evidence which is at present prevalent. My argument is that, as regards nine-tenths of our problems, such evidence is all that we can possibly get, and that the conditions are frequent under which it is more trustworthy than that which is now the custom to offer us in its stead. So far from its being true, as some seem to imagine, that the clinical method is an idle haphazard and conjectural one, it is probably the fact that its methods honestly pursued require at least as much patient perseverance as those of the laboratory, and that they lead to more trustworthy results.

Some of my readers may possibly be thinking that I am pursuing a needless argument, and that in reality there is no risk of neglect of clinical methods of research. It may be thought that we at least equal our forefathers in zeal for bedside observation. I readily admit that many and able armour-bearers are still to be found in the clinical camp. The fact, however, remains, and it is surely important that, as compared with the more minute methods, clinical investigation is at present under a cloud. There is no lack of zeal as regards the operative treatment of disease; in this respect, indeed, clinical surgery is most prosperous. What is wanted, if I may be permitted to say so, is more industry and more patience and more care in Case-collecting and Case-illustration and Case-comparison.

THE COOL BATH TREATMENT OF ENTERIC FEVER.

We take the following rules from the abstract of a paper in the B. M. J.:

1. A temperature of 102.2 in the rectum calls for a bath, and it must not, as a rule, be permitted to rise higher without giving the bath, unless the patient is in a sound sleep.

2. The bath, long enough for the patient to be at full length in, is brought close to the bedside, and the patient carefully lifted in and out in the horizontal posture.

3. Half an ounce or 1 ounce of old pale brandy in 2 or 3 ounces of soda or diluted lime water to be given first (in case of adult) [the utility of this is very doubtful.—En, Med. Misc. Mag.]

4. The patient must always pass water before being put in the bath.

5. The patient to be immersed up to the neck; the head to be constantly sponged; and the chest and extremities, not abdomen, to be gently rubbed by an attendant.

6. The first bath to be given at 90° F. or 85°, and cooled down, by adding cold water, to 75° or 70°. If the patient bears it well subsequent baths may be given at 80°, and cooled down to 70°. The cold water is poured over the patient's head and chest.

7. Average duration of bath, 10 minutes; some say until patient begins to shiver; but if he begins to feel cold or gets uneasy the bath must be cut short. Where a patient is nervous, or bears the cool baths badly, he may be kept in tepid ones at 87° for 15, 20 or 30 minutes; the more prolonged immersion producing the desired effect.

8. Lift the patient carefully on to a couple of large soft bath towels laid over a mackintosh sheet, and rub him dry briskly (except the abdomen, which dry gently), envelop him in a warm blanket and put him in bed, covering lightly, and give him
a cup of warm coffee and milk, or peptonised cocoa and milk.

9. Half an hour after take the temperature, in the rectum preferably, when it should be 2° or 3° lower.

10. Take the temperature every 3 hours, and as soon as it again rises to 102.2 F., repeat the bath, unless he is sleeping, when as a rule he must not be disturbed, even if the temperature rise to 104°, but the bath deferred till he awakes.

11. Usually a bath is indicated every 6 hours. Sometimes, however, during the fastigium the pyrexia is so obstinate and uncontrollable as to call for a bath every 3 or 2 hours.

12. During the night baths are seldom called for, except by an extremely high temperature.

13. In case the bath lowers the temperature only 1° or less, or only for a very short interval, it becomes necessary to lower its temperature to 66° (cool bath), or even 45° (cold), and lumps of ice may be put into the bath to cool it down with perfect safety.

14. If intestinal haemorrhage occur baths must be discontinued. The only absolute contra-indications for this treatment are peritonitis, perforation, haemorrhage and the advanced cardiac weakness sometimes observed in the later stages of the disease. Broadbent considered that neither albuminuria nor pulmonary complications were prohibitive, and stated that he had seen albumen disappear from the urine, and pulmonary complications cease after a single bath.

----

THE APPOSITION OF PERITONEUM TO PERITONEUM.

In the B. M. J. for January 5, Mr. Greig Smith has an interesting and important paper calling in question the soundness of the surgical rule of peritoneum to peritoneum apposition. After narrating how the exigencies of rapid operating compelled him, in the first instance, frequently, to neglect this axiom, with the after result of finding that adhesions between bowel and raw surface were exceedingly firm, he writes: "The practical outcome of this has been that where I want temporary drainage with loose adhesions and mobile bowel—as in temporary enterostomy—I suture parietal peritoneum, bowel and skin; but where I desire firm, permanent and intimate adhesion, with no mobility of bowel on parietes—as in coelio-colostomy—I implant bowel directly on raw surface, and if this rawed surface is small, as it is in thin subjects, I increase it by unfolding or peeling from the parietes more peritoneum, and turning its rawed, not its serous, surface into the bowel." He then gives evidence to prove that fibro-serous adhesions are much stronger than sero-serous, and continues: "Whenever possible one raw surface is implanted in peritoneum. Thus in hysterectomy by the extra peritoneal method the peritoneum is not attached by its serous surface to the serosa covering the pedicle, but the raw surface of the peritoneum is opened up and laid over the pedicle. In cholecystotomy the gall bladder is surrounded by the raw surface of the detached peritoneum, not gathered in and sutured, but purposely opened up and spread out. It is easy enough, if it tends to remain open, to close the fistula without entering the general cavity. In colostomy by coeliotomy immovable fixation of the gut on the parietes, preventing both indrawing and prolapse, is best got by direct implantation of the gut on the parietal incision, supplemented, if necessary, by outfolding of the detached peritoneum. And in every case where I desire to get rapid and strong fixation of hollow viscus, cyst or abscess wall, pedicle or solid growth to the abdominal parietes, I always now apply not serous to serous surface but either serous to raw surface or raw to raw. The parietal peritoneum is either turned out, so that its raw surface lies in contact with the serosa.
to be attached, or the serosa of the organ is peeled off, or both are done. The practical application of these principles is as wide as abdominal surgery, and includes not only results to be encouraged, but results to be avoided. Where it is desired to secure quick, strong and permanent union sero-fibrous apposition is better than sero-serous. Where the union sought need not be strong and is desired to be only temporary sero-serous apposition may be adopted. Fibro-fibrous apposition, while perhaps as good as sero-serous, is not in my experience so good as sero-fibrous. Sinister results, which we seek to avoid, arise when we leave raw surfaces to which intestines may adhere and cause obstruction. To cover such a surface by peritoneum would, according to published statistics, save nearly 2 per cent of the deaths after abdominal operations."

**THE CONTROL OF HÆMORRHAGE IN AMPUTATION AT THE SHOULDER.**

In the *B. M. J.* for February 23 Mr. Clement Lucas thus describes his method of controlling the main artery on the inner flap of amputation at the shoulder without the aid of an assistant: "The deltoid flap having been raised and the head of the humerus disarticulated the knife is carried down on the inner side of the bone somewhat below the neck. The left hand now grasps the inner flap between the thumb and fingers so as to compress the artery, the thumb being in contact with the raw surface and the fingers outside. Held in this way the inner flap is completed by the knife without haemorrhage; the surgeon retaining his hold until the vessel is secured with forceps."

**THE AFTER-TREATMENT OF TONGUE-EXCISIONS.**

By Henry T. Butlin, F R.C.S. (London.)

The after-treatment of operations on the tongue should be chiefly directed to: (1) maintaining the wound in the mouth as aseptic as possible; (2) diminishing the tendency of the wound-discharges to pass down the air-passages; (3) preventing food from passing down the trachea into the lungs.

The first indication is best fulfilled by the frequent use of powdered iodoform to the mouth wound. As soon as the operation is over, and before the patient is put back to bed, the surface of the fresh wound is dusted with powdered iodoform. And, for a week or ten days, iodoform is blown on to the surface of the wound by means of a proper insufflator. In addition, the patient may use a mouth-wash of Condy's fluid or weak carbolic solution to help to cleanse the interior of the mouth of the fluids which collect there.

The second indication requires that the patient's head should be kept low, and that he should lie on one side. Butlin only allows one small pillow and insists that the patient should lie well over on the side from which the greatest amount of tongue has been removed. The discharges then have a tendency to sink into the cheek, and are frequently washed out or allowed to run out, and there is thus the least possible inclination of discharges to sink down toward the back of the mouth and larynx.

The feeding of these patients needs very great attention. When only half of the tongue—whether a lateral half or the front half—or two-thirds has been removed liquids can generally easily be taken on the day following the operation from a feeder with a spout, provided a piece of India-rubber tubing, three or four inches long, be fixed on to the spout. If the right half of the tongue has been removed the patient should lie over on the left side during feeding, so that the food is kept as far as possible away from the wound, and passes over the parts which have been least interfered with.

When the whole of the tongue has been removed the difficulty of swallowing is much greater, and many days may elapse before the patient acquires the knack of
swallowing liquids without permitting a small quantity to pass down the air-tubes. During the first forty-eight hours these patients are fed through the rectum with nutrient enemata. At the end of that period the patient may make a first attempt to swallow a little liquid, and water should be chosen for the experiment, because the entrance of a little water into the trachea is seldom followed by any serious consequences. Milk and beef-tea are more dangerous; they hang about the air-tubes, are difficult to get rid of, and are very prone to undergo rapid decomposition and occasion the much-dreaded swallowing pneumonia (Schluck-pneumonie). If the experiment is successful other liquids may be tried, and the problem of feeding is really overcome. But if there is any difficulty the patient, as long as may be necessary, should be fed through a tube. No instrument is so good for this purpose as a black bulbous catheter, about No. 9 or 10, attached to a long piece of India-rubber tubing, to the other end of which a small glass funnel is fixed.

The throat is first sprayed with a 3 or 4 per cent. solution of cocaine; the tubing is clamped with forceps just above the attachment of the catheter, and the funnel and tubing are filled down to the clamp forceps with warm food. The catheter is very gently passed down the pharynx, and hitches at the posterior border of the larynx. The patient is directed to swallow, and as he does so the catheter is easily passed on into the œsophagus. For the moment discomfort is created, and the patient often struggles. He is directed to close his mouth, and no attempt is made to pass the catheter farther down for half a minute or longer. Then it is slowly and gently passed down to a distance of about eleven inches from the teeth. When the annoyance of the presence of the catheter has ceased the clamp is removed, and the food is allowed to run slowly down into the stomach. If there is an inclination to regurgitation or to cough the descent of liquid is instantly arrested by pressing on the tubing with the finger and thumb, and the nurse lowers the funnel until the dangerous moment has passed. By attention to these details a pint or a pint and a half of liquid may easily be introduced into the stomach without danger. Before removing the catheter the funnel is raised higher up, so as to get rid of the contents of the tube; and during the actual removal of the catheter the tubing is kept tightly pressed between the finger and thumb in order to prevent the entrance of even a few drops into the larynx. Patients are often so satisfied with this method of feeding that they have sometimes insisted on being fed through a tube for a much longer period than was really necessary.

Results.—The reporter has removed at least half the tongue in forty-six consecutive cases with one fatal result. The great majority of the cases were, of course, uncomplicated, that is, they were not complicated by the removal of lymphatic glands or of ligature of the lingual artery. But they were performed on persons varying in age from thirty-three to seventy-five years, and nineteen of them were performed on patients over sixty years of age. Some of the patients were suffering from organic disease of internal organs, and some of the operations were very severe. They may be thus classified:—

(1.) Uncomplicated operations, 30; removal of one lateral half of the tongue, 13; removal of anterior half or two-thirds, 12 (in several of these the floor of the mouth was at the same time freely dealt with); removal of the whole tongue, 5.

These uncomplicated operations were recovered from in almost every instance without any drawback. One patient, forty-six years old, had an attack of secondary haemorrhage from the right lingual artery eleven days after the removal of the whole tongue. An anaesthetic was administered, and the artery tied in the floor of the
mouth, after which he made a steady recovery.

In an old man, aged seventy-two, severe bleeding took place on the day of the operation, not from the tongue but apparently from the back of the throat. After some time the haemorrhage ceased, and he slowly recovered, but his recovery was seriously retarded by the loss of blood.

(2.) Complicated operations, 16; removal of half of the tongue and lymphatic glands, 2; removal of the whole of the tongue and lymphatic glands, 1; removal of half of the tongue, ligature of the lingual artery in the neck, removal of glands, &c., 10; removal of the whole tongue, ligature of the lingual artery in the neck, &c., 3.

These complicated operations were for the most part recovered from with greater difficulty than the uncomplicated operations. Infiltration took place from the wound in the mouth into the deeper wound in several of them, and in one case in which this occurred the patient was for two or three weeks seriously ill. Since then Butlin has almost invariably drained the lower wound for the first few days after the operation, a precaution which he had seldom previously taken.

In one of these patients, fifty-one years old, haemorrhage occurred six days after the operation from a deep cavity which had been made in the floor of the mouth, and recurred during three or four days. It was ultimately arrested by clearing out the wound to the bottom and stuffing it with iodoform gauze. And in a man, aged forty-nine, secondary haemorrhage set in from the wound in the neck nine days after the operation. The haemorrhage was arrested also by plugging, and the patient slowly recovered.

The fatal case was that of a man, aged seventy-one, who suffered from an epithelioma of the anterior portion of the left half of the tongue and associated enlarged glands. In the course of a day or two the wound in the neck was foul, apparently from the sinking down of discharges into it from the mouth; it had not been drained. The patient had rigors and high temperature. He appeared to improve for a while after the condition of the wound had been bettered, but he finally died five weeks after the operation.—From the British Medical Journal, April 14th, 1894.

THE INDIAN MEDICAL CONGRESS.


Presidential Address on the Influence of Race and Climate upon Obstetrics and Gynaecology in India.

[Surgeon-Major H. Peers Dimmock, Professor of Midwifery, Grant Medical College, Bombay, delivered his presidential address. After a preamble dealing with the importance of the subject and the difficulties incidental to its treatment in an Oriental country he proceeded to the consideration of puerperal fever, saying:—]

"Since Professor Semodaelweis first placed us in possession of the axioms of puerperal fever there has been accumulated a mass of evidence to demonstrate their truths, and fresh knowledge had been added to them, especially by the discovery of the antiseptic system by Lister. But though the ideas of all authorities are fairly well defined there are still many effects and conditions of puerperal fever and points of difference that are hard to reconcile. This is especially the case in a country like India, which teems with forms of pyrexial diseases that are liable to complicate the pregnant and puerperal states. To indicate all forms of puerperal fever as puerperal septicemia, whatever the infective cause, and however much the symptoms may vary, is alone sufficiently confusing when we are brought face to face with their actual protean clinical facts; and on the other hand, to seek to differentiate each and every kind of puerperal fever according to its features, whether of cause or effect, would
lead us into an interminable phraseology that would be too awkward for any practical purpose. The old familiar term "puerperal fever" as a main distinctive indication is rendered sufficient for all purposes by the affix of a descriptive adjective for the special condition or cause associated with the pyrexia of the puerperium, which after all is the generic meaning of puerperal fever. Thus the words 'traumatic, septicemic and pyemic puerperal fever,' would describe fairly well the form of puerperal pyrexia that was associated with traumatism, septicemia or pyemia. Any local effects can, at the same time, be described as complications, and we should thus have a designation like 'traumatic puerperal fever with pyo-metritis' and so on. To eliminate the special characters and peculiarities of these and other complex puerperal fevers we require a very extensive knowledge of their clinical features, and in India we are confronted with so many kinds of the fever type of disease that such an inquiry is sure to be full of immensely interesting and intricate possibilities. Clinical observation and deductions therefrom are always most attractive, and have been naturally the principal methods of elucidation of disease throughout all time of medical knowledge. They demand the first attention of the physician, and now-a-days, waited on by pathology and its youthful handmaid bacteriology, they are yielding most fruitful results. In these rapidly progressive days we are continually on the outlook for some fresh means of divining the actual causes and conditions of disease, and those occurring in the pregnant state and the puerperium are so enrobed by their own peculiar accompaniments that there is a separate and special field for the study of them, both clinically and pathologically. In a research into the causes and effects of puerperal fever in India we are confronted not alone with special disease entities, but also with the many conditions peculiar to the country itself—of season and meteorological events, of race, of surroundings, of habits, of intercurrent disease and of the preliminary effects of the pregnant state under such conditions, in all of which I can only suggest what a large field there is for philosophical, thoughtful, scientific and useful inquiry, especially to those members of the profession who actually practise among the people and are intimate by race association with their modes of life and other influences. In a tropical climate the main influence would, of course, be that of the high temperature of the air, by which all developments and changes are brought about with a greater rapidity, so that the tissues become less stable, less hardy, and so tend to disentegrate quickly when once a rift is opened in their continuity. The extreme changes of intense dry stimulating heat in the summer and of a depressing heat that comes with the onset of the monsoons present aspects of variation, apart even from acclimatisation, in the organisms of all who are subject to them, and still more of those whose tempaments are liable to an easy divarication of the physiological equilibrium, either towards depression or exaltation. As examples of the differences of disease types under such circumstances may be taken the sharp attacks of fever which occur in the drier seasons of the year and the low forms of continued fever and malarious cachexia with engorgement of the abdominal visera, especially of the spleen, such as take place in humid states of the atmosphere and damp climates. Frequently the slow development of malarious cachexia produces in the pregnant woman a form of pernicious malarious anemia, which is characterised towards the end by intense anemia, oedema and an enlarged spleen and liver, for the sluggish circulation and nervous debility encourage congestion of the organs. Race may show its influence in the various tendencies that are developed out of evolutionary characteristics, as, for instance, the neurotic type, rendering the woman more
susceptible of nervous impressions and reactions, often altering the characters of disease by superadded nervous phenomena, such as high temperature quickly subsiding. Habits of food, of drink and of luxury are worthy of reflective consideration, and it may be accepted as a fact that pregnant women whose food is of a vegetable and non-stimulating kind will have less stamina in enduring prolonged pain and exhaustion, but will recover more quickly from ordinary trials than those whose food is of a more generous description, while again the latter will be more liable to inflammatory reactions and rapid tissue changes, such as sloughing from traumatic injury. The surroundings of pregnant and puerperal women are manifold in their effects, and include those of the room, the house, the village and the town; septicemic, zymotic and malarious puerperal fevers being the most likely outcome of dangers from these sources.

"I have had the usual experience of most inquirers in being baffled at the outset by forms of puerperal fever that I have had to deal with in India, and what impressed me most in the first instance with some of the cases was their unusual and surprising resistance to rigid antiseptic and aseptic precautions. A study of a series of temperature charts and the effects of various treatments on the temperature gave the true line of explanation. When once the clue was given the opening of some of the hidden processes was shown, so that I venture to tabulate certain forms of complex fever as follows:-

1. Malarious intermittent puerperal fevers.  
   (L) quotidian, (B) tertian, (Y) quartan.

3. Thermic do. do.
4. Dysenteric do. do.
5. Syphilitic do. do.

"I have no doubt that others will be added to their numbers as the science of medicine progresses, and wrests from the chaos of uncertainty the many forms of Indian fevers. The protozoic causes of these fevers may develop in the pre-pregnant or the pregnant state, and be carried on into the puerperal state to be further impressed with a septicemic pyrexial element, which is the result of the condition of the tissues and systems of the puerperal patient, rendering the unusual secretions and excretions more liable to the action of infective agents; or these causes may be latent in the system, manifesting no symptoms until they are excited to action by the onset of labour or roused to a more powerful influence by a septicemic pyrexia. To deal with the group of the malarious forms of puerperal fever I submit cases with their accompanying charts. Many of you may be familiar with an experience that pregnant patients in this country who contract malarious fever, or whose systems are inoculated with its organisms, are very resistant to treatment for malarial fever or cachexia, either because the blood and tissues of the pregnant women are very retentive or reproductive of the disease factors, or because they are specially vulnerable to, and ineffective in, repelling their ravages. How often it happens that a pregnant woman suffering from malarious fever is treated by all the known methods, which produce no yielding of the fever for some time, and when the pyrexia runs high miscarriage is sooner or later brought about. The quinine may here be wrongly blamed for the mishap, which was in reality due to the overheated blood current and to the poisons circulating in it, and I have elsewhere protested against this shibboleth of the objection to use quinine in doses that are adequate for the control of the disease. At the same time we must not forget that sometimes malarial fever is not affected by quinine, and that the system may also be inoculated with previous treatment by that drug, so that it fails to give the expected result. It may be some days even before an ordinary attack of ague in a pregnant woman can be controlled, and if the case is allowed to go on without treatment the disease gets such a grip of the
patient as to be uncontrollable, and if labour or miscarriage results an additional puerperal septicemia is an inevitable result. We are all familiar with the sudden appearance of malarial fever coincidently with a severe shock to the system, such as a fracture of a bone, the passage of a catheter, or an overwhelming emotion; recollecting that the dilatation of the os uteri is often accompanied by a rigor, I have attributed the sudden accession of a high temperature at the commencement of labour to a disturbance of latent malarious poison by the vascular, nervous, and tissue changes wrought by the mechanical process of dilatation. It is difficult to account in any other way for the sudden appearance of these fevers at such crises, when they have not been preceded by any signs of a latent lurking in the body; and I believe that the organisms are really latent, and that their sudden activity is because the balance of nervous control is disturbed by the advent of labour, the vitality of the cells and leucocytes are diminished, and their ranks are thereby thrown open to the invaders, because the reflex irritation to the nervous centres causes through the trophic nerves changes in the metabolism of the body and through the sympathetic nerves changes in the circulation which facilitate such morbid processes. It is the same with malarious fevers that develop after labour, in association apparently with the stimulus to the plasmodia of slight or severe puerperal septicemic pyrexia, and in these instances the puerperal fever will be established with the thread of malarious fever running through it and giving a distinctive character to the temperature record, for the treatment of which complex condition it is necessary to combine methods applicable to both the diseases. Further, whenever malarial fever is developed in the puerpera there is a liability to what may be called an auto-genetic form of septicemia as a result of the high temperature of the malarial fever, for the lochial secretions decompose rapidly within the genital cavity, and their poisons are absorbed into the system, so as to produce the usual septicemic effects in addition to those of malaria, thus causing a continuance of pyrexia during the intervals that would be remissions of the malarial fever, and exaggerating the high temperature of the pyrexial stage of the malarious attack. Very high and alarming temperatures are developed in this way. Again, puerperal women who have malarial cachexia may have progressed favourably even beyond the first week, when they expose themselves to a chill, and this is followed by the typical phases of the rigor, of the pyrexic and sweating stages of ague. The lochia become offensive, the temperature is continuously high, and there is an intermittent recurrence of the ague and increased pyrexia. It takes several, sometimes many, days before recovery is brought about, while if proper measures are not adopted the case may end fatally. In all these cases, associated with malaria of whatever kind, we have not only general effects to deal with, but also those local effects that are inevitably associated with the traumatism of labour. The lowered vitality of the tissues makes them very prone to take on a sloughing or even gangrenous character, and such conditions are not only resistant to repair and will heal slowly, but add a further and serious danger to the case from a multiplication of poisonous agents. If no treatment of the constitutional state is adopted their ravages will increase to a terrible extent, so that I have seen cases of malarious cachexia in the puerpera where the genital passages have been in a gangrenous state throughout their whole area; consequently when artificial traumatism is produced by the use of instruments particular precautions are necessary to guard against such effects, and, although there may be no apparent symptoms, most rigid attention should be paid to the local antiseptic treatment. Another effect of malarious cachexia and of malarial fever during pregnancy is to
cause a placentitis, from which the placenta becomes adherent, and so adds a further danger to the case at labour time. The shock of manual detachment may set up the pyrexia of malaria, or there may be infection from without by the operation. Such patients often complain of excessive tenderness over the uterus during pregnancy, which is no doubt due to the inflammation that is going on. Another effect of malaria in the puerperium is to produce intense neuralgia of some of the sexual organs. It may be the uterus that is thus affected, in which case it is probably caused by some inflammation of the nerve filaments communicated from a placentitis, or an actual primary neuritis of malarial origin, and the patient may suffer great pain, especially in connexion with the after-pains. I have found the uterus in these patients to be excessively tender, and the condition has mostly yielded at once to quinine and anti-neuralgic drugs. I can recall one case of acute neuralgia of the ovary which followed a miscarriage. The patient did well in all respects, except that at a regular hour every afternoon she suffered from acute agonising pain in the left ovarian region. It yielded at once to large doses of quinine. Post-partum hemorrhage is also very likely to occur, mostly from the effects of the placentitis, but also in consequence of the state of the blood, of heightened blood-pressure and of the defective contractile power of the uterine muscular tissue. Diarrhoea is a frequent occurrence, and is of great importance. In all conditions of health or disease in people living in India, whether native or acclimatised, there is a primary climatic potentiality towards diarrhoea. A chill, an irritant, or disease are likely to be accompanied by it in ordinary individuals, and in puerperal fever particularly this natural tendency is exaggerated by the secondary morbid and derivative tendency of the system to relieve itself of the toxemia through the mucous membrane of the intestines. Accordingly the usual dose of castor oil will frequently start a severe diarrhoea, and sometimes almost choleraic symptoms are caused by what seems a small cause. Rheumatism is an occasional complication; the connexion between rheumatism and malaria is outside the present subject, so I will not discuss it. Mania is also a not infrequent sequel, and has partly to do with the state of health and partly with the high temperature. The higher the temperature the more likely are the psychological centres of the brain to be injured and disorders connected with them to follow. The fact is, as a rule, not particularly affected, except in nutrition, and so suffers from fever at birth only in occasional cases, and this is probably due to the resistant and destructive power of the placental structures, which thus guard the entry of the foetal area from deleterious matters. A similar result occurs in some cases of syphilis contracted during pregnancy."

[Surgeon-Major Dimmock then quoted cases of various forms of malarious puerperal fevers with their treatment, laying special stress on the point that quinine should be administered hypodermically in order to avoid the effect upon the digestive tract. He continued:—]

"The next series of puerperal fevers is that of the dysenteric form, which arises in connexion with a true dysenteric attack. The dysentery itself generally originates during pregnancy, either at full term or earlier. In the former labour and in the latter case abortion or miscarriage are very likely to occur, and so we have a puerperal condition with the dangerous concomitant of very poisonous alvine discharges. Infection of the genital passages from these produces an extraordinary disease of the puerperal fever type.

Dysentery itself is very obstinate in pregnant women, and there are no doubt turgescence of the mucous membranes and changes in the circulation which make the disease persistent. It is also desperately resistant to remedies, so that a dysentery
fever, whether it is a climatic effect on the syphilitic patient, whether the syphilis stirs up an irritative fever in the system, or does the syphilis render the body more susceptible of septicaemia, and the septicaemia more persistent than usual, until specific remedies are used. In cases of puerperal fever of a continuous type associated with increasing cachexia, where the child shows also faint symptoms of congenital syphilis, it is always advisable to administer specific remedies. Of other forms of Indian puerperal fever the thermic is the one most frequently met with, and of course its main characteristic is intense and resistant hyperpyrexia. It is usually the sequel of pyrexia occurring before or during labour, although it may occur during the puerperal state, being most liable to happen on the third day in connexion with the usual slight fever which results from any affection or lacteeal disturbances on that day. It may be associated with puerperal eclampsia, and cases of this kind that occur without albuminuria indicate an intense congestion of the meninges. Complex cases of puerperal fever in association with other diseases of the pyrexial type must sometimes occur."

MALARIAL INFLUENCE IN ABORTION AND STERILITY.

Mr. Arthur J. Weatherley, M.R.C.S. England, L.R.C.P., London, in his paper under the above title said:

"From my experience in Africa, Florida and India, I do not think sufficient stress is laid on the malarial influence in abortion and sterility. In my practice I have had the following cases:

<table>
<thead>
<tr>
<th>Confinements Abortions</th>
<th>at Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>England ...</td>
<td>56</td>
</tr>
<tr>
<td>Healthy parts of South</td>
<td>35</td>
</tr>
<tr>
<td>Unhealthy parts of Africa</td>
<td>40</td>
</tr>
<tr>
<td>Florida ...</td>
<td>30</td>
</tr>
<tr>
<td>India...</td>
<td>60</td>
</tr>
</tbody>
</table>

A large proportion of these cases, though living in malarious districts, did not abort at times of an attack of fever;
in fact, in very many cases, malaria only showed itself in the habit of abortion. I have also noted that a very much larger proportion of women are sterile in malarial districts than in others, and that if they reside many years this sterility becomes permanent, whereas if they leave before too long a time has elapsed they bear children. Of course in this latter class I do not include those who, miscarrying in malarial districts, bear children in non-malarial climates. Perhaps, as this paper has to be short, the quoting of two typical cases will be sufficient. I would like the experience of others in malarial districts on this subject, as I think its importance is not sufficiently recognised. A woman had frequent miscarriages in the plains. She was treated by various surgical and medical measures, including scraping out the uterus, both in India and in London. On her return to a malarial district, however, she invariably miscarried, generally in the third month. I saw her early in her fifteenth pregnancy (after ten following miscarriages in the plains), and advised her to go at once to the hills and stop there, giving her a tonic of citrate of iron, quinine and strychnine, and enjoining recumbency for ten days at a time when her period would have been due if not pregnant. She went safely to term.

Another woman had lived for years in a malarial district, and had never been pregnant. The first year on coming permanently to the hills both husband and wife suffered much fever, but in the second year both were in good health, and the woman became pregnant and went safely to term. These are only two instances of very many. The influence of malaria on abortion and temporary sterility is still more marked in the very deadly malarious climate of Florida, where I saw twenty-two cases of abortion to thirty confinements at term, and ten cases of temporary or permanent sterility in a period of two years in a very small district. In a malarious strip of coast country in East-south African sheep and cattle constantly abort, and, in fact, the natives have recognised this so well that they keep their breeding stock inland and only send their stock into this strip of country to fatten. In this country there were no Europeans, but abortions were frequent among the native women, though I could get no figures as to the proportion.

A large number of women-who have been in malarious countries, even if they do not abort, suffer very much more when pregnant at the time when their period would have come on than is common with women who have not been in a malarious country, and require very strict precautions as to recumbency, &c., at such times. In such cases I have found that giving quinine, rather than tend to bring about abortion, certainly tends to ward it off. Though my experience does not extend over many years it embraces malaria in very different climates, but in all with the same effect in bringing about abortion and sterility, and proves a danger in the former case, which, I think, is not sufficiently recognised and guarded against."—From the Lancet, Feb. 2, 1895.

VARICOCELE TREATED BY INCISION, LIGATION AND SHORTENING OF THE SCROTUM.

Dr. W. E. Parker, of New Orleans, reported 7 cases of this affection thus treated: An incision varying in length according to the size of the varicocele is made, and the scrotum shortened by converting the wound from a longitudinal into a transverse one. All cases which recovered with union by first intention are still doing well, the period since the first operation being seven months. The milder form of varicocele should be treated with a suspensory bandage; proper attention being given to diet, exercise and bowels. A varicocele should be operated upon: (1) if it is of large size; (2) if it is painful; (3) if marked nervous symptoms are present; (4) if the testicle is atrophying; (5) if the varicocele is increasing rapidly; (6) if it is
The China Medical Missionary Journal.

an obstacle to entering a public service; (7) if, on account of a patient's occupation, a suspensory is troublesome and he desires an operation.—Boston Med. and Surg. Jour., Dec. 27th, 1894.

THE TREATMENT OF VOMITING IN CHILDREN.

The Journal de Chirurgie et de Thérapie, infantiles, publishes the following directions and formulae to be used in the treatment of vomiting in children: Very young children should be made to swallow small pieces of ice before nursing. Milk diluted with a little Vals or d'Alcet water should also be given. Before the child is nursed three grains and three quarters of bismuth subnitrate should be put on its tongue. The diet should be restricted, the milk sterilized, and the time of nursing properly regulated. For older children iced drinks, ice and effervescent waters are recommended. A teaspoonful each of the following mixtures is to be taken, beginning with the first: 1. Potassium bicarbonate, thirty grains; syrup, two hundred and twenty-five grains; water, an ounce and a half. 2. Citric acid, thirty grains; syrup of citric acid, two hundred and twenty-five grains; water, an ounce and a half.

Fonssagrives recommends the following: Essence of cajuput, from six to twelve drops; sugar, thirty grains. When this is thoroughly mixed, add an ounce of syrup of tolu and three ounces of Melissa water. From a teaspoonful to a tablespoonful is to be taken every hour. Huchard prescribes seventy-five grains of tincture of iodine and two hundred and twenty-five grains of saturated chloroform water, of which from two to six drops are to be taken in a little sweetened water.

For nervous children, over twelve years old, Ewald prescribes cherry laurel water, three quarters of an ounce; tincture of belladonna, seventy-five minims; cocaine hydrochloride, four grains and a half; morphine hydrochloride, three, grains. From five to ten drops are to be taken every hour or two. The following formula is recommended by Guioburt: Syrup of lemon, three hundred grains; lemon juice and orange flower water each two hundred and twenty-five grains; Linden water, two ounces; Sydenham's laudanum, nine grains; sulphuric ether, fifteen grains; potassium bicarbonate, thirty grains. The bottle should be corked immediately, and from a quarter to a third of the mixture is to be taken at once. Le Bariller advises the use of the ether spray over the epigastrium; also blisters or the actual cautery over the same part.—New York Med. Jour.

THE MECHANICAL TREATMENT OF CHRONIC CONSTIPATION.

Dr. F. E. Le Marin'el believes (Jour. de Med. de Chirur. et de Pharmacologie.—Amer. Lancet) that the mechanical treatment should be the treatment of choice in a large number of forms of chronic constipation. The manoeuvres of massage comprise three forms—frictions, pressures and percussions. In addition various active and passive movements are undergone—flexion, extension, abduction, supination, rotation and circumduction.

The various forms of constipation which are likely to be benefitted are: (1) from anaesthesia of mucous membrane; (2) from muscular paralysis; (3) from induration of the stools; and (4) from mechanical obstacle. The contra-indications are: (1) acute inflammation of intestines, peritonitis, peri-intestinal cellular tissue, or of intra-abdominal veins; (2) ulcerations (round, tuberculous) of stomach or intestines; (3) tumours of the alimentary canal (sarcoma, carcinoma, polypi); (4) voluminous faecal masses of stony hardness. An interesting comparison is given of the value of diet, habit, purgatives, hydrotherapy, injections, electricity, various medicinal methods, with that described by the author, the general conclusion being that of all these methods only one can be compared to the mechanical, and that one is electricity. But when one
considers the question from the standpoint
of success, massage shows figures which are
not surpassed by electricity. As to facility
of application massage is superior, in that
it does not require any apparatus, and can
be applied equally well at the house of the
patient as at the office of the physician.
Further, massage is better borne than elec-
tricity, and particularly by children. A
series of 147 cases are reported, the treat-
ment being that advocated in the paper.
The care shown in the report, the apparent
accuracy of diagnosis, the fullness of detail,
give an especial value to the clinical histo-
ries. In the cases cited, those of the synop-
tical table, and eleven in detail, 158 in all,
radical cure was obtained in about 90 per-
cent. The final conclusions are:—
Mechanical treatment takes rank among
those therapeutic agents whose action is
most energetic upon the circulation, the
respiration and general nutrition. It can
modify the abdominal circulation and cause
certain foreign congestions, notably those
which are met with in abdominal plethora,
to disappear. Under its action the muscles
acquire an increase in volume and strength.
It is the best curative agent in constipation
dependent upon muscular paresis or paraly-
sis not of central nervous origin, or upon
diminished sensitiveness or anæsthesia of
the mucous membrane due to local causes.
Finally, it is formally contra-indicated when
constipation is due to acute inflammatory
lesions or to tumours.

P ALUDAL NEURASTHENIA.

Triantaphyllides, of Batoum, states (Sem.
Med.—Brit. Med. Jour.) that among the
manifestations of malarial poisoning there
is one bearing resemblance to neurasthenia
which has hitherto escaped notice. It is
seen in persons who present no other sign of
chronic paludism (enlargement of spleen
or liver, anæmia, etc.) During the last four
and a-half years the author has seen some
fifty examples of the condition, and its
malarial origin has been established by the
discovery of typical haæmatozoa, as also by
its amenability to treatment by quinine.
In its slightest form paludal neurasthenia
expresses itself merely as a state of mental
apathy or psychical malaise. In a higher
degree of development it may be accom-
panied by nearly all the psychical, vasomot-
or and other disturbances characteristic of
ordinary neurasthenia. Insomnia, digestive
disorder and headache are, however, less
constant in the paludal than in the ordinary
form. Spinal hyperæsthesia is not well
marked, but umbilical hyperæsthesia is
rarely wanting, sharp pain being caused in
the majority of sufferers by pressure in the
umbilical region on the left side. The
affection generally comes on by degrees, and
is preceded by vague nervous disturbances
which occur paroxysmally, till after a time
the neurasthenic condition becomes perma-
nent. In recent cases a cure can, as a rule,
speedily be effected by hypodermic injec-
tions (1 in 4) of hydrochlorate of quinine
in doses of 60 centigrammes to 1 gramme.
In cases of relapse a large number of injec-
tions is required. In invertebrate cases
sulphate of cinchonine, given by the mouth
or hypodermically, or sulphate of cincho-
nidin, together with tonic measures, wet
packing, and especially sea bathing, has
often been successful in the author's hands.

TREATMENT OF VOMITING AND GASTRIC
IRRITATION.

Dr. C. MILES recommends (Clin. Jour.)
the following:—

R/ Crescot. arg..........m.j.
Aqua...................oz viii.

M. To be well shaken and a teaspoonful
taken every five minutes.

D. R. B.

APoplexy AND THERMOGENESIS.

Dr. Charles L. Dana concludes (American
Jour. of Med. Scien.) his observations as
follows:—

1. That all intra-cranial haæmorrhages,
whatever be their lesion, are much more apt
to be accompanied with immediate distu-
bances of temperature than are necrotic processes from embolism and thrombosis. These temperature disturbances in hemorrhages are, in rare cases, a sudden initial fall; then in almost all cases, except where the lesion is small, there is within a day or two a rise of temperature of from one to three degrees. On the other hand, in acute softening this initial fall and early rise do not occur unless the process is very extensive or involves the pons.

2. In apoplexy due to hemorrhage the temperature is greater upon the paralyzed side than on the normal, the difference averaging about one degree. In acute softening this unilateral difference of temperature does not occur, or is extremely slight.

3. The rise of temperature due to apoplectic lesions depends more upon the extent and nature of the lesion than upon its location. Lesions of a hemorrhagic character in the cortex, however, are especially apt to cause a rise of temperature. Lesions in the pons also, either of hemorrhagic or softening character, almost uniformly cause a rise of temperature.

4. There is as yet no clinical evidence that lesions of the basal ganglia, or the parts about them, cause temperature rises on account of destruction of certain thermic centres; in other words, the clinical and pathological evidence of thermic centres in the human brain, aside from the parts mentioned, is yet inadequate.

5. Finally, I would specially impress upon you the great value, from a diagnostic point of view, of a careful study of the temperature changes after apoplectic strokes. The temperature should be observed on each side of the body, in the rectum, also, if possible. With data thus obtained one can, I feel sure, gain much more positive evidence as to the nature of the lesion in these cases, and I have repeatedly been able to satisfy myself, in my clinical work, of the nature of the lesion by means of the methods referred to. I do not believe that, with the help of the numerous factors which we now have in aiding our diagnosis, there are many cases of apoplexy in which it is difficult to make a diagnosis. The old-time tabulation of differential points in diagnosis between hemorrhage and acute softening still remains of value. We need, and must use, all the helps possible; but if we, in addition to other methods, carefully apply the thermometric, I am sure we can reach vastly more satisfactory results.

---

**TREATMENT OF SPASMS OF THE ANUS.**

The *College and Clinical Record* has the following:

Lidoformi gr. iv-x.
M. fr. Suppositorium—(*Clin Jour.*)

D. R. B.

---

**TREATMENT OF IN-OPERABLE CANCER OF THE UTERUS WITH INTRAPARENCHYMATOUS INJECTIONS OF ALCOHOL.**

F. Vulliet has obtained (*Sem. Med.—Brit. Med. Jour.*) excellent results in cases of uterine cancer beyond operation by means of injections of absolute alcohol made into the substance of the tumour. This mode of treatment was recommended in 1892 by H. Schultz, but Vulliet claims to have employed it independently since 1891. The treatment, according to the author, is indicated under the following conditions: When the disease has spread so far that its complete removal by hysterectomy is impossible; in cases in which suspicious infiltrations are present after hysterectomy; in cases of recurrence of the disease after operation; and when a uterine tumour presents nothing definitely cancerous, but is nevertheless suspicious. In the last case injections of alcohol may be made all round the seat of disease after removal of the suspected tissues. Vulliet's procedure, which differs from that of Schultz, is as follows: The vagina, the cervix and the surface of the tumour are washed first with a solution of soda, next
with one of corrosive sublimate (1 in 1,000). After careful drying of the parts with tampons of cotton-wool the patient is placed in the genitopectoral position and a speculum is introduced, through which the injections are made. The operator should have at hand three or four Pravaz's syringes filled with absolute alcohol. The first injection should be made into the centre of the tumour. If the disease is scirrhus the needle at once strikes hard tissue; if it is ependymal it first strikes friable tissue, in which case it must be made to penetrate until resisting tissue is reached and then only must the piston be pressed. If the prick causes slight haemorrhage the injection should not be made until the bleeding has stopped, otherwise the alcohol will be washed away by the blood. From 3 to 7 drops should be injected at a time, and the instrument is left in position for a certain time, during which injections are made in the same manner with the other syringes, which are also left in position. The first syringe is then withdrawn and thrust into another part of the tumour, where a few drops of alcohol are injected, the instrument being again left in position as before, and so on. In this manner from 9 to 12 injections are made at one sitting, proceeding from the centre of the tumour to its circumference. The last injection should be made all round the tumour in a zone of tissue to all appearance perfectly healthy. These injections, as a rule, are well borne, the patients being able to get up and walk home directly afterwards. In the case of faint-hearted or exhausted patients, who cannot bear more than one or two injections at a time, the sittings must be more numerous or chloroform must be used. The effect of the injections, according to the author, is quickly shown by the diminution, and then by the more or less complete stoppage, of the foul smelling discharge and bleeding. At the same time local examination will show progressive hardening of the granulations, and healing of the ulcerated surfaces. The alcohol appears to produce in the tumour and surrounding surfaces a sort of artificial cirrhosis which retards the evolution of the growth, and consequently lengthens to a greater or less extent the period of survival. The ischaemia brought about by this cirrhotic transformation seems to play an important part in the action of the remedy. The results of the treatment described are, according to the author, very superior to those of curettage. These injections are usually sufficient by themselves for the palliative treatment of inoperable uterine cancer. In cases in which a layer of fungosities is present on the surface of the growth which do not disappear under the influence of the injections, it may be necessary to combine curettage with the injections; the fungosities should first be removed with a blunt curette, and the raw surface should then be cauterised with chloride of zinc, or the thermo-cautery.

TREATMENT OF PURULENT OPHTHALMIA OF THE NEW-BORN.

M. Kalt related (Lancet) at the Académie de Medicine, Paris, the numerous successes yielded in the treatment of the above serious affection by abundant irrigation by means of a 1 in 5,000 solution of potassium permanganate. The apparatus devised by him for this purpose consists of a small funnel, the nozzle of which is introduced between the eyelids, while the other extremity is connected by means of a tube with a reservoir placed at a height of thirty centimetres above the eye. Each irrigation is effected every morning and evening with two litres of the solution at a temperature of from 30° to 35° C. Where corneal ulceration exists four daily irrigations must be practised for the first three or four days, after which they may be made less frequently. In order to avoid relapses the douching must be continued until all secretion has ceased. The superiority claimed for this mode of treatment over cautera-
tions is that it can be easily applied by the nurse.

ARISTOL IN OTO RREA.

According to a very good authority aristol gives very good results in the treatment of chronic otorrhoea where the purulent discharge has given place to a serous drain, and in granulations of the middle ear, not depending on caries. The ear is washed out with a boric acid solution, and then the aristol in very fine powder is thrown on the tympanum. The operation is renewed once a day.—*Med. Press. and Circ.*

CHLORAL IN EAR-ACHE.

**Brodnax** has the following remarks about the use of Chloral in Ear-ache in his paper contributed to the *Polyclinic (Therap. Gaz.)*:—Camphor, 10 grs.; chloral, 10 grs.; carbolic acid, 10 grs.; castor oil, ½ oz. Drop into the ear warm. Fill the ear full, apply a piece of cotton wetted in warm water to fill the external ear, then a cloth wrung out in hot water as warm as can be borne.

D. R. B.

CHLORAL IN CORYZA.

**Brodnax** says (*Therap. Gaz.* ) that in coryza where the Schniéderian membrane is very irritable, chloral, 10 grs. (or drops); castor oil, ½ oz., used with a soft mop applied over the surface after being dried, acts to check the excretion of mucus, and lulls the irritation and the head pains.

D. R. B.

A PIGMENT FOR WARTS.

The *Practitioner* has the following:—

R/ Acid Salicylici ... gr. xv.

„ Lactici ... m. xv.

Collodii floris-tis ... ad. oz. ij.

M. et ft. Pigmentum.

To be applied morning and evening.

D. R. B.

POTASSIUM PERMANGANATE AS AN ANTIDOTE FOR MORPHINE.

**Dr. Graham Chambers** arrives (*Canadian Practitioner*) at the following conclusions after a series of experiments:—1. Potassium permanganate, in dilute solution not stronger than one grain to an ounce, may be given by the stomach without danger. 2. Potassium permanganate, subcutaneously, is poisonous. 3. Potassium permanganate, grain for grain, completely decomposes morphine, the decomposition occurring in acid media more rapidly than in a neutral medium. 4. Food-stuffs and acetic acid do not interfere with the decomposition. 5. Potassium permanganate is an efficient antidote if taken while the morphine is in the stomach.

The question still remains as to whether potassium permanganate is of therapeutic use after the morphine is absorbed into the system. It has been proved conclusively that if morphine is introduced subcutaneously into the system it is excreted into the stomach. Now, the morphine passes from the blood into the stomach by osmosis and by excretion, and, by the principle of osmosis, more morphine will be excreted if it is decomposed as soon as it passes into the stomach. Reasoning on this principle, we should expect that repeated small doses of potassium permanganate by the stomach would be of use in cases where the morphine has been absorbed into the system. This is rendered more probable by the fact that morphine, as a rule, is a slow-acting poison.

CALOMEL AND NEPHRITIS.

**Dr. L. Skloudoski** has been using (*Deutsch Arch.—Clin. Journ.*) calomel as a diuretic in nephritis with excellent results and states distinctly that kidney disease is no contra-indication to the use of calomel. (Thus falls one more ancient belief.)

D. R. B.
HYSTERO-EPILEPSY DUE TO ASCARIDES.

S. N. KONEFF relates (Meditzinskaia Beseda.—Brit. Med. Jour.) at length a case of severe reflex neurosis due to intestinal parasites. The patient—a peasant lad, aged 18—came under his observation with "fits," recurring with increasing frequency and severity. They had commenced in 1885, at first occurring twice or thrice a year. At the time of admission the fits occurred several times weekly, the seizures lasting from one to two and a half minutes and mostly recurring successively twice or thrice, with intervals varying from five to ten minutes. The fits consisted in exceedingly violent clonic convulsions accompanied by loss of consciousness, insensibility of the pupil, trismus, etc. They were ushered in by globus hystericus or epigastric pain, or sometimes vomiting, and invariably made their appearance shortly after a meal. After the attacks the patient always remained in a drowsy state for one or two hours, coming round but very slowly and looking extremely weak. The administration of KB\(^4\) (in increasing daily doses of from 20 to 80 grains during a month) and a subsequent course of laxatives (Carlsbad salts, rhubarb, etc.) did not produce the slightest effect either on the frequency or on the severity of the fits. Ultimately, having elicited the fact that the lad had voided 'a worm' five years previously, the author tried santonine (1 grain three times daily for three days) with the result that seven ascarides were expelled, after which all the symptoms described "vanished as if by magic," and never recurred up to the patient's discharge five and a half months later.

FIFTY CASES OF RECTAL SURGERY.

Dr. RICKETS gives (Mathew's Med. Quarterly) detailed statistics concerning fifty cases of rectal surgery, and concludes from these cases that in such operations it is necessary to have the patient completely anesthetized, and that the use of chloroform is the quickest and best means of securing this end. Cocaine is not satisfactory. This drug should, however, be given the preference in minor surgery.

As to the clamp and cautery, he relies wholly upon them in removing haemorrhoids of any size or number, it being the safest and quickest method, and so followed by speediest convalescence.

An application of the actual cautery to all ulcers and fissures at one sitting has been the most efficacious means of destroying them that he has found.

Division of fistulae with the bistoury has not failed in any attempt to obliterate them, without in a single case destroying the function of the sphincter.

Of eight cases of ischio-rectal abscess, five occurred at the time immediately following an acute gonorrhoea. Fistulae resulted, and were operated upon in each of the eight cases. He believes that acute gonorrhoea is the most frequent cause of ischio-rectal abscess in the male. However, an acute inflammatory process, due to any cause, is as likely to produce an abscess, the contents of which may escape into the rectum.

It is interesting to note that thirty of the cases were either tubercular or syphilitic. In the four cases of carcinoma the disease had progressed to such a degree as to render it unwise to attempt a radical operation, except towards the last, when colotomy should have been resorted to, but was refused.

Case No. 50 was unique, in that, falling from a table, a piece of ducking one and a quarter inches square was driven along the side of the rectum by a chair leg. The foreign body remained concealed for five months without detection, until the writer was consulted. A portion of the sphincter was torn away, but its office remains good at the present time.

The average loss of time is but little for surgical cases of this nature.
COPPER SULPHATE AS A DISINFECTANT.

H. Vincent claims that copper sulphate is the best disinfectant for faecal matters and the contents of cesspools, satisfactory results being obtained in twenty-four hours with 7 Gm. to 8.5 Gm. of the salt per 1,000 C.c. of matter disinfected. For typhoid and cholera dejecta 6 Gm. and 4 Gm. respectively, per 1,000 C.c. sufficed, the comma bacillus disappearing in about twelve hours. The greater the degree of fluidity in the matter to be disinfected, the sooner is the result attained, whilst a smaller proportion of disinfectant is required in summer than in winter, other things being equal. The presence of alkalies tends to check the action of both copper sulphate and chlorinated lime. For normal excreta mixed with urine it is recommended to employ 6 Gm. of sulphate per 1,000 C.c., to effect disinfection within twenty-four hours; in typhoid cases 5 Gm. per 1,000 C.c. should be used; whilst for cholera dejecta 3.5 Gm. per 1,000 C.c. will suffice, twelve hours only being required in the last two cases.—Comp. rend.—Pharm. Jour.

SALICYLIC ACID IN RING-WORM.

Salicylic Acid is highly recommended as an application to Ring-worm. It may be used as an ointment, but is much better as a saturated solution in collodion. One application is often all that is necessary to effect a cure, but more may be necessary. The pain caused is not usually severe.—Med. and Surg. Rep.

D. R. B.

A TREATMENT FOR ACNE OF THE FACE.

In an abstract from the Bulletin Général de Thérapeutique for December 30, 1894, which appears in Lyon Médical for January 13th, the writer gives the following formula, which, he says, has often been employed at the Saint-Louis with success: Fresh lard, 750 grains; sublimed sulphur, 105 grains; beta-naphthol and styrrax ointment, each, 80 grains. Applications of this mixture should be made with strong friction every night for a week, then interrupted for six days, when they may be repeated if necessary, although it is often useless to do so. If there is an appearance of small acute clusters, which generally show themselves toward the second day, the acne is ordinarily cured or very much ameliorated at the end of a week.

ICTERIC PRURITUS.

Alcohol, sulphuric ether, each 40 grammes (14 fluid ounces); ichthyol, 10 grammes (24 drachms). Rub thoroughly into the skin. Dissolves cholesterine crystals irritating the excretory canals of the sudoriparous system, and prevents them from forming again by impregnating them with a resinous substance. (Boulland, Jour. de Méd. et de Chir. Prat., January 10, 1895.)

LARYNGITIS STRIDULUS.

Bromide of potassium in large doses, continued for several days. In a child of 12 months the dose was gradually increased by the author until it reached 1.50 grammes (23 grains). Important to continue treatment for five or six days to prevent return of the attacks. (Huchard, Jour. des Praticiens, December 1, 1894.)

NEURALGIA.

A Post Graduate Lecture by W. R. Gowers, M.D.

In most cases of neuralgia of the fifth nerve, such as that which I am about to show you, no organic lesion has been found. It is a matter which is still uncertain. Facts can come but slowly to tell us whether most cases of persistent neuralgia of the fifth nerve are due to a peripheral or a central cause. It is most difficult to discern evidence one way or the other from the symptoms themselves. Among the facts that we have learned which seem of clear significance there is the fact that disease of
the centre of the fifth, in the pons, may give rise to such pain, that disease of the fibres in their course, perhaps also in the Gasserian ganglion, may give rise to such pain, and that disease of the peripheral termination of the fibres may give rise to such pain. It is important, in connection with the conception of the pathology of neuralgia, to realize the fact that the nerve-fibres which conduct differ only in degree from the structures which generate the nerve-impulses. I have elsewhere laid great stress upon this fact. It has been brought out by recent discoveries regarding the structure of the gray matter of the nervous system. These discoveries have an important bearing upon almost every problem of disease. The nerve-fibres, those for instance of the fifth nerve which reach in the pons and disappear from perception in the spongy substance of a long column of gray matter, probably end in that substance by terminations slightly thickened, it may be, but absolute. We used to say, we used to think, that the nerve-fibres end in the cells of the gray matter. The cogency of the facts which have been brought forward prevents me, for my own part, from entertaining any doubt of the correspondence of the new statements with fact. We must conceive that from the cells of the nucleus of the fifth nerve branching processes go off which end by contiguity, but not by continuity, with the ends of the fibres that conduct. We must conceive that the impulses which pass up leap in some way from one to the other. I say "leap," but it may be that the most powerful microscope would not reveal the chasm over which they leap. Yet it is absolute; a break in the molecular contiguity which permits the passage of chemical action. The leap is probably by simple motion, like that which produced the impulse in the first instance at the periphery, where branching processes of the cells (that is, of the long fibres) end or begin in slightly enlarged terminations in the skin.

I spoke of "branching processes," but I should rather say "separated fibrils." I need not go into that distinction, although it is one of fundamental importance, because it is explained fully in an address I have lately published, and in which these facts and opinions are readily accessible to you.* Remember how extremely complex is the spongy structure of the gray substance in every nerve-nucleus; that we have innumerable fibrils in close relationship, and among these there must be terminations which constitute definite paths in the closest contiguity, so that impulses readily pass from the one to the other. Others must be sufficiently near for an energetic impulse to pass between them, but not for a slight impulse in the closest, and among these we can readily understand that there may be a difference in special excitability at the time. An impulse may even reach the centre and excite an adjacent fibril ending more readily than the ending which is in strict relation to it, because the former is the more excitable. If we conceive, as I think we must, that the nerve-impulse which begins by excitation from simple motion, which is propagated by chemical processes as a form of motion, may pass again as simple motion where the absence of contiguity prevents the chemical transfer of its special form of motion, it is not difficult to understand that adjacent fibrils may be thus excited, and that we may have what is called an "irradiation of sensation."

I remember a personal instance of that. Unpleasant as personal experience may be, never forget that the most useful knowledge of your professional life is that which is subjective. I remember having a carious tooth in the lower jaw, from which I suffered no pain. After a time I had an attack of recurring paroxysms of intense neuralgic pain in the upper jaw, just opposite the tooth, but never associated with any pain in the carious tooth. At last I had that tooth

The China Medical Missionary Journal.

extracted. The process of extraction caused the most intense paroxysm of pain in the upper jaw that I had ever experienced, and — it was the last. There can be no doubt that the irritation of the inferior dental branch of the fifth nerve had in some way, probably by some increased susceptibility of contiguous fibrils, led to their special excitation, and their stimulation had reached a morbid degree, intensifying itself until it possessed the capacity for neuralgia.

These new facts of the relation of the nerve-structures do enable us to understand many phenomena better; and that which explains much is seldom wrong. We can sometimes discern truth most surely by perceiving how much that is obscure is made clear, how much that is discordant is brought into harmony, how much more we can look for than before could be conceived.

Among the many varieties of neuralgia which you will find arrayed in text-books in serried ranks of formidable length and imposing order, three groups are specially important: (1) The neuralgic pains which occur at all periods of life from definite local irritation, such as that which decayed teeth induce. (2) The changing neuralgic pains that we meet with especially in middle life,—when a neuralgic pain comes in one part, then passes to another, then may leave and go to a third, then perhaps will change to some other temporary neurosis, and then may vanish as an altogether different malady comes on. (3) The class of which this case is an example,—senile neuralgia.

Neuralgia in its intense severity and enduring form is a malady of late life. It is the most formidable, the most distressing disease that life can bring, and it comes when the clouds should clear for the placid sunset, always longed for, seldom obtained. It is a disease of age. The influence of age on neuralgic pain is an important and significant fact, shown in a most striking way by the neuralgia which follows herpes. After the age of fifty years post-herpetic neuralgia is prolonged in proportion to age, or rather its persistence is longer and far greater than the ratio to age. In middle age the neuralgia is trifling, and will last only for a week or two, but at seventy it will last for years, and may never pass away entirely. That is true irrespective of situation. I remember that Sir William Jenner used to tell us of one striking instance of this. A man had herpes zoster on the calf of the leg. It was characteristic, and had left the usual sequel. It was before the days of chloroform; he had everything done which could be thought of, and at last he consented to endure the pain of having that part of the skin and muscle cut away. Obtaining no relief he shot himself. That may impress on you the intensity of the pain in the old which is trivial in the young. Why it should be I do not know, but we may form some dim conjecture when we remember that all these nerve-impulses are matters of, as far as we can see, chemical processes occurring in the tissues under the influence of life. The vital power of nutrition is the influence which renews the capacity for function, by replacing the molecules which have been changed by the functional action which has just occurred. As life goes on, the capacity for renewal becomes less perfect, so that molecules are formed less competent to achieve their purpose, more prone to give rise to abnormal impulses, and recovery from any other morbid process produced by outside influences is less perfect. The restoration of structure is not such as to enable it to do the normal work in perfect degree, and the degree of imperfection of constitution, so slight, it may be, as to us to be scarcely conceivable, may determine a morbid function adequate to produce intense pain, where under normal condition hardly any sensation should be caused. Every morbid functional action is followed by a renewal of capacity for like action, but renewing it every time in an increased degree. The nutritional power of life is an augmenting
influence, potent for all acquisition of
capacity, healthy and diseased. The dis-
orders of the nervous system that depend
on morbid action are by the vital processes
of nutrition, self-perpetuating.

This patient is forty-seven years of age,
her case makes us call to mind as possibly
important the fact that senility is individual,
so far as concerns the time of life at which age
becomes "old age," and come the transition
must, unless the shears snap the thread be-
fore it breaks. It is not only individual, but
often partial. Ever" gray or hairless head
reminds us of the fact, and should prepare us
to meet with local troubles in some patients
which are commonly met with only in those
who are much older. The patient is younger
than most subjects of her malady. But in
life's sad cadence, tones only just distinct
in one generation dominate that of the next.
The patient inherits neuralgia, but not in its
senile form. Her mother suffered from
nerve-pain for several years, but in another
seat and form. The transmission of tenden-
cies to disease rather than of precise disease
is forever rising conspicuously before us
when we endeavor to discern the relations of
the morbid processes we have to treat. Each
tendency may be inherited in hindered or
augmented form, often through causes that
we cannot trace. Senile changes in one
person may come only a little before due
time, and in the offspring may be definitely
premature. The strength of tissue vitality
varies and is capable of variation through
direct and indirect influences. Its primary
influence is on function, the changes in nu-
trition first thus manifesting their presence.
Ultimately derangement increases to loss as
nutritional alteration advances to structural
change. But this is clearly seen only
when function readily reveals the early
change.

There is another class of cases in which
the inheritance of disease depends upon the
inheritance of structural peculiarities, un-
important in themselves, incapable of mani-
festing their presence, and yet determining
in an adventitious manner grave disease.
Thus early death may be inherited through
that which, save for its position, would
entail no difference in any one of life's
many features. Yet a simple inherited
peculiarity in anatomical arrangement may
produce pain. I press suddenly, and you
see at once evidence of suffering. I again
press gradually, and gradually lessen the
pressure, and there is no pain. Again I
press gradually, and suddenly withdraw the
finger, and pain is acute. The patient has
had fewer attacks of pain during the past
week, but she has had more slight con-
tinuous pain. The substitution of this for
the intense paroxysms is probably an im-
provement, but the patient seldom realizes
it. A present evil, vivid in its experience,
always seems greater than that which
memory only presents to the consciousness.
The slighter constant pain seems to her
harder to endure than even the frightful
paroxysms she suffered with intervals be-
tween of perfect freedom. The patient has
been admitted with a view to an operation
upon the nerve, but at present we have
only an example of the frequent difficulty
that is due to some improvement produced
by the perfect rest or by the treatment it
is right to try.

The result of division of the nerve is
sometimes great and sometimes most disap-
pointing. Benefit apparently depends upon
the effect of preventing all afferent im-
pulses from the periphery. When the
neuralgia depends upon nutritional changes
in the centre, rendering it unduly active, so
as to generate impulses, the activity may be
kept up, and the paroxysms of pain caused
by impressions from the periphery which
normally would have no effect. If the
morbid process is actually in the periphery,
or in the nerve-fibres which conduct and are
also excitable, and the nerve can be divided
above the morbid process, then the morbid
impressions are arrested. But it may be
that even then the effect is not absolute, because the repeated abnormal impulses giving rise to the pain may have brought the centre into a state of spontaneous over-action, and neuralgia, primarily peripheral, may be ultimately central, and thus continue when the peripheral cause is removed from action. It is a similar process to that of epilepsy due to a tapeworm in the intestine, and may persist for years after the cause is expelled. Such arrest of the peripheral impressions is a point of great importance in treatment, but it is so formidable that only when other measures have failed can it be proposed. In many cases, especially in those which are not of long duration, we have the means of lessening the peripheral impressions for a little time each day by the hypodermic injection of cocaine, and, slight as this may seem to be, yet by its repetition it has often in time an unquestionable influence. Moreover, the importance of combining several influences, each of which alone has but slight effect, is often strongly impressed on the practitioner. It interferes seriously with the progress of therapeutic science, but we have to gather for the general good the fragments that we can secure without individual harm.

I can glance at some only of the more important of the other general elements in treatment. Apart from the removal of causes and the operative treatment, the chief measure is the promotion of the general health by every means in our power, avoiding whatever lowers the tone of the nervous system, and endeavoring to strengthen it by drugs, and to lessen, if we can, the tendency to its over-action in the same way. I do not hesitate to speak of treatment by drugs. I hold that their influence is by conveying energy in special forms to special structures in which energy is evolved. I wish we could associate drug with drag and draw. Alas! Professor Skeat forbids, and from his decision there is no appeal. He only permits us, as the source of the word, dried roots and sugar-plums. Well, "these things are an allegory," without doubt, but not that which I desire. In passing, may I ask if you knew Skeat's "Concise Etymological Dictionary," in which words are arranged according to their derivation? If not, let me urge you to spend on it the first seven shillings and sixpence you can save or beg (I will not go farther, though I almost might). But, frankly, if a copy cost five pounds, I would sell any books I have, to that value, in order to obtain it.

To see the real significance of the use of drugs—as dynamical therapeutics—we must realize that all the impulses in the nervous system are the result of chemical processes occurring in the nerve-tissue. In this the molecules, their composition and arrangement, are determined by the influence of life, mysterious, inscrutable to us perhaps forever. But the processes depend on energy latent in the molecules, released by chemical union. Most drugs, like most food, are of value not as matter but because they convey energy. These chemical compounds present latent chemical energy in certain forms, and by entering into the composition of various structures they modify their composition or action or both; thus they do good; thus also at times they do harm. But into this question, fascinating as it is, I cannot go. You will find its grounds discussed in the address I have already referred to.

In the treatment of neuralgia I confess my own experience does not lead me to express any high estimate of the older drugs, such as sulphate of copper, but the influence of direct sedatives is unquestionable. The influence of cocaine is purely local, it is simply to arrest the afferent impulse; but the influence of morphine is central, it has special action upon the sensory structures. A strange thing, which may not have struck you, is that morphine and opium seem to have a special action upon the centre which is over-acting, so that the agents will quell pain without producing sleep, and indeed at first in doses too small
to cause sleep, if only they reach the centres with the sudden momentum secured by hypodermic injections. As a rule, in my observation, the greatest benefit has been obtained from the milder sedatives, especially Indian hemp and gelsemium, while the tonic effect that is usually essential for permanent benefit is produced, I think, even on the sensory structures, by strychnine more effectually than by any other drug. Its effect also seems to be proportioned to the momentum with which it is brought to bear upon the elements, and as it is not always convenient to give it as a hypodermic injection, and it is well to convey the momentum of its tonic influence with the momentum of gentle sedative influence, I have been accustomed to combine strychnine with Indian hemp or gelsemium, and to secure their more rapid transit by giving at the same time nitroglycerin. Our pharmacopoeial one-per-cent. alcoholic solution called tinctura trinitrini is most convenient for the purpose. The important thing is that the initial dose should be uselessly small and rapidly increased, and that the mixture should not be alkaline. From this I have seen results, even in such cases as the patient before you, exceeding anything I could have expected, giving greater and more permanent relief than any other therapeutic measures, so much so that the treatment has made it unnecessary to operate on some patients who were admitted for that express purpose.—Post-Graduate Lecture by W. R. Gowers, M.D., International Medical Magazine, Vol. IV, No. 2.

MALARIAL FEVER.

In certain cases, pseudo-continued malarial fever is accompanied by congestion of some important viscera, like the brain, cord, lung, etc., and diagnosis at the outset becomes very difficult. Pleuro-pulmonary hyperaemia especially leads the physician to think of a simple pneumonia, inasmuch as the patient complains of severe stitch in the side, cough and dyspnoea, and spits blood; if together with these symptoms we take the initial chill, which is almost never wanting, and a temperature of 104° or 104.5°, the error of diagnosis becomes pardonable. Yet there is, in these difficult and embarrassing cases, one circumstance of great value, to which the physician should always attend, for it greatly enlightens his judgment, or at least puts him on his guard—namely, the absence of physical signs, especially those furnished by auscultation, which are present in a true pulmonary inflammation. There is no fine crepitation, even when the patient coughs; there is no bronchial respiration nor bronchophony; the ear barely perceives a very fine friction sound, superficial and circumscribed (due to the dryness of the pleura), and weakening of the respiratory murmur (due to the diminution in capacity of the pulmonary vesicles, connected with excessive fulness of the vessels which pass over their walls).

There entered the hospital of Nossa Senhora d'Ájuda a patient in exactly this condition: he had had an intense and prolonged chill; an acute and pricking pain below the right nipple, cough, dyspnoea and extreme febrile heat (105.5°) were present. The intern who received him (one of the most distinguished students of the sixth year of our university), in spite of the absence of the characteristic physical signs, diagnosed a pleuro-pneumonia and prescribed accordingly. The next day I diagnosed pseudo-continued malarial fever complicated by pulmonary congestion, and prescribed the sulphate of quinine exclusively for the space of four days. The patient, who was a young negro and very robust, recovered promptly.

In February, 1873, I saw a patient in São Christovãö who presented a very singular array of symptoms, which environed the diagnosis with serious difficulties. He had high fever, which dated from forty-eight hours back, was somewhat delirious, and
had incomplete paralysis of the upper and lower extremities and the bladder, accompanied by general hyperæsthesia; the slightest pressure made on any part of the body, particularly on its upper half, excited cries of pain. There was slight congestion of the liver and spleen; the tongue was slightly furred and the bowels constipated. At first sight it seemed a case of spinal meningitis; but the absence of opisthotonos, the high degree of fever (105.2°), the hepato-splenic congestion, and above all the very important circumstance of these symptoms having appeared rapidly, reaching their maximum gravity in two days, led me to presume that it was a malarial pyrexia of continued type, attended by hyperæmia of the parts contained in the spinal canal. The treatment I advised, and which produced splendid results, was as follows: Twelve leeches to the verge of the anus; twelve wet cups along the spine; calomel in purgative doses; and then half a dram of quinine in solution, given in three doses. Twenty-four hours after this treatment the patient was extraordinarily improved. The quinine was continued for several days, in decreasing doses, and convalescence was manifest twelve days after.

In the treatment of continued malarial fever, quinine should be given as soon as the diagnosis is established, even though the febrile reaction be intense. But it is important for the physician never to forget that before administering the precious specific he should fulfill certain previous indications—a condition at times indispensable to the absorption and action of the drug: he must combat the gastro-intestinal disturbance by means of an emetic and cathartic; remove visceral congestion by blood-letting, general or local, profuse or moderate, in accordance with the extent and severity of the hyperæmia, age, sex, temperament, and other individual peculiarities of the patient, and according to the condition of the pulse and date of the disease.—Medical Age.

HICOUH.

This is often a most distressing symptom, and in rare instances becomes, when prolonged, threatening and even dangerous. In a recent number of Vratch, TATEVOSSEFF calls attention to common tobacco-snuff as a remedy. He narrates the case of a patient suffering from chronic chest-disease, accompanied by violent attacks of cough, invariably succeeded by paroxysms of most obstinate hiccough. After a time the singultus refused to yield to any of the classic remedies—even cocaine was powerless. Then tobacco-snuff was employed in successive pinches until lively sneezing was induced. The result was most satisfactory, for with the first sternutation the singultus disappeared, to return no more.

CHILLS AS A CAUSE OF ERROR IN DIAGNOSIS.

Dr. WILIAM OSLER makes some remarks upon this subject. Chills differ very much in their etiology, but may be divided into two main groups: (1) those from sudden shock to the nervous system, and (2) those from absorption of the toxic material formed by organisms. In so-called nervous chill fever is absent. In the second group there is always fever. The nervous chill is that met with in gall-stone colic or in the passage of a catheter. This initial chill is without fever, but subsequently, of course, there may be chills with fever due to infection. The disease most often associated with chills is malarial fever, and here the chill is of a characteristic kind; so that the name "chills and fever" is synonymous with malaria. The two great diagnostic points in malaria are the invariable association of the plasmodium of Laveran and the invariable curative effects of quinine. It may be said that within forty-eight hours the chill will cease in genuine malaria if quinine be used.

Chills cause errors in diagnosis in various affections. In tuberculosis the error may be made early or late in the disease, for it is at the two extremes of pulmonary tuber-
closusis that we have chills. These are a special feature of the early stages of tuberculosis. He has had many cases of early phthisis brought to him as malarial fever. Errors occur frequently in regions where paludism is common. Then there is the large group of septic processes with fever, such as abscess of the liver, which is a common cause of chills and fever in this latitude. There are very few cases of abscess of the liver which are not at first regarded as malarial fever, and thus much valuable time is lost in the treatment. Malignant endocarditis is another disease which is ushered in by chills and which is often treated for malaria. A not frequent source of error is the chill following and associated with pleurisy of a tuberculous form and empyema following the infectious diseases, as scarlet fever, etc., and following the formation of pus. The chills in typhoid fever are of the greatest importance, and have attracted attention for years. They occur in 2 or 3 per cent, of all cases, and are often due to the powerful antipyretics given. He had seen cases in which chills and fever had followed a large dose of antifebrin. In certain affections of the urinary passages, and more especially in pyelitis, chills occur which are often obscure. In chronic obstruction of the common duct by gall-stones there is the condition called by Charcot hepatic intermittent fever due to catarrhal cholangitis. In new growths of various kinds, as in cancer of the stomach, in Hodgkin's disease, and lastly in syphilis, errors as to the nature of the fever may be made. The important aids in the diagnosis of chills are quinine and the examination of the blood. Medical Record, January 12, 1895.

HAEMATOPORPHIRINURIA FOLLOWING THE ADMINISTRATION OF SULPHONAL.

Dr. L. R. Oswald related at length the history of a woman admitted to the Glasgow Royal Asylum, in August, 1893, for acute mania, from which she had been suffering for a couple of weeks.

There had been no previous bodily or mental illness, though there was an hereditary predisposition to insanity and marked allied neurosis in the family history. She was at first given paraaddehyde when it was necessary to produce sleep, and after a couple of months appeared to be on the way to recovery. The urine contained traces of albumin. When an hypnotic was required she was given chloral and bromide. In November she had a relapse, and in January, 1894, a burst of great excitement. Chloral and bromide seemed not to act very well, and in the middle of April, as she was in a state of chronic excitement, she was given sulphonal for the first time in doses of 15 grains (1 gramme) twice daily. This was continued regularly till about the middle of July, but in varying doses, from 15 to 30 grains (1 to 2 grammes), according to the condition. For a couple of weeks she was quieter, and the drug was given rarely; but in the beginning of August it was resumed in 10-grain (0.65 gramme) doses twice daily and continued until August 23rd, when an illness set in which proved fatal in eleven days. In all she took 2,200 grains (70½ ounces) of sulphonal. The doses were not large, and the drug had seemed to act well, procuring sleep, lessening excitement and calming the patient without producing any evident injurious effect. The following morning, August 24th, vomiting occurred, with abdominal pain and tenderness about the umbilicus on pressure. No urine was passed that day; but the next morning that passed was found to be scanty, of dark color, and, microscopically examined, to contain many altered blood-discs. The color was evidently due to haematoporphyrin. The patient continued in much the same condition from the 26th to the 31st, when she seemed better and retained a little peptonized milk. The pulse was fuller and the claret color was absent from the urine. After a rest.
The evening mental crease gradually weakened her. During the temperature ever, and urine and faeces were passed involuntarily. The next day she grew gradually weaker and died at midnight, the temperature being at 100° F. (37.8° C.). During her illness there was a great decrease of blood-corpuscles, but some days before death they increased, showing that the destructive process had apparently stopped. Dr. Buchanan made a microscopic examination of the liver and kidneys finding the former in a state of generalized fatty degeneration, the fat being mostly in a finely-divided form. The kidneys presented a notable departure from the normal, the renal epithelium being homogeneously granular and the outlines of cells and nuclei almost entirely lost. In sections hardened in Müller's fluid and stained with alum-carmine the granular appearance of the nuclei was retained; but the cells of the convoluted tubules, with the exception of a coil here and there, did not show nuclear staining, and the same was true of many of the straight tubules. The connective-tissue nuclei had also in great part disappeared, as well as those of the vessel-walls.

As albumin had been noted in the urine prior to the fatal illness, the changes in the kidney were probably due, at least in part, to previous renal disease. This would undoubtedly be aggravated by the irritative action of the excretion of hæmatoporphyrin and allied substances, as it has been determined that injections of blood-serum containing hæmatoporphyrin produce considerable irritation of the kidneys and changes in the urine.

Dr. Oswald stated that about forty cases of a similar nature had been reported, all in women, and over one-half of them terminating fatally. From these cases it must be admitted that the hæmatoporphyrin in the urine in such quantities is directly due to the sulphonal. When the cases for its administration are carefully chosen its value as an hypnotic cannot be called in question; but when the bodily condition is poor and the patient anæmic it is difficult to see the value of a drug that has been shown to lead to the appearance in the urine, in variable quantity, of the decomposition products of hæmoglobin. In cases of folie circulaire, though it lessens the excitement, it seems to render the stage of well-being less bright and clear intellectually. As a temporary hypnotic for acute cases in private practice, and as a sedative for chronic and incurable cases of excitement, it is of great service; but it must be given with care and watchfulness, as symptoms of great severity may arise with little warning, and the life of the patient be endangered.—Glasgow Medical Journal, January, 1895.

THE PARASITES OF MALARIA.

By A. Laveran.

Translated from Traité des Fièvres Palustres, by J. H. Kellogg, M.D.

[To Laveran, perhaps more than to any other one individual, belongs the credit of the discovery of the malarial parasite. More recent observations have given an interpretation of some of the forms different from that of Laveran, but no writer has given a more graphic description of these curious animal forms than has this distinguished discoverer. In subsequent numbers of this journal we purpose to give the results of more recent studies of this subject.—TRANSLATOR.]

The parasitic elements of the blood present themselves under several forms, which appear to correspond to the different phases of the evolution of the same parasite. These forms, four in number, have been described in my first communication relative to parasites of malaria, under
the following names, which I believe to be useful to preserve, to avoid confusion:

Cystic bodies Nos. 1 and 2, or, more simply, bodies Nos. 1 and 2; mobile filament and bodies No. 3, which appear to be only the cadaveric forms of bodies Nos. 1 and 2; and mobile filaments.

To these animals we may add also pigmented leucocytes, which obtain the grains of pigment with which they are charged from parasitic elements in the process of destruction, and which consequently are very characteristic of malaria.

Cystic Bodies No. 1, or Developing Bodies.—These bodies consist of cylindrical elements, pointed at their extremities, usually curved and crescentic in form, and pigmented in the middle portion (Fig. 1.). The length of these bodies is 8 to 9 mm.; their width, about 3 mm. at the central portion. The extremities are sometimes very pointed, sometimes rounded (Fig. 1, A, B). The outlines are indicated most frequently by a single very fine line, but it is easy to make out that in some preparations a double contour exists. These bodies are transparent and colourless, excepting toward the central portion, where some pigment granules are aggregated. In exceptional cases the pigmented spot may be situated at one of the extremities. One often sees, on the concave side, a very fine line which seems to unite the extremities of the crescent (Fig. 1, B). When one of these bodies is attached to a red corpuscle (Fig. 1, C), the extremities of the crescent extend beyond the border of the corpuscle. The adhesion to the corpuscles is not strong, and appears to be purely accidental. Aside from the curved and crescentic bodies which are always numerous, one often finds some which are scarcely at all incurred, and of which the longest axes is a straight line. It is easy to see that these elements have a cylindrical form, and that their appearance is not due to the manner in which they present themselves to the observer. It is only necessary, in order to demonstrate this, to produce a slight current in the pre-

![Fig. 1. Magnified 1000 diameters.](image)

paration of blood containing some of these bodies, when one sees them turn upon themselves, thus presenting the different phases, but preserving constantly the same aspect.

Aside from these cylindrical, or crescentic elements, there are nearly always found oval bodies (Fig. 1, E) which appear to be intermediary forms between body No. 1 and body No. 2, which will be described later. In these oval bodies, grains of pigment are often disposed in the form of a regular circle, as in bodies No. 2.

Bodies No. 2 do not appear to be endowed with movement. They do not change their places in the field of the microscope, and when their form is modified the change occurs very slowly. One can sometimes follow the transformation of these pointed cylindrical bodies into oval and finally into spherical bodies.

The pigment grains situated in the middle of these bodies are not movable. They never present the lively and rapid movements with which the pigment grains of bodies No. 2 are often animated. Once only have I observed the existence of movable pigment grains in the interior of bodies No. 1. The blood had been collected in the moist chamber of RENVIER, where it had been forty-eight hours at the time when I made this observation. The double contour of these bodies (No. 1) had already become very apparent.

The bodies No. 1 contained in preparations of fresh blood rapidly change their form, of which it is easy to assure one's self by proceeding as follows: After having
found examples of body No. 1 in a preparation of fresh blood, make a drawing, then fix the preparation for a stage of the microscope in such a manner as not to lose the field in which the bodies drawn are found. At the end of some hours the bodies are examined again, and a new drawing made, and so on. One observes, generally, that at the end of twenty-four hours, bodies No. 1 have taken an irregularly spherical form. In the cadaver, the bodies No. 1 change their form more quickly still than in fresh blood. We find that it is necessary to collect the blood during the first hours after death.

I will endeavour later to determine what relation these bodies No. 1 sustain to those elements found in the blood of persons affected by malaria.

It is necessary to observe here that the presence of these elements in the blood is less constant than that of bodies No. 2. I have described them first, only in order to preserve the order which I have adopted in my previous publications. Sometimes bodies No. 1 are not found in the blood, although it may be rich in malarial parasites (bodies No. 2, and mobile filaments). Sometimes, on the contrary, the blood contains only bodies No. 2. In certain patients these elements exist in very great numbers in the blood. I have many times found ten or a dozen bodies No. 1 in a single microscopic field, employing ocular No. 2 and objective No. 7 of Verneuil; that is to say, these bodies were nearly twice as numerous as the leucocytes in the normal blood.

**Cystic Bodies No. 2, Spherical Bodies.**—These elements are, without contradiction, those which are most often encountered in the blood of paludicellidae. Fig. 2 shows the principal aspects under which they present themselves to the observer. Their form is spherical, but we shall see farther on that this form may be modified under the influence of movements comparable to amoeboid movements.

The dimensions are very variable, the smallest bodies No. 2 being scarcely 1 micromillimeter in diameter. The largest may have a diameter of 10 micromillimeters.

The contours are indicated by a very fine line. Sometimes a double contour (Fig. 2, C) may be distinguished, principally in preparations treated by osmic acid colored by picrocarmine and preserved in glycerine.

![Fig. 2. Magnified 1000 Diameters.](image)

A. Parasites of average volume. B. Parasites including movable grains of pigment. C. Parasite with double contour. D. Parasites of small volume, free and isolated. E. Parasites of small volume aggregated. G, H, I, X. Red corpuscles with parasites of small volume attached, 1, 2, 3, 4, etc. L. A red corpuscle to which is attached a parasite of average size. The corpuscle has lost part of its coloring matter.

These elements appear to be composed of a very transparent hyaline mass including round granules of black or very dull fire-red pigment, identical with those which are found in bodies No 1. The smallest bodies No. 2 often inclose only one or two grains of pigment (Fig. 2, B). In the largest of these bodies, grains of pigment are often regularly arranged in the form of a crown, or it may be observed that the pigment granules are disposed without order, and that they are animated by a very lively movement comparable to the movements of the solid particles which are found in a boiling liquid. This agitation of the pigment grains is also in analogy with the Brownian movement, but it has not the same regularity. Sometimes the movement stops completely. Some-
times it is increased without a change in the physical conditions of the preparation, being modified in appearance. A priori, one is tempted to believe that the pigment grains are animated with a self-movement. We shall see farther on, in studying the mobile filaments, that they are very probably agitated only by a common movement.

The pigment grains are generally immoveable in bodies No. 2 of small volume, while in bodies No. 2 of medium and large volume they are nearly always seen in movement, especially if the preparation is kept at a sufficiently high temperature.

The spherical cystic bodies are sometimes free in the serum, sometimes adherent to the red corpuscles (Fig. 2, H, I, K, L).

Bodies of small volume which are free in the serum are often united in groups of 4, 5, 6, or more (Fig. 2, E).

Cystic bodies attached to the red corpuscles have a variable volume. Sometimes we find bodies of very small volume, each inclosing only 1, 2, or 3, pigment grains, and 2, 3, or 4 in the same red corpuscle (Fig. 2, H, I, K). Sometimes larger bodies have a diameter nearly equal to that of the red corpuscle (Fig. 2, L), which becomes more and more pale, and finally appears only as a pale-yellow zone around the parasite.

The moment finally arrives when the red corpuscle can no longer be distinguished except by its contour; its natural color has entirely disappeared. Its transparency is greater than that of the parasite to which it is attached. The parasite appears then to be surrounded by a transparent zone of more or less concentric form. Suddenly the corpuscle disappears entirely. In proportion as the red corpuscle disappears, body No. 2 increases in volume.

One often finds, in preparations of the blood of paludicellids, red corpuscles which present small, clear spots (Fig. 2, G). It is probable that these clear spots are due to spherical bodies in a nascent state, so to speak, which do not yet contain pigment. MM. MARCIAFAVA and CELLI appear to have observed this phase of the parasites.

Certain bodies No. 2 containing grains of pigment have exactly the same diameter as the red corpuscles. In this case we must ask ourselves if we have to deal with parasitic elements having independent existence, or with red corpuscles which have been changed by the presence of parasites which have entered into the interior of the red corpuscles as the weevil enters into a grain of wheat. This hypothesis and this comparison were made by Dr. RICHARD, in a communication to the Academy of Sciences, Feb. 28, 1882.

Besides bodies No. 2, which have a diameter nearly equal to that of the red corpuscles, there exist others which are only one to two micromillimeters in diameter, and which, consequently, are smaller than the smallest blood globules. The existence in the blood of bodies No. 2 of medium and small volume, free, independent of the red corpuscles, clearly shows that these bodies have an independent existence. Further: A red corpuscle which has no envelope, properly so-called, possessed of so great elasticity as to yield to the slightest pressure, cannot be compared to a grain of wheat. Dr. RICHARD has himself abandoned this hypothesis. In his last publication upon the microbes of malaria, he expressed himself thus: "These bodies, spoken of as cystic bodies No. 2, are sometimes found in groups of 2, 3, or 4, but more frequently, instead of swimming free in the plasma, they are attached to the red corpuscles, at the expense of which they are nourished. Sometimes the globule, as well as the parasite, conserves its discoid form. More often its edges roll up in such a manner that it embraces the parasite in its concavity. We might then believe that the parasite is inclosed in the globule itself, and for a long time I thought this to be the case. To-day I am of the contrary opinion.—Revue Scientifique, 1883, p. 114.
When one examines bodies No. 2 of medium or large dimensions at a temperature of 30° to 35° C. (86° to 95° F.), while the pigment grains which they contain are very much agitated, these transformations which take place with a certain slowness, as those of amœbae, are easy to observe when one takes care to keep the same elements within the field of the microscope and to make drawings every five minutes. Some little sarcodic bodies sometimes form themselves upon the borders of bodies No. 2.

When one examines attentively a body No. 2, he sometimes sees these bodies divide into three or four similar elements, but of smaller volume. These bodies may again unite into a single one in such way that the body No. 2 regains its original appearance. At the end of a variable time the movements of the pigment grains cease. The body No. 2 then takes its cadaveric form, which will be described later.

Bodies No. 2 possess no visible nuclei in a fresh state, and even when coloured with carmine no nuclei can be discovered, so that these bodies cannot be confounded with pigmented leucocytes, even though the parasites may be nearly of the same diameter as the leucocytes.

When one carefully examines a preparation of blood showing spherical cystic bodies, there may often be observed at the borders of the parasites, filaments which move with great rapidity, and which impart to the neighbouring red corpuscles rapid and variable movements. These mobile filaments, the animated nature of which is incontestable, appear to represent the adult state of the malarial parasite, and their study then is of great importance. Unfortunately they, of all the different parasitic elements which exist in the blood, are those the observation of which presents the greatest difficulty. The movable filaments are very long in comparison with the parasites. Their length is, in fact, three or four times the diameter of the red corpuscles, perhaps 21 to 28 micromillimeters, but they are so slender and transparent that in a state of repose they cannot be discovered. It is with these as with the vibratile hairs of certain infusorians, which are not apparent in repose. We know that a glass rod plunged into Canada balsam becomes invisible, the index of refraction of the glass being nearly the same as that of the balsam. It will be easily understood that there is still greater reason why these extreme forms and transparent filaments should be invisible when in a state of repose in the serum of the blood.

The movements of the mobile filaments then cease for some time after one has collected the blood upon a cover-glass, especially if the external temperature is low, and if the warming stage is not used. I have many times noticed that during the summer, when the external temperature was very high, the movements of the filaments were observed from the beginning of the examination of the blood; while in the winter, when the temperature of the laboratory was low, it was found necessary to wait long to see the mobile elements.

Let us note, in conclusion, that the mobile filaments correspond to a certain phase of development of the parasites of malaria, and that, consequently, one must not expect to encounter them constantly in the blood of paludicellids.

For these different reasons the study of the mobile filaments is very difficult, and it may be understood that these microbes, in spite of their length and the vivacity of their movements, for a long time escaped the attention of observers. Sometimes the mobile filaments are free among the blood corpuscles; sometimes they adhere by one of their extremities to a spherical cystic body, or bodies No. 2. The free filaments move among the red corpuscles like eels, and it is difficult to follow them in their movements. The filaments which are still adherent to bodies No. 2 are easier to study, because they remain in the field
of the microscope and move in the same place.

I have already said that the length of these mobile filaments is 21 to 28 micro-millimeters. Their thickness may be estimated at 1 micro-millimeter or more.

The filaments are not observed in connexion with bodies No. 2 of small volume, nor in developing bodies or bodies No. 1. The mobile filaments are only observed at the borders of bodies No. 2 of medium or large volume.

The number of mobile filaments which adhere to a single body (No. 2) is very variable. Sometimes one or two may be observed. At other times three, four, five, or even six. This is a matter difficult to determine for the reason that the filaments do not all move at the same time, and those which are not in movement are not visible. Sometimes the filaments are arranged in a very symmetrical manner (Fig. 3, A). Sometimes they are grouped upon the same side (Fig. 3, B). Sometimes, finally, they wrap themselves around the spherical bodies to which they are adherent. No precise rule can be formulated upon this point.

The movements of the mobile filaments which adhere by one of their extremities to a body (No. 2, January number) are extremely lively and variable; they may be compared to those of an eel attached by its tail and making efforts to escape. In their movements the mobile filaments impart movements to the neighbouring red corpuscles, which aids in their discovery.

Dr. Richard has given the following excellent description of the variable movements which the mobile filaments present:—

"These filaments are animated by movements so lively and energetic as even to change the form and displace the neighbouring red blood corpuscles. From time to time the movements diminish a little, to recover their former activity a few seconds later, when they encounter an obstacle
The China Medical Missionary Journal.

which hinders their movements. The filaments double upon themselves with agility. In watching these movements one is nearly ready to believe them to be voluntary. Thus one day I observed a filament about the end of which was wrapped a mass of fibrous reticulum. Suddenly it redoubled its activity; it was agitated with veritable shocks, movements of impatience, if I may so express myself, as if it was seeking to disentangle itself. These little dramas upon the field of the microscope are sometimes varied and very interesting. Thus one discovers some elements inclosed in a red globule as in a helmet, and if a vibrating filament finds itself situated exactly in the cavity of a red corpuscle, one sees it moving about as a pestle in a mortar, changing its form, beating it, so to speak. The little boxer soon frees itself, thanks to its elasticity. Sometimes the mobile elongations become entangled with one another, forming a regular snarl, when the movement is almost instantly arrested. When the vibrating element finds itself in a little lake of plasma, free from red blood globules, it may be seen to direct itself in a definite direction with great swiftness, from which one would be tempted to conclude that these organisms have the means of locomotion."


The mobile filaments often give to the spherical bodies into which they are inserted an oscillatory movement more or less extended. Sometimes even spherical bodies undergo movements of translation under the influence of shocks communicated to them by their mobile filaments. I have many times observed movements of this kind very extended in character, notably when the blood was examined in the moist chamber of Ranvier, and when consequently, the filaments had a larger field in which to move than in ordinary preparations.

The pigment grains inclosed in bodies No. 2 furnished with mobile filaments are sometimes in repose and sometimes animated with more or less lively movements, which have been already described.

We have seen that bodies No. 2 sometimes present amoeboid movements. Fig. 4 represents the different aspects of a body No. 2 furnished with mobile filaments, drawn Dec. 1, 1880.

The movements of the mobile filaments may persist during two or three hours. In general, they disappear much more rapidly. In pressing upon the cover-glass in such a manner as to act mechanically upon a body No. 2 furnished with mobile filaments, one always sees the effect of this action in arresting the movements of the filaments. Again, in examinations of a spherical body furnished with mobile filaments analogous to those represented by A and B in Fig. 3, the first idea which occurs

![Fig. 4](image_url)

A. Body No. 2 found with three mobile filaments. C. The same body drawn at 3 o'clock in the afternoon. B. The same body drawn at 3.35 in the afternoon. D. The same body drawn at 3.35. E. Moveable elements can no longer be distinguished, drawn Dec. 2, 1880, at 8.30 in the morning. Magnified about 1000 diameters.
to the mind is that one is in the presence of an animated being, presenting a central and spherical pigmented mass and some pseudopodia. This was the first hypothesis which I made upon the structures of these bodies. A more attentive examination showed me that it is necessary to renounce this interpretation. In the first place, it is often impossible to discover mobile filaments upon the borders of bodies No. 2, even when these bodies have attained their average dimensions. In the second place, the number of mobile filaments is variable. Finally, one nearly always observes that the mobile filaments detach themselves from bodies No. 2, into which they have been inserted. These filaments, when free, circulate among the red corpuscles, while the body No. 2, appearing like a cystic pocket which has been abandoned, remains immovable and soon undergoes transformation.

The spherical bodies (No. 2) are probably small cysts in the interior of which these mobile filaments develop. I have many times seen mobile filaments which had only incompletely escaped from bodies (No. 2), and which, during the examination, completed their escape from the cyst. But I shall have occasion to speak again of the relation existing between these several parasitic elements which it is now only necessary to describe.

Dr. Richard, as well as myself, has observed that the mobile filaments adherent to bodies No. 2 often detach themselves from these bodies. He says: "These filaments often take an independent existence. They detach themselves from the mother element, and then with prodigious agility they precipitate themselves like little serpents upon the mass of red globules, and it is very difficult to follow them long, so extensive and rapid are their movements. In cases in which these filaments are very numerous, the blood appears to be literally alive."—Revue Scientifique, 1882.

Cystic Bodies No. 3.—These elements are constituted of little masses of hyaline matter inclosing pigment grains, of which the arrangement is very variable. We may distinguish many types, as the spherical form, which is very regular, and in which the pigment grains are massed at some point of the periphery (Fig. 5, A); secondly, the irregular form (Fig. 5, B, C), in which the pigment grains are disposed without order; thirdly, the regular spherical form, with pigment grains collected at the centre, appearing in the form of a single pigment granule of very great volume; and fourthly, with pigment grains collected in the centre of the parasite, as in the preceding, but, in addition, there may be distinguished around the pigmented central mass a very regular segmentation of the neighboring parts.

Cystic bodies No. 4 have a size nearly equal to that of the leucocytes; they measure, in fact, from 8 to 10 micromillimeters in diameter; but they are very clearly distinguished from pigmented leucocytes (Fig. 5, D, E) by their refraction, which is much greater, and by the absence of nuclei, even when stained with carmine, which brings out so well the nuclei of leucocytes.

It is easy to assure one's self that these elements are only a cadaveric phase of cystic bodies Nos. 1 and 2. When one leaves upon a stage of the microscope bodies Nos. 1 and 2 and examines them at the end of twenty-four or forty-eight hours it may be nearly always observed that the elements are changed, and that they have attained the aspect of cystic bodies No. 3. The same is true of the body No. 2 furnished with mobile filaments. When the filaments

---

**Medical and Surgical Progress.** 125

---

A, B, C. Bodies No. 2. D, E. Pigmented leucocytes (magnified about 100 diameters).
Pigmented Leucocytes and Free Pigment.—Besides the parasitic elements properly so called, one nearly always finds, in the blood of a patient suffering from malarial fever, free pigment grains and leucocytes inclosing a variable number of pigment grains. The grains of free pigment are in general regularly rounded and of variable volume. Some are as small as those found in bodies Nos. 1 and 2, the others are much larger. The grains of small volume are probably massed together to form pigmented grains of large volume which are much less regular in form than the first. The colour of the pigment is darkish or a dull fire-red.

The pigmented leucocytes are distinguished from cystic bodies No. 3 by the existence of a nucleus which is coloured rose-red by carmine. The pigmented grains are of variable number. More often the leucocytes inclose one, two or three grains of pigment (Fig. 5, D). But we may often find, principally in individuals affected with pernicious fever, leucocytes very rich in pigment (Fig. 5, E). It is especially in the spleen, in subjects dead from pernicious malarial fever, that pigmented leucocytes heavily charged with pigment may be found. The arrangement of pigment grains in leucocytes is very erratic, but the pigment is always situated outside of the nucleus. Cystic bodies Nos. 1, 2 and 3 may become attached to the leucocytes. In general, the pigment becomes free in the serum before it is taken up by the leucocytes.

It is easily understood that the pigmented leucocytes are absolutely characteristic of malarial poisoning, since the pigment which they carry originates in the parasitic elements, and consequently is encountered in no other disease, a fact which at the present time is inexplicable.
THE SWEETNESS AND BITTERNESS OF THE DIVINE WORD.

We read in Jeremiah, "Thy words were found and I did eat them." In Ezekiel we read that the prophet was caused to eat the roll. We hear in Amos of a famine which is not a famine of bread nor a thirst of water, but a hunger for the Word of God. In Revelation the seer eats the book of judgment and finds it sweet and bitter.

When we feel the reality and pressure of personal sin, when the heart is stirred by mighty hopes and fears, the Word of God possesses an exquisite and mysterious attraction. Nothing satisfies us then short of its becoming part of ourselves. It must be eaten. It must be interwoven with the texture and system of the mind. The Word of the Lord endureth for ever, and it is possible so to make it our own as that it shall never leave us. A great preacher has illustrated the pathos of the final separation between the hearts and things outside it from the Memoir of the Comte de Brienne. There we read that Cardinal Mazarin roused himself from his dying bed at Vincennes, to take a last look at the treasures he had accumulated during his long ascendancy in the councils of the French Monarchy. When left alone in his last hours, he wandered, pale and wasted, into the gallery, dragging his limbs feebly along. The reporter of the scene was hidden behind the curtains, and heard the Cardinal as he halted at each step murmuring, "I must leave all this." Then as he caught sight of Brienne, "Give me your hand," he said, "I am very weak and helpless, yet I like to walk, and I have something to do in the library." And then he again pointed to the pictures. "Look at that beautiful Correggio, and this Venice of Titian, and this incomparable Deluge of Antonio Caracci. Ah! my poor friend, I must leave all this. Good-bye, dear pictures, which I have loved so well." When we cannot see our path clearly across the world, when the heart is near breaking, when we faint under the consciousness of our miseries and our wounds, when we feel that it is very grievous to have left behind us the living treasures of the past, nothing will content us short of making the Divine Word part of our being, not to waste with disease or to perish with the earthly existence. We do not then criticize it, question it, stand outside of it. We so lay hold of it and incorporate it, that it is henceforth inseparable from our central personality.

We can say when we eat the Divine Word that its verity is no more doubtful. It has been sealed by experience. We have lived through every throb of its strange and tragic story.

Sweeter than honey is the Word of God in the mouth. What is comparable to the taste of a Divine communication? To know that God is, that is much. One tells how he "danced with delight" when he realised that there was a God. To know past all doubting that God has spoken, that is far more. To see the darkness which we had thought impenetrable impaled and stabbed through by a living light, is there any ecstasy comparable with that? To those who have exhausted, themselves in question and conjecture, how sweetly comes the Voice that speaks with authority and from behind the veil! We can endure the
world's despair if it is possible to break through the mists that hide the Divine Kingdom; if it is possible to see deeper into the future than the passing hour; if the effort of the soul, ever springing up into the eternal light, is not foiled; if the speculations of reason are distanced and rebuked by an authentic voice of God. The very thought warms the heart like sunshine. It is sweeter than honey and the honeycomb.

But the Word which is sweet in the mouth is bitter in the belly. The Word of God comes forth judging and making war. As has been pointed out by one of the most suggestive commentators on the Apocalypse, the little book which the seer finds sweet and bitter is the scroll of judgment. It is full of what is tragic and violent, of what spoils and gives pain. Take it as you will, the story is hard and sickening. It tells us of dark clouds over the destinies of God's creatures; it tells us of agony endured vainly, of anguish which scorches the final sensibilities and burns up the last remnants of tenderness and humanity. We do not hear, as we hoped, that the forces which make for evil are at once reduced to impotence. On the contrary, we are told of their power and triumph. Much that is dear and sacred is to vanish in flame. The candlesticks that Christ has lighted in the world are often to flicker unsteadily and sometimes to go out. Nay, the redemption of the world is not to be achieved as we imagine. The Hands that hold the sceptre must first be outspread in anguish and death, and over the head of the Crucified King there must break the storm of the Passion. The Son of Man comes not to be ministered unto, but to minister, and to give His life a ransom for many. The King, the rightful Ruler of mankind, is seen upon His cross, disfigured with wounds and robed in shame, and the homage which He claims from all of us is, after nearly two thousand years, largely denied Him.

But in the end the Word of God is sweet. True, we see not yet all things put under Christ. His reign is not yet felt in all the order of life. There is no end within sight to the rude experiences of rejection and denial, of bitterness and violence. He who once refused to be made a king by force, still rejects the impatient expedients by which we seek to hasten His triumph. But we see Jesus. To endure the visible we must learn to look at the invisible. If we know that Christ is reigning through the disorder and tumult and darkness, it is enough for us. We can then bear life's burdens cheerfully, knowing that the bitterness of the Divine Word will turn to the sweetness of its first taste, that the way is appointed, that the end is sure, and that the issue will be more glorious than our desire. We shall see when it comes that our highest hope was too feeble, that the fruition is beyond our utmost dreams. As for the way, it may be long for the world, it cannot be long for any of us. Now is our salvation nearer at hand than when we first believed. Time may have passed with us but roughly; still, it has passed.—The British Weekly.

THE ART OF CONVERSATION!
I. Remember when you converse that others like to hear their own voices as well as yours.

II. Be careful, however much you feel moved to talk—and you may talk much if you have much to say—to give others space for reply. After exacting attention, do not forget to be patient and receptive in your turn.

III. People are never happy when labeled second best, nor will you ever be personally liked if you rivet upon them a sense of their own inferiority, or prevent them from shining or doing themselves justice.

IV. Encourage people to talk on what interests them. A man may be dull on all topics but one; find that one out, and he
will take you to his heart—ay, to his heart of hearts. You may also learn something.

V. Don't be too eager to shine. If you can't shine without effort better not to shine at all; it won't be a success.

VI. Don't sneer at trade or commerce in the presence of self-made men. Don't talk of gentles folks and gentlemen over much, or brag of birth or connection, especially in the presence of those who have neither.

VII. Don't fear or resent overmuch people's bad opinion, but take care not to deserve it.

VIII. Self-consciousness paralyzes spontaneity. Self-effacement conquers more infallibly than anything else; and he that humbleth himself shall be exalted.

IX. In company you must take the tone before you can give the tone, or you will have no πόδι στῶ to work from.

X. If you are willing to be a pigmy among giants, you will never be a giant among pigmies.

XI. If you must be cock of the walk, and feel yourself irresistibly impelled to crow, try to crown on something better than a drughill, and over something better than bantams.

XII. There may be deep sympathy without talk, but no good talk without sympathy.—Rev. H. R. Haweis, M.A.

**MUTATION.**

By James Clarence Harvey.

Upon the shores of No-man's-land,
I met an angel, one whose wings
Shed beams of light on either hand,
As radiant as the sunrise brings.
And happy souls, with eager tread,
Passed up and down the sandy slope;
"Oh, tell me your fair name?" I said;
She turned and smiled, and answered:
"Hope."

Along the shores of No-man's-land,
The angel walked, with folded wings,
And shadows fell on every hand,
The burden that the night-wind brings.

With head turned backward, sad and slow,
She paced the sands, her eyelids wet,
"Hope mourns," I said; and soft and low,
The angel sighed: "I am Regret."

—From *The New York Independent.*

**EFFICIENCY OF MISSION BOARDS.**

The work of a board of foreign missions has two departments, each with two divisions. The home department has to do (1) with the collection of funds and appointment of missionaries, and (2) the education of the Churches. The foreign department has in charge (1) the detail management of the missions, and (2) the establishment and application of the general principles which underlie and control all mission enterprise. The successful conduct of the work depends upon the wise co-ordination of these four divisions. To allow any one of them to fall into disuse, or to become overshadowed by the others, is to inflict serious injury upon the general work.

It is becoming increasingly apparent to those most thoroughly acquainted with the subject, that there is great danger lest in each department the first division overshadow the second. Appeals for money and men take precedence of that broad, educating influence which furnishes the most reliable assurance of a steady supply of both. The effort to mete out fairly and wisely the modicum of cash, first between missions, then between Churches, schools, preachers, teachers, buildings, hospitals, etc., so monopolizes time and strength that the fundamental questions of the aim and object of missions, the relations between missions and native communities, the organization of native Churches, get but scant consideration. It is simple fact that notwithstanding a century of experience there is no general understanding of these principles among the Churches, no general agreement between the different boards, scarcely even among the members of any one board. The reason for this is plain. With the expansion of the work the organization is
swamped by details. Money must be bad. It is easier, takes less time, and is more immediately effective to make an appeal than to set forth the great character of the work. The question of the rental or the purchase of a school building must be decided to-day, that as to the best organization for a native Church can wait till to-morrow. The result was voiced by a business man after a few months' experience as member of a prominent board. "It seems to me we do nothing but vote money. The broader consideration of the principles of missions we do not seem to be able to take up at all." Probably the great majority of the members of the boards would agree with him.

It is undoubtedly easier to point out the difficulty than to suggest a remedy. It will not do to slight the details. Upon them depends in great measure the success of the work. If, on the other hand, the details swamp the principles, the work becomes mere mechanical routine.—The New York Independent.

BIRTH.
At Kia-ting Fu, Szchuan, April 7th, the wife of Dr. O. L. Kilborn, Canadian Methodist Mission, of a son.

ARRIVALS.
At Hongkong, March, Dr. and Mrs. John C. Thomson, London Mission (returned).

DEPARTURES.
From Shanghai, 13th April, Miss Hoag, M.D., Methodist Episcopal Mission, for U. S. A.
From Shanghai, 3rd May, Dr. and Mrs. Mathews and family, American Episcopal Mission, for England; Miss Reifsnyder, M.D., Woman's Union Mission, for U. S. A.; Dr. G. Y. Taylor, American Presbyterian Mission, for U. S. A.
From Shanghai, 8th June, Dr. Stewart, of C. I. M., for England.

OFFICIAL NOTICES.

The following have been duly elected members of the Association:—Fullerton Boyd Malcolm, M.D.; Julia Maude Donahue, M.D.; Alfred Hogg, M.A., M.B., C.M.; Rev. C. R. Hager, M.D.

We have pleasure in announcing that Dr. J. C. Thomson, of the London Mission, Hongkong, has been elected Secretary, and has kindly consented to act. All nominations, voting papers and other business not strictly connected with the Journal, must, in future, be addressed to him.
Presidential Notice.

As was generally expected the Majority Report of the Royal Commission appointed to investigate the Opium Traffic in India does not favour any radical change.

According to this Report the number of those using opium in India is small, and any evil effects it may have on some is more than counterbalanced by the great relief its use affords to those suffering from pulmonary, bowel or even malarial troubles.

But little is said of interest to us in China. In this respect the document is more noticeable for what it does not than for what it does contain.

The morality of a Christian nation being identified with the cultivation and sale of the poppy, as well as the actual amount of harm done by its consumption in China, are questions to which we should like to see authoritative answers.

For us as Christian medical men it settles nothing to be told that the Indian government needs the revenues arising from the traffic; that the rise of fully as destructive an agent—alcohol—is licensed at home; that opium gives relief in certain diseases; that the Chinese will get it any way; that those who protest against the whole trade are fanatics. These as statements may, or may not, have a basis of truth, still they do not really touch what we consider the main questions at issue, viz., the morality of the trade, and whether the effects on the whole are pernicious or otherwise.

The Report practically says that those opposed to the opium traffic have exaggerated its evils, and that the testimony of missionaries who mix continually with the people is less reliable than that of others chiefly in government employ.

If we, as an association, quietly swallow this Report many will suppose that opium is the same "blessing" to China that it is said to be to India, and we, to say the least, will "loose face" over the stir we have made in so vehemently protesting against it.

Personally I believe that for the credit of Christianity England should have nothing to do with the trade, and that opium to-day is, if not the greatest, at least one of the greatest, of "China's sorrows"; that the deterioration of this great empire, the absence of conscience in its officials and of morale in its soldiers, has as one of its vital causes the ever increasing use of this drug. More rapidly even than alcohol it strikes at the nervous centres, destroying the moral stamina of its victim even before its effects are physically evident.
As I think most, if not all, the medical missionaries in China hold these opinions our Association should speak with no uncertain sound against a Report thus minimizing an evil which, here at least, is inflicting a moral and physical wrong.

As any action of the Association depends on the wishes of the majority I trust that each member will communicate with some one of the following committee, stating what he individually considers to be the best course for the M. M. Association as a body to take. Shall the above Report on opium be, or shall it not be, officially protested against?

Thus guided the committee can draw up a set of Resolutions covering the whole question and present them in the next number of the Journal. I would suggest that when writing to the committee statistics and proofs from direct experience be also added, thus giving the members facts upon which to base their series of Resolutions.

I will ask Drs. Kerr, Main and Douthwaite, with Dr. Hodge as Secretary to act on the above mentioned committee.

B. C. Atterbury,

Pekin, June, 1895.

President, C.M. M.A.
Third International Congress of Dermatology.

Dr. Neil Macleod, the China Secretary of the Congress, has forwarded us the following for publication in our Journal:

THIRD INTERNATIONAL CONGRESS OF DERMATOLOGY.

To be held in London from August 4th to 8th, 1896, both days inclusive.

Regulations.

(1.) All duly qualified medical men, British or foreign, or others interested in science, invited by the Council, who shall have paid the fee of £1 (a) sterling, and who shall have enrolled themselves shall be members of the Congress and entitled to the Volume of Transactions.

(2.) The official languages of the Congress shall be English, French and German, but with the permission of the president members may express themselves in the language with which they are most familiar.

(3.) The proceedings of the Congress shall be embodied in a Volume of Transactions, edited by the Executive Council.

(4.) Communications relative to membership, papers, or other matters connected with the Congress, should be addressed to the Secretary-General, Dr. J. J. Pringle, 23 Lower Seymour Street, London, W., or to one of the foreign secretaries.

(5.) The fee for membership shall be payable in London at or before the opening of the Congress.

It will greatly facilitate the work of the Executive if the fee is forwarded as soon as possible after the 1st May, 1896.

(6.) Members who are unable to attend the Congress shall receive the Volume of Transactions.

(7.) The subjects treated of shall be of two orders:

I. Those selected beforehand by the Executive Council and introduced by gentlemen chosen for that purpose by the Council.

II. Those selected by individual members themselves.

(8.) Subjects selected for debate by the Council shall take precedence over those selected by the members.

(9.) The sitting of the Congress shall take place from eleven to one in the forenoon and from three to five in the afternoon of each day.

(10.) There shall be clinical demonstrations of patients every morning from nine to half-past ten and every afternoon from two to three.

(11.) Members contributing papers must submit an abstract of them to the Secretary-General on or before the 1st May, 1896, which will be printed either in full or in part and embodied in the general programme of the Congress, which will be distributed at its opening.

(12.) At every debate precedence will be given to gentlemen who have communicated beforehand their intention to take part in it.

(13.) No papers lasting more than twenty minutes will be permitted. Speeches will be strictly limited to ten minutes each. Manuscripts of the papers read must be left with the Secretary-General before the end of the sitting. The Executive Council shall decide as to the entire or partial publication of such papers in the Transactions of the Congress.

J. J. Pringle,
Secretary-General.

(a.) The equivalent of £1 sterling is: French, 25 Francs; German, 20 Marks; Italian, 25 Lire; American, 5 Dollars.