FRONT VIEW OF SOOCHOW HOSPITAL.
SOME RECENT ADVANCES IN OPHTHALMOLOGY*.

By SYDNEY R. HODGE, M.R.C.S., L.R.C.P.

The short time allotted to a paper makes brevity an essential element of success. I shall try, in covering as much ground as possible, to be as brief as is consistent with clearness and to touch only on matters that are likely to be of interest to us in our work out here.

In common with our confrères in every part of the world we find a good deal of our work has to do with purulent ophthalmia and its results. Quite recently a new and simple treatment has been suggested which seems to me to have many advantages over silver nitrate. Mons. Vian, a French surgeon, uses concentrated solutions of permanganate of potash and asserts (1) that the cure is rapid, (2) that the application has no bad effect on the cornea, as the permanganate, though an extremely strong astringent, is not in the least caustic, (3) that the application is relatively painless and (4) that the permanganate does not aggravate the condition in cases of diphtheritic conjunctivitis, a disease of which the diagnosis may as first be doubtful, while silver nitrate, in such cases, sets up a marked exacerbation. He uses a ten per cent. solution night and morning and applies it on absorbent cotton wool, rolled round a wooden or metal stem and destroyed at once. When swelling prevents eversion of the eyelids he pushes his medicated stem between the lid and the eye and cleanses each cul-de-sac in turn. When suppuration is profuse, Vian repeatedly cleanses the eye with warm boric lotion and prescribes poultices of borated rice, renewed every two hours. As suppuration diminishes

* A paper read before the Hankow Medical Missionary Association.
the potash permanganate solution is used less frequently, first once a day, then every two days and so on. When suppuration is at an end yellow ointment is used twice a day for a few days or weeks to clear the yellowish infiltration of the cornea which is often then seen. Under this treatment Vian affirms he never sees the indelible leucomata due to the penetration of silver chloride into the corneal lesion, such as are often met with after the use of silver nitrate.

When purulent ophthalmia is due to gonorrhoea the chief danger to be feared is ulceration of the cornea. A German surgeon, Goldzieher by name, has lately treated such cases by fixing a flap of conjunctiva over the ulcer. In every case the infiltrated cornea cleared, hypopyon disappeared, and the danger of staphyloma was avoided. Should there be a prolapse of the iris this must first be removed. Should these results be confirmed I see no reason why the same treatment should not be applied to other intractable ulcers. [Magaz. Ophthalmology.]

When I was last in England Mr. Pridgin Teale, of Leeds, brought before me the advantages of peritomy in many intractable inflammatory affections of the cornea, and both Dr. Booth and I have used it with success. Just lately he has formally brought his views before the Ophthalmological Society of Great Britain. The old operation of syndectomy (often called peritomy in text-books) was, as its name implies, an excision of a strip of conjunctival and subconjunctival tissue, a quarter or one-third inch or so in breadth, so as to denude and expose a ring of sclera completely or partly round the cornea and was mostly done for old standing and densely vascularised infiltration of the margin of the cornea, which is usually symmetrical. By “peritomy” Mr. Teale means “the laying bare by scissors of about one quarter of an inch in breadth of the sclera immediately surrounding the cornea and the dividing of the vessels in that area which enter or emerge from the sclera without any cutting away of tissue.” He adds: “This separated conjunctiva in some cases reunites so rapidly to the denuded surface and corneal margin that in severe cases I think it well to make two, three, or four radial cuts into the freed edge of conjunctiva so as to retard the reunion with the corneal periphery and secure a more distinct cicatricial union as a means of cutting off and constricting vascular congestion.”

The operation acts probably sometimes by depleting and cutting off vessels, by formation of cicatricial tissue and sometimes by counter irritation of a powerful nature. In many cases it is a good thing to curette the denuded surface, so that if any little vessels have been missed they may be torn across, and this is especially the case if there be much congestion. It seems also to be a matter of some little importance that the circumference
cut should be quite at the edge of the cornea. The operation is especially recommended in severe and chronic episcleritis and cases of vascular ulcer of the cornea, whilst in specific inherited interstitial keratitis, Mr. Teale considers it "the most powerful weapon we possess" for combating the disease; he has also used it in purulent ophthalmia, herpes ophthalmicus and iritis.

A form of eye trouble which we ought to occasionally see out here is the chronic serpiginous ulcer of the cornea, known in Germany by the bad name of "ulcus rodens." This ulcer was first clinically differentiated from hypopyon ulcer and accurately described by Mooren in 1867 and so is also known as "Mooren's ulcer." It is rare, intractable to treatment, and has no known cause. An exhaustive paper on the subject, including a summary of all the hitherto published cases, amounting to seventy-four, has lately been published by Mr. Nettleship, and I am indebted to that paper for what I have to tell you this afternoon. The ulceration always begins at the border of the cornea, usually as a narrow crescent of infiltration or an excoriation of the epithelium, and occupies only a small part of the circumference. In nearly three-fourths of the cases it begins on some part of the margin that is more or less uncovered when the lids are open, whilst in the remainder it usually starts at the upper margin. The process, though progressive, is essentially a superficial one in the anterior layers of the cornea, the middle and deeper layers being untouched; therefore hypopyon and perforation are rare, although iritis is common. Pain, congestion and photophobia are prominent symptoms. The progress of the ulceration is well described by Mr. Nettleship thus: "In from one to two weeks the initial lesion ulcerates and the ulceration thenceforward spreads both in length, along the border, and in breadth towards the centre of the cornea. Unless checked it invades the whole area, leaving the cornea thinned, scarred and semi-opaque. Sometimes a second ulcer forms at another part of the circumference, and the two eventually join. The ulceration never attacks either the conjunctiva or sclerotic, nor is there any thickening or deposit anywhere. Sometimes a series of small secondary ulcers form on the already healed scar, and these may lead to protrusions and perforation. The advancing edge of the ulcer forms a narrow, sinuous, whitish band, level with the healthy cornea beyond, and of which the two ends are usually in advance of the centre, so that the diseased surface at this stage is roughly crescentic or sometimes almost semilunar. This narrow opaque band consists of the line of active disease overhung and obscured by a lip of half-dead corneal tissue with its epithelium; the cornea beyond it is usually clear and healthy. The ulcer does not increase
uniformly either in time or place. It may be stationary for days, weeks, or even occasionally for months, the ulcerated part healing so far as can be clinically determined; then, without apparent reason, small spots of infiltration appear just in advance of some part of the opaque line, run together, and in two or three days break down, giving rise to a fresh little bay or extension of the ulcer. Healing almost keeps pace with ulceration, so that only the part near the advancing border is actually ulcerated; the rest of the affected surface being more or less healed and covered by epithelium, beneath which straggling blood-vessels pass across from the scleral border."

The disease is particularly one of adult life, three quarters of the cases occurring after forty; but a case, thought to be of the same nature, has been reported in a child of three (Trans. Ophth. Soc. Vol. XXIII). The duration of the disease seems to be mostly from four to twelve months. The whole clinical course of the disease suggests some pathogenic organism, but so far none has been found, and whilst there seems to be no connexion with any particular constitutional state, yet Mr. Nettleship thinks that the question of a syphilitic taint has not hitherto been sufficiently investigated. Treatment may be said to resolve itself into the galvanocautery or pure carbolic acid, or both. If carbolic acid is used it should first be liquified by warmth or by a few drops of alcohol and applied carefully with a small splinter of wood, the ulcer being dried with blotting paper both before and after the application; to prevent the acid from running. In using the cautery everything depends on how it is done. The best way is to first cut away with scissors or knife the overhanging border of the advancing edge and, after scraping it, to then burn it deeply, even at the cost of spoiling a little good tissue beyond the line of disease. A fiddling timidity is fatal to success. Whichever treatment one uses it is necessary to remember that the disease often recurs, even after being definitely checked, and the patient must be watched for many weeks or months; the prognosis too is much worse when both eyes are attacked, whether simultaneously or with a long interval. Statistics showing that three quarters of these cases go on to universal leucoma.

The last Bowman Lecture of the Ophthalmological Soc. of G. B. was delivered by Prof. Fuchs, of Vienna, and from it I should like to cull one or two remarks of practical interest. He points out the corneal epithelium is the only safeguard the deeper structures have, aided as it is by its extreme sensibility to pain. In its endeavour to prevent external agencies, microbes, etc., penetrating through the deeper part of the cornea it has developed the power of rapid proliferation and a tendency to level all inequalities and penetrate into every cleft of the cornea. It will
sometimes penetrate so rapidly between the lips of a clean incised wound as to prevent the two lips healing. Occasionally after cataract extraction it will rapidly pass down between the edges of the wound, reach the front surface of Descemet's membrane and quickly line the whole anterior chamber with epithelium, thus forming a true cyst of the aqueous chamber, a condition which is followed by increased tension, and he thinks this condition "may sometimes be the cause of increased tension after cataract extraction in cases where no other cause can be found to account for glaucoma." In cases of marginal ulcers, even the chronic serpiginous ulcer, one sees the epithelium rapidly covering up the invaded cornea, following close on the advancing edge, its vital energy being greater at the margin of the cornea, as it is there near to the nutrient vessels of the limbus. It is interesting to note that Professer Fuchs is a firm believer in the existence of a genuine neuroparalytic keratitis. He writes: "Many authors deny the existence of true neuroparalytic keratitis and consider it to be always due to exsiccation of the corneal surface. I have myself no doubt that the keratitis occurring in rabbits after section of the fifth nerve is mostly due to exsiccation; but I doubt still less the existence of genuine neuroparalytic keratitis in man, especially as this form of keratitis occurs also when exsiccation is carefully avoided by bandage. Besides, it has a most characteristic appearance, entirely different from any other form of keratitis. It begins in typical cases with the falling off of the epithelium; at first in the centre, and spreading from here to the margin where it stops 2 mm. to 3 mm. for the limbus. Here the epithelium may even proliferate and form a small, greyish ring, slightly projecting, which surrounds the bare, dry, dull and hazy-looking surface of the cornea, which then slowly becomes more opaque and remains so for ever, unless it be lost by suppuration." I have seen this condition more than once in China, but have never had the opportunity of watching its evolution from the commencement. All cases of acute corneal disease are attended by a greater or less amount of infiltration of the corneal epithelium, which may be superficial only or be so deep as to expose the basement membrane, but it may also occur in unhealthy conditions of the conjunctiva, such as gonorrhœal ophthalmia. As such a desquamative catarrh of the corneal epithelium facilitates the invasion of microbes, and so endangers the cornea, it is easy to understand why conjunctival diseases are so often followed by corneal disorder.

The Professor utters a word of warning as to the use of cocaine. This drug seems to have a powerful influence for evil upon the cornea. Professor Fuchs writes: "If before an operation it be instilled for a long time, especially if the patient does not keep his eye carefully shut mean-
while, we see the epithelium at first become opaque and dull and finally entirely thrown off. Indeed partial epithelial abrasions are a common occurrence after an imprudent application of cocaine. For this reason I avoid giving the drug into the hands of the patient as an anodyne, especially in cases of keratitis, where it may decidedly influence the course of the disease unfavourably." This is worth remembering in cases of corneal ulcer, especially in private practice. And here I should like to draw attention to Zeiss' new binocular corneal microscope, an instrument which, it seems to me, is likely to become as necessary a part of an ophthalmic surgeon's outfit as an ophthalmoscope. With this instrument it is possible to observe the current of the blood in the vessels of the conjunctiva, the nerves of the cornea, and the state of the corneal epithelium. One author, Stargardt, asserts that it is possible to make the diagnosis of sympathetic inflammation, before other alterations are visible, by the endothelial lesions revealed by this instrument. But even without it, most valuable data as to the true nature and probable course of cornea disease may be obtained by a strong lens, and such an examination should never be omitted.

Coming now to a few matters of operative interest, let me first draw your attention to a recent paper by Mr. Adams Frost on the operative treatment of myopin. It is only quite recently, since the publication of Fukala's monograph in 1891, that it has been considered justifiable to attempt to cure myopia by extraction of the lens. Under certain conditions, which he enumerates, Mr. Frost considers that any degree of myopia over 15 D can be practically cured by the operation. Not that he thinks the operation arrests the progressive elongation of the eyeball, but that the continued elongation will no longer cause the same increase in the myopia. The operation is most suitable for young adults, and it is not advisable unless the other eye is a useful one. The author arrives at these conclusions: (1) The operation should be restricted to patients whose actual myopia is not less than 12 D (i.e., who require a correcting lens of not less than 13.5 D). (2) The patient should be able to read 1. J. without glasses with each eye, thus showing that the function of the macula is good. (3) Except under special circumstances, the operation should be limited to the more myopic eye; the eye that remains myopic can see near objects unaided, while the other serves for distant vision. The possibility of obtaining binocular vision is too remote to be worth considering. (4) After the entire removal of the lens, the distant vision without glasses is usually at least as good as it was before with glasses, and with correction it is usually much better. The method of operating is the same as for lamellar cataract-discission,
"The lens matter may be needled pretty freely at the first sitting and a week or ten days later the lens matter may be evacuated, a final needling being generally required."

The question of operation in glaucoma is an important one, and though I have seen very few cases out here it may be well to recall one of the latest published opinions on the subject. The late Mr. David Little, of Manchester, made it the subject of his presidential address at the Ophthalmological Society last year. In common with most surgeons he affirmed his preference for iridectomy over sclerotomy. He had given the latter a fair trial, but abandoned it chiefly because of the iris complications and the too frequent recurrence of tension. He reserves sclerotomy as a secondary operation when iridectomy has failed and says that when it is necessary to resort to it, he prefers the incision in the coloboma rather than a second iridectomy on the opposite or any other part of the eye.

Speaking of the operation itself (which he testifies is the most difficult of all the operations on the eye, and in certain advanced cases, when the iris periphery is extensively adherent to the cornea, and with a small antechamber, almost impossible of performance even in the most experienced hands) he says many failures are due to a faulty performance of the operation; the line of incision being made too near the cornea and not sufficiently long. As a consequence of this the iritic angle is not opened, the iris is not removed up to its root and so no channel being opened for the escape of the pent-up intra-ocular fluid, the operation fails. He points out that in the majority of cases iridectomy does unmistakably reduce tension permanently; and "if patients go blind subsequently, it is seldom from a recurrence of the glaucoma but from a progressive atrophy of the nerve." In support of his statement as to the permanence of the result of iridectomy he followed up thirty-seven cases for periods of from seven to twelve years after the operation. "Of these ten had become blind, one from atrophy of the globe, another from a recurrence of the glaucoma; the remaining eight cases were blind from atrophy of the nerve; the tension in these eight cases being normal. Of the other twenty-seven cases, the vision in four of them had considerably deteriorated and they were slowly going down hill from atrophy of the nerve; in the remaining twenty-three cases the vision in some was better than at the time of operation, in most of them it was about the same, in a few others it was a little worse but not in any serious degree." The whole twenty-three appeared to be in about a stationary condition and perfectly satisfactory. This gives a result of sixty-two per cent., permanently good results.
This paper has already gone beyond the prescribed limit, so I will close with two practical remarks. The first is that in cases of symblepheron, after division and excision of the cicatricial tissue, the raw surface should be covered with Thierch's graft; the graft being kept in place by two sutures so placed that the length of the sutures cross over the length of the graft in the shape of the capital X.

The second suggestion is that in cases of total evisceration of the orbit for malignant disease the healing process should be shortened by covering the surface left with grafts. Four cases have thus been treated very successfully; in two of them the grafts were placed at once on the orbital wall at the time of evisceration, in the other two cases grafting was done about a fortnight afterwards after granulations had formed. As all the cases were equally successful there seems no object in not doing the grafting at once.

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[The accompanying article is a paper written by Dr. Bland-Sutton, of London, and published in the Middlesex Hospital Archives, Vol. 1. November, 1905. Last year I removed a dermoid of testicle from one of the boys in our Hankow Blind School. In the interest of science I forwarded the tumour to Dr. Sutton for full detailed examination. In return he has sent me the following paper on the subject. Knowing that such a paper cannot fail to be of interest and instruction to us all, I have asked the Editor to kindly print in our Journal.

R. T. Booth, M.D., Hankow.]

AN ESSAY ON DERMOIDS OF THE TESTIS AND SCROTUM.

By J. Bland-Sutton.

(From the Archives of the Middlesex Hospital, London.)

After reading the accounts in the current text-books on surgery concerning dermoids of the testis and scrotum, an impression is left on my mind that surgical writers do not fully realize the extreme rarity of such tumours. I hope that the facts set forth in this Essay will stimulate those surgeons who work particularly among children to carefully record cases bearing on this question.

In 1889 I devoted the Hunterian Lectures entirely to the consideration and classification of dermoids, and endeavoured to extricate them from the conglomerate class known as cysts, and formed them into a special group. Dermoids of the scrotum and testicle gave me great difficulty, for it was evident that no clear distinction had been drawn between dermoids of the scrotum and those intimately associated with the testis. This is a matter of prime importance, because scrotal dermoids arise in the same manner as those with which we are familiar at the angle of the orbit and in the course of the facial fissures, that is, by inclusion during embryonic life of surface epiblast; they belong to
the genus sequestration dermoids. The anatomical landmark, so to speak, between a dermoid of the scrotum and one of the testicle, is the tunica vaginalis. Testicular dermoids have a different origin, as there is proof of their existence in the testis before it descended into the scrotum, and in the case of the horse such dermoids are associated almost invariably with retained (undescended) testes.

My greatest difficulty in dealing with the question was the lack of concrete material. During the last twenty years only two examples have been recorded as far as I can ascertain in English literature, and the Continental publications of the last fifty years furnish under twenty cases. It was therefore with great interest that I received from Dr. Hodge, Hankow, Central China, a testis removed by Dr. Booth, which contained a typical dermoid, accompanied by the following history:—

A blind boy, sixteen years old, with an enlarged testis, has been in our blind school (Hankow) for nine years. The boy says his mother told him "he had it when he was born." He had frequent inflammatory attacks of the scrotum following injury, such as crushing against a stool, etc. He came to the out-patient clinic during one of the attacks, which rapidly subsided under an evaporating lotion.

At the operation the right testicle was small but normal in position. The skin over the front of the left testicle was reddened, and a sinus existed at the junction of the scrotum and penis; the testicle appeared as a globular, tense, but elastic mass, as though filled with fluid, and no distinction could be made between the body of the testis and the epididymis. The spermatic cord was thickened.

In the course of the operation some pus escaped from beneath the reddened skin, otherwise the organ was shelled out and removed entire without any difficulty. The sinus and the adherent skin associated with it was excised, and the edges of the skin brought together with sutures and the wound drained. The boy made an uninterrupted recovery.

Dr. Booth then goes on to say: On opening the tumour by a longitudinal incision, he found it filled with hair, grease, and a mass of tissue containing a tooth. In the interest of pathological science he and Dr. Hodge resisted the temptation to make a complete dissection, but preferred to place it in my hands for thorough investigation.

The tumour is globular, with a diameter of 5 c.m.; near the lower pole it presents an irregular body. The walls of the tumour are thick and gristly, resembling thickened tunica albuginea, but the whole mass was invested by a delicate tunica vaginalis. The cavity of the dermoid contained the usual sebaceous matter mixed with loose hairs, and a
sessile body of irregular shape consisting of bone and hyaline cartilage covered with tissue, which to the naked eye looked like mucous membrane. Embedded in the upper end of this tissue there was a multicuspldate tooth resembling those found in ovarian dermoids, Fig. 1; its crown still covered with mucous membrane. The soft investing tissue also possessed some delicate lanugo-like hairs. Microscopically this tissue was found to be covered mainly with stratified epithelium; in some parts it exhibited a single layer of columnar and subcolumnar cells. Sebaceous glands were fairly numerous.

The soft irregular body, to which reference has already been made, lying near the lower pole of the tumour but outside its capsule, received particular attention, because I thought that it might probably turn out to be the true testis. I made a very careful search for traces of the vas deferens, but this was unsuccessful, due partly to the fact that formalin solution makes the tissue hard and brittle, thus rendering them unsuitable for minute dissection. The tissues were submitted to thorough microscopic examination, but no testicular tissue could be made out; but the mass consisted of a collection of round cells surrounding and isolating large giant cells; the disposition of the cells and their character recalling that seen in tuberculous disease of the epididymis, but tubercle bacilli were not detected.

It disappointed me greatly that I was unable, even after the most critical examination, to determine whether the dermoid was situated inside the tunica albuginea and replaced the testis, for I failed to find any of the usual anatomical guides, such as the epididymis or the vas deferens. Though this specimen is interesting in itself, it is useless in helping to solve the source of testicular dermoids.

In its gross anatomy and structural details this tumour reveals the usual features of dermoids growing in relation with the testis. Some, it is true, are more complex and contain nerve cells, as in one very carefully reported case examined by Cornil—in a "bud" growing from the cyst-wall a collection of nerve-tissue containing ganglion cells was detected.

In its clinical details the tumour did not differ from its forerunners. There is a remarkable uniformity in this respect. In nearly all the recorded cases enlargement of the testis was observed at or shortly after birth. In a fair proportion the patients were deprived of the affected organ in early childhood. In those who were not operated upon during infancy, the tumour seems to have caused little inconvenience; indeed it appears to lie dormant till puberty, then bruises and knocks, or abscesses and sinuses cause trouble and lead to surgical interference.
Fig. 1. A Dermoid of the Testis shown in section. Dr. Booth's Specimen.

Fig. 2.—Undescended Testis removed from a Colt. It is associated with large dermoid containing grease and coarse hair like that of the mane and tail.
Most of our knowledge of testicular dermoids dates from an elaborate article published by Verneuil in 1855, founded on the reports of nine cases he collected from the literature of the preceding one hundred and fifty years, and one example which came under his own observation. The conclusions expressed in this admirable paper have become classical, and form the foundation of our knowledge of the subject; and even at this date, nearly half a century since its publication, Verneuil’s views are reproduced (frequently without any reference to, and often perhaps in ignorance of their source) in monographs devoted to diseases of the male genital organs and in text-books of surgery. It is true, notwithstanding the fact that these tumours can now be studied with all the advantages of modern histologic methods and differential staining, that we know no more concerning their pathogenesis than Verneuil, and testicular dermoids remain with us as with him pathological curiosities.

Verneuil shows in the title of his Paper (‘‘Memoire sur l’inclusion Scrotale et Testiculaire”)—which title he relates was selected as conveying precisely the view he held in regard to the nature of the disease—he believed that testicular dermoids belonged to the class of double monsters known as parasitic foetuses. A study of the records published during the last ten years supports Verneuil’s contention that dermoids within the tunica vaginalis, though attached to, and often intimately associated with, the testis, are not really ‘‘of the testis’’ in its strictest sense; they do not arise from transformation of testicular tissue, but whether they should be regarded as parasitic foetuses (teratomata) is another question, and one which requires further consideration and elucidation. In some of the cases the dermoid was attached to the gland by such slender connections that the surgeon succeeded in detaching the tumour and preserved the testis. Admirable conservative operations of this character are recorded by Cornil and Beger, Chevassu and Reclus. These facts, in conjunction with the observations that in some of the best described examples the dermoids, though incorporated with, were nevertheless independent of, the essential glandular tissue of the testis, are of first-rate importance in its bearing on the source of ovarian dermoids. The view which I hold strongly is that dermoids of the ovary arise in and from modifications of the cell-elements of the ovarian follicles. If similar tumours can arise from modifications of the germ elements of the testis, the theory must fall; but a critical study of testicular dermoids indicates in no uncertain way that even those dermoids which appear intimately incorporated with the gland are not of the testis proper, but have an extra-glandular origin. It remains for those who
have opportunities of studying perfectly fresh specimens of testicular dermoids to make careful search for the testis and to verify its tissues microscopically.

In this desirable search for the truth veterinarians can lend assistance, for horses, especially cryptorchid specimens, seem liable to testicular dermoids, a fact which has been known nearly a century. Verneuil refers to a case reported by Meckel in 1818 of a testicular dermoid in a stallion; it contained bone, grease, and hair. A case was recorded by Patu in 1833, occupied by cartilage, hair, and sebaceous matter. Hobday has collected from recent veterinary literature three examples from horses, all associated with undescended (abdominal) testes, and containing pilose skin, loose hair, grease, and in one instance seven imperfect teeth. In each instance the hair resembled the coarse hair of the mane and tail.

I have to thank Mr. Hobday for the specimen represented in Fig. 2. It is a testicular dermoid from a cryptorchid colt. The dermoid is attached to the testis and the epididymis, but it is outside the tunica albuginea. The tubular elements of the testis appear to be normal.

It is also important to note in studying the records of testicular dermoids in horses, that the authors often incidentally mention that the testis was recognized apart from the dermoids.

The occurrence of dermoids in the undescended testes of horses has a clinical interest, for, as I have already mentioned in the records of the human cases, although the unusual size of the testis was invariably noticed at birth, yet it did not interfere with the descent of the organ. There is a case recorded by Delbet in which a testis, retained at birth in the inguinal ring, gradually descended to the scrotum; subsequently it was found to be occupied by a dermoid. In this respect horses and boys differ very markedly, but they agree in the following points: that though a dermoid may be attached to, or incorporated with, either a right or a left testis in fairly equal proportions, an example of bilateral testicular dermoid has yet to be recorded. In this respect the testes are in marked contrast with ovaries, for ovarian dermoids are very frequently bilateral.

Literature.—It is an interesting feature of the writings concerning dermoids of the testis that the majority of the observations, and certainly the best among them, have been the work of French surgical writers. It would seem that the classical monograph of Verneuil gave the subject a French domicile. The subjoined list makes no pretence to completeness, but furnishes references to the best known and most easily
An Essay on Dermoids of the Testis and Scrotum.

accessible records, in which the details are related with sufficient care and completeness as to make them useful either for the surgeon or the pathologist:—

Cornil and Berger "Bull. de l'Acad. de Med.," 1885, tome xiv., 275.

Horses.

It is curious that of three dermoids of the testis recorded in London during the last twenty years by D'Arcy Power, Jackson Clarke, and myself, two of the examples came from across the seas. Clarke's specimen was removed in India by Surgeon-General Giles, and the specimen described in this essay comes from Hankow in Central China.

Note.—Although in this Essay the rarity of scrotal and testicular dermoids is insisted on, it is worth while to state that tumours of the testis of any kind may be regarded as uncommon. To give some indication of their infrequency I asked the Surgical Registrar, Mr. Aslett Baldwin, to furnish me with a list of the cases which came into the wards of the Hospital for operation during the last twenty-three years. The result is somewhat astonishing. From the year 1880 to 1902, both these years included, there were thirteen cases of tumour of the testis; they were all sarcomata. In the period 1893 to 1896, including these two years, no case of testicular tumour appears in the Hospital records.
SOOCHOW HOSPITAL.

The Soochow hospital for men has been in operation just twenty years. It is under the M. E. Church, South.

The plan herewith does not include the hospital for women, which is next door, and under the same Mission, but under different management. As will be seen from the plan the wards are quite separate one from another, all connected by covered passage ways. All buildings are about four feet from the ground, allowing free circulation of air underneath.

The total number of patients to pass through our hands last year is 13,567.

While we do a great deal of charity work, every one who is able to do so is expected to pay something. The dispensary patients are divided into first and second classes. The entrance fees are fifty-six and twenty-eight cash respectively. The first class patients are seen by the foreign physician, the second class by a native graduate with the foreign physician as consultant. All first class patients pay something for their medicines. Both classes pay for containers. In-patients range from free to ten dollars entrance fee; food extra. Opium patients are classified as first, second, and third class patients who pay two, five and ten dollars respectively for the time necessary to rid them entirely of the desire to smoke. The hospital is self-supporting.

There is a large out practice connected with the hospital which adds greatly to the revenue of the hospital, though it consumes a great deal of time.

Since the hospital was first opened, there have been classes of students receiving both didactic and clinical instruction. In 1894 the then existing class was organized into a regular medical school. This class consisted of students from the two hospitals under the M. E. Church, South, two young women and three young men. Since that time we have conducted a co-educational institution. Last year the school became a chartered institution under the laws of the State of Tennessee and is now the Medical Department of the Soochow University.
REAR VIEW OF SOOCHOW HOSPITAL.

HOME OF PHYSICIAN IN CHARGE.
Note on Case.

NOTE ON CASE.

By V. H. Yang, Wusih (Graduate of Soochow Hospital).

A young man, about thirty years of age, was recently employed as a clerk in a newly-opened pawn shop outside of the West Gate, Wusih. As is customary in China, feasts must be given at the opening of a shop, so the young man was kept from returning home at the usual hour in the night, which made his wife very angry. Unfortunately there was a feast again on the second night, so the young man did not return home any earlier than on the previous night; however he was let in by his father after knocking a long time at the gate of his home, as his wife determined that she would not open the door for him, in order to show her disapproval of his returning home at such a late hour, regardless of the position and duty of her husband. The woman kept very quiet until next morning, when a quarrel arose, and then a fight was begun between the couple; of course the man was the victim of the two, so the woman caught his forearm and gave him a cruel bite, on the under side, just below the elbow. It was noticed that there was no bleeding from the penetrated skin. After the fight, the man in his anger and disappointment rushed to his father's store. After two or three days his friends noticed that he began to lose flesh and strength rapidly, but nobody knew the cause of it, and he was sent home in a chair by his friends. The wound then gave intense pain and became oedematos. The swelling gradually extended upward until it reached the chest on the side of the affected arm. The father, after discovering the suffering of his only son, sent first for a Chinese surgeon and then for one of my students who was living near them. On the arrival of my student the patient was found unconscious; this unconciousness had been preceded by two days of delirium. There was a yellowish serum oozing from the oedematous arm above the wound and the skin of the whole arm was tense and of a dark purplish hue. My student saw that the patient was past help, and so did not treat him; the poor man died a few hours afterward, on the seventh day after he was bitten.

Some years ago I saw two cases of swelling resulting from bites by human teeth: one on the ball of the thumb, the other on one of the fingers. In both cases the arm swelled as far as the elbow, and the pus from the wounds had a penetrating offensive odor. In one case the bone became necrosed, but as neither of the cases were my own I was unable to learn the final results. From what I saw of them the symptoms were somewhat like those of snake bites.
A HOSPITAL PLAN.

HANKOW, February 24th, 1904.

Dear Sir: I am going up to Kansuh to start medical work. I have made a plan of a hospital. I think you might perhaps like to see it and to add it to the collection at Shanghai:

The hospital could easily be enlarged without altering the plan at all, by extending the wings and by adding stories. With such in view, the dimensions could of course be made larger below. In the copper and wash house could be kept the boiled water, hot and cold, from which the surgery, wards, and opposite room could be supplied. The surgery is conveniently placed for both out and in-patients. An operating table for septic cases could be kept there.

Side buildings could be added between the N. and central wings (thirty-one feet interspace).

By opening the folding doors the wards and halls form one large preaching place. A table in the centre could be placed for servants and convalescents.

The out-patient department explains itself.

With kind regards, yours sincerely,

J. W. Hewett, M.R.C.S., L.R.C.P.

HOSPITAL DISCIPLINE IN MISSION WORK.

(Z.)

Let me first call your attention to the fact that Jesus Christ was the most successful disciplinarian in all history. It is a very positive characteristic of the Master of men which is not often spoken of and which I believe to be of special importance to us His commissioned followers in the movement for the establishment of the kingdom of God in the East. It is a common saying that, from the human standpoint, at the time of Christ's death His work was or seemed a failure. That may be so in general matters, but in this matter of discipline Christ's success was, even at that time, a positive and self-evident fact. At the outset of His ministry He chose from His acquaintance twelve men
Hospital Plan.

Exit. NORTH. Entrance.

Kitchen: 15x16
Kitchen Stores: 18x6
Dispensary Stores: 15x9
Dispensary: 15x14
Consulting Room: 13x13
Dark Room: 5x10
Surgery: 18x16
Central Hall: 15x24
Ward: 24x40
Ward: 20x40
Extra: 16x12
Private Ward: 12x10
Bath: 12x6
S Wash Room: 12x12
Opium Room: 14x16
Laundry and Linen: 18x18

S = Sterilized doors.

SOUTH.
of various professions, ages and worldly estates, and these without an exception He retained in His service and fellowship to the day of His death. He never dismissed one, He never quarrelled with one, He never dispaired of one. Judas betrayed Him, judged and hanged himself in self-condemnation, but the Master received His kiss and gently rebuked him for its lie. The figure of Christ was ever the personification of dignity. He was laughed at, stoned, beaten, spat upon, but the final verdict was, "truly this man was the Son of God." He was crowned with a crown of thorns, but Pilate stands like a puppet before the Majesty of Jesus the prisoner. He consorted with men with whom we have no friendly dealings, and the worst that His enemies could say of this was that He was their friend. His friendship made a saint of a fallen woman, but the words of Christ are the balance upon which the world finds wanting the purity of its morality. How does this record compare with the record of those who carry on His work to-day? Can we say the same of our relation to our disciples and of our standing among the Chinese? Is our discipline, allowing for human limitations, along the same lines as that of Christ? It seems to me that in two important respects it is largely so and that in one, most important respect, it is largely not so.

If we look for the basis of Christ's success as a disciplinarian it is not perhaps very difficult to discover, at least in part. We have the record of many words and acts that bear directly on the subject. Ranging, if we accept the common interpretation, from those of truest tenderness to those of so-called righteous anger. We see Him with His whole soul concentrated in desire for the signs of promise in the heart of the rich young Jew; there is no wholesale condemnation but yearning sympathy in the discipline, and then "If thou wouldest be perfect, give all the temptation away, come and follow me." And on the other hand, we hear Him, in the most scathing of all scathing condemnations, His denunciation of the Scribes and Pharisees beginning "Woe unto you Scribes and Pharisees, hypocrites," pouring out the supreme passion of that great righteous soul at the whitewash of official rottenness, and ending with the words, "Ye serpents, ye offspring of vipers, how shall ye escape the judgment of hell?" In words Christ never minced matter. He told the woman of Samaria that the man she was living with was not her husband. In act He was free and bold. It took but a look to recall Peter to life-long allegiance and it took the whole strength of His personality to cleanse the house of His Father, but He was as ready to act in this as in that. Whether we accept the powerful rendering which the great religious painter Hoffman has given
in his picture of the cleansing of the Temple and see the Christ in passion, with scourge in hand, driving the money makers from the Temple court, or believe, as the more accurate translations suggest, that there was a cord to drive the cattle out and a word that would brook no human disobedience, there was in either case an intimation to us that there may at times be reason for righteous indignation and for action; but personally I believe that from the day of His birth Jesus never raised His hands except in blessing, to the day on Calvary when He raised them up in universal benediction.

Other than the following factors in Christ's success as a disciplinarian will quickly suggest themselves to you, but probably these three are the more important:—

1st. Absolute justice, the justice of God which is tempered with mercy and understanding of human deficiency.

2nd. Complete grasp of the principle that the best master is the servant of all, that to lead means to serve.

3rd. The power of discrimination between the man and the sin of the man.

Turning to the application of Christ's methods to our work let us first recall clearly to our mind what we should mean in using the word discipline. Discipline is "the treatment suited to a disciple or learner, that is, the development of his faculties by instruction and exercise." The idea of punishment is only a small part of the whole and in Christ's example apparently insignificantly so, and then by way of correction and training. It is of course never primarily an act of self-satisfaction, physical or intellectual; never a letting off of energy. That is not what discipline is for, not for the disciplinarian, but for the disciple. Right discipline is always and essentially altruistic. It is just here, and particularly on the servant question, that we most often fail. We discipline for our own benefit and we fail to win the allegiance we desire. But of this, later on.

The question of practical discipline, with regard to the Chinese who follow or serve us, and which I propose to you for discussion at this time, is certainly an involved one and has perplexed me more than any other that I have had to face in my own active medical missionary work in China.

I was chatting not long since with one of my assistants, whom I know as my most trustably honest and plain speaking of Chinese Christian friends, and he said that another of our Christian Chinese had said of a certain man that he "liked him better than any foreigner he had ever met." I asked him what it was in this individual that so par-
particularly appealed to him, and his answer was: "He is so kind, not hard (the word he used was hyong), not hyong as the rest of you foreigners are." The conversation with its development made a strong impression on me, and I believe that, coming from the source it did, it is worthy of not a little consideration on our part. The Chinese as a body recognize that at least in his way the foreigner is by nature a just man and they learn to sincerely respect his justice, and this is an element in the discipline of Christ. And I believe that at least the Christians and not a few others recognize us missionaries to be more or less true and far more than less sincere servants of Jesus, which also means servants of humanity. But I am neither persuaded that the Chinese believe that we have, to any great extent, attained the gift of discriminating between the man and the wrong of the man, nor am I myself persuaded, with all due allowance for the to us well known difficulty of understanding the Eastern mind, that we have learned in this discrimination to follow Christ.

We certainly cannot do our work to the best fruition in China, whether it be in church matters, in school or in hospital, without good discipline, respect for authority, and the maintenance of dignity, but I do not believe that even discipline will win China for Christ if it is attained with any sacrifice of tenderness, of patience, of the encouragement bred of evident trust and personal sympathy. If the implication on the part of our Christian Chinese that we are hard be a just one, and that is a matter for earnest thought, then we are at fault indeed, for if Christ was hard then He was not the Son of the God of mercy. But my observations lead me to believe that many who have served in China longest and whose work has born the most perfect fruit have done so with both tenderness and good discipline, yet that on the whole we incline to hardness, that in our common conversation and every-day life we are hyper-critical, impatient, and tend to confuse the man and his sin. The servant question is one of those uncomfortable prospects that I do not contemplate with much satisfaction. There are some whom I know of that seldom employ a servant who leaves them other than a Christian man, but this I think you will agree with me is not the rule. There are many servants whom I believe gain little from us beside good wages, fairly just treatment, and the perfected knowledge of how to cheat the foreigner. It is true that men who have once served for any length of time in mission households and in other mission departments seem to rotate from place to place in the same, and, in spite of the temptation of higher wages outside, are inclined to remain in the circle. This shows that, as we speak Chinese, they do not learn enough English for
outside service; also that we do pay their wages and that we do not kick and beat them.

The Chinese small-business man with whom we deal is sure of his money and equally certain of our much provoked impatience and mistrust. It is true that his Chinese neighbor is equally mistrustful of him and not so sure on the pay question.

In my work I am constantly face to face with the doubt as to whether I have sufficient evidence and grasp of the situation, whatever it may be, to take strong measures making for discipline, with the certainty of even common justice, let alone with an approach to the refinement of righteousness. Within a week, and often in the past, I have proved myself mistaken when I thought I was on certain ground. The particular case this week was in connection with an abjectly "k'oo-nau" specimen of the genus boy who presented himself at the hospital alone, filthy, in rags, and suffering from a large and extremely painful ulcer. He was apparently a victim of utter neglect, and though an apprentice, claimed to be without a cash and without any hope of financial aid. He was admitted to the hospital as a free patient, and at the end of a month was all but cured. About this time there appeared one morning in the ward his master, who said that, for various reasons, none of them the true one, he wished to take the boy home. I jumped to the conclusion that he believed him capable of being put to work and so had use for him again. Well, here was a case for righteous anger and I let myself go. I berated the man soundly, accused him of brutality, and went to the extent of threatening him with the Mixed Court for cruelty to the child. When I had gotten through and paused long enough to give the fellow time to speak, he mildly remarked that he really could not afford to pay the boy's expenses longer in the hospital (as it then appeared he had done regularly), and as he was so nearly well he simply proposed that he should be made an out-patient at three cents a day instead of an in-patient at twelve cents. You may be sure that my righteous anger looked suddenly like cheap theatre play and that I was glad enough to gain the master's consent to leave the boy in the hospital as a free patient until his cure should be completed. The man was not a saint and a good deal of a liar in a mild way, but he was ten times the man I had accused him of being.

Theoretically the question is partly solvable, but practically, to me, it is full of difficulties and the course seems to run constantly between the rocks of injustice and hardness and what I, as a physician, fear more, and as a Christian less, the shallows of poor discipline.
Here is the proposition:—

1st. That we are, on the whole, just, but that generally we do not sufficiently let the native Christians feel our confidence in them. That the evidence of trust begets trustworthiness.

2nd. That, except on the servant question, we realize that we are here to lead in service.

3rd. That in the majority of cases we do not sufficiently discriminate between the heart of the man and the appearance of his mistake, fault, or sin.

The solution lies in close study of the mind and methods of the Master.

A NOTE OR TWO ON SKIN GRAFTING.

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

In the January issue of the Journal, I called attention to the fact that success in skin grafting depends largely on three factors—careful preparation of the patient, asepsis, and care against meddlesome surgery after the operation. It has been my good fortune to have among other duties that of looking over the reports of most of the hospitals in China, and I find that, on account of the vast number of large and neglected ulcers that come to us, skin grafting is one of the very common operations and one that is resorted to even in new stations in which the number and character of surgical procedures is limited by the well known circumstances that attend pioneer medical work in China.

The accompanying plate shows five stages in a case of skin grafting and represents what many surgeons are doing all over China, a very useful, widely applicable, and generally satisfactory factor in the practical routine of most of us. The case offers no salient features, but on the contrary is a very ordinary and every-day affair and is presented on that very account.

The patient was a boy of twelve years of age, is poor health, and presented himself in my clinic unable to walk and suffering from three large ulcers on the right leg; two covering most of the external aspect and being the result of an extensive lime burn received five years previously. The third ulcer was smaller and under the heel, and I judged it to be a pressure sore of long standing. The whole leg was ezcematous and foul beyond description; the ulcers, as is often seen, were covered with brown paper stuck fast and simply rotten. This condition of the leg on removal of the paper, etc., is shown in (1) in the plate.

Following our rule in such cases, the patient was put to bed, the foot raised, patient put on tonic treatment and fed to the utmost, and the leg put through two weeks of cleansing and other treatment prepara-
A Note or Two on Skin Grafting.

When the eczema had entirely subsided and the ulcers became healthy and sweet and all tendency to bleed had disappeared, some thirty pin head grafts were transplanted from the patient's arm and an aseptic dressing applied. (Strips of oiled silk, interlaced and covered with one thickness of gauze and plenty of cotton.) The first dressing was not removed till forty-eight hours had passed, after which it was dressed daily.

About two-thirds of the grafts took hold, and their growth was rapid and quickly covered the large area, aided by the marginal growth which proved considerably more than is usual in an ulcer of such long standing.

Photos 2, 3 and 4, show stages in growth of the grafts, fourth day, tenth, and end of second week respectfully. The fifth was taken after the entire surface had covered over and was perfectly dry. The patient was dismissed at the end of a month after the operation, cured and able to walk easily, in spite of a slight contraction at the knee joint which was present on admission, largely due to having walked on one leg for years and held the other leg up, also partly due to old contractions.

I have seen the patient since, some months after discharge, for another ailment and was glad to find that the skin grafts had not broken down except at one point. In this connection I have several times had my grafts break down, either from traumatism or from late infection. This latter has shown itself in the development in spots of a superficial moist gangrene of a delicate green color and which, I suppose, as it has happened three times in my wards, is due to a special saprophytic micro-organism. The process can be at once arrested with a weak solution of nitrate of silver, but this will also destroy some of the grafts and should therefore be used with care. If the gangrene gets a good start it will either destroy all that has been done or at least leave a large ulcer or two in the grafted area. In this case I would advise using some such local application for the ulcer as bichloride of mercury in glycerin, 1-500 (I owe this prescription to Dr. Reifsnyder's clinic in Shanghai) applied on gauze to the ulcer itself, not beyond, till it builds up again to the level of the rest of the part.

The contraction following this operation is much less than that which results from ulcers which are forced to do all their healing from the edges and of course much time is saved. Still there is in some cases a great deal of contraction which in certain places on the leg and arm may give rise to interference with the circulation.

Note.—In my paper published in January I made some remarks about the uncomfortable and improper conditions under which we have
been working at St. Luke's during the past year. It occurred to me afterwards that what I said might be misunderstood by some of the younger men in China who do not know Dr. Boone and his splendid work and the fine little operating room in which he worked before I ever darkened the doors of St. Luke's. It was a case of our being simply crowded out of our old quarters and the time of which I spoke was transitional when much of the old was torn down and much of the new unfinished.

SOME DEVELOPMENTS OF MODERN MEDICINE.

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

The recent discovery of radium with its wonderful powers and its action upon living tissue brings us out of our work-a-day world with a sort of shock and we stop and ask ourselves, what next?

In many respects it seems as if the promise of the greatest advance and the most hopeful results in the future of curative as well as preventive medicine lies along the line of experimental physiology and the application of physiological chemistry for the relief and the removal or even the prevention of pathological conditions.

The impetus in this direction was undoubtedly given by labors of such men as Prof. Virchow, Brown-Séquard, and Pasteur, and to-day hundreds of men have entered into the labors which they so boldly and enthusiastically began.

Surely there can be no more fascinating field of research for him who has the training and the call thereto than to investigate the functions, in health and disease, of this marvelous body of ours, and particularly those changes so subtle and far reaching in their effects which are embraced in that vital word metabolism.

What is it? What are its causes? Why does it continue, retrograde, or cease? These are some of the questions that we daily have to ask ourselves and perhaps interrogate our physical natures for the answers.

According to the most recent works on physiology the key to this wonderful mystery, unknown to the student of a dozen years ago, is the adrenal system and its governing center the anterior portion of the pituitary body.

The cycle is briefly as follows: the stimulation of the anterior pituitary body is kept up by the secretion of the thyroid gland, and the former body, through the sympathetic nerves, is the direct controlling
force of the adrenal glands which in their turn produce a secretion which enters the blood plasma and is carried to the lungs, where it combines with oxygen and has a very marked effect on metabolism, both to sustain and increase the functional activity of many different organs.

Hereditary tendency to disease is now regarded as only a congenital depression of the adrenals which thereby weakens the body resistance to disease.

The action at all specific diseases, venoms, and toxic doses of drugs, is in most cases to overstimulate the adrenal system and then depress it. In either condition we get marked toxic symptoms.

In a similar manner, medicinal dose of drugs either simulate or depress these organs, and consequently increase or diminish the adrenal secretion.

The posterior part of the pituitary body on the other hand, acts as the regulator and stimulator of all functional activity and is also considered to be the center on which shock psychical or traumatic depends.

The spleen and pancreas have a very important co-operative part to play in maintaining the vital integrity. The latter sending to the spleen one of the so called internal secretions rich in trypsin which gives to the leucocytes their power as destructive agents to bacteria.

The action of the adrenal secretion on the heart action, the blood, the production of tissue waste, are well established, as also are the relations of these organs when diseased to rarer diseases of perverted nutrition, such as goitre, myxodema, and cretanism.

The new theory of the source of nervous energy being the force generated by the chemical union of this oxidizing product with the white substance of Schwaun also adds to the utility of this adrenal secretion.

These and hundreds of other problems are to-day being patiently worked out by the experimental physiologist and his no less strenuous colleague the physiological chemist. They may reap the glory, and they doubtless deserve much more than they receive, while the rank and file of the profession inherit the blessings of their investigations. Is it too much to hope for in modern therapeutics that the extracts of these important glands may be as potent for good as they give promise of being, and that the list of drugs may be reduced and simplified as the action of these important centers of vitality are and more clearly recognized?
SYPHILITIC GANGRENE.

By R. B. Ewan, M.D., Chen-tu.

That syphilis is a fruitful source of arterial disease with its far reaching and varied train of evils has long been recognized, but that it may be, and not infrequently is, a direct factor in producing gangrene of the integument and extremities, seems to have received but slight attention judging from the spaces devoted to it in even such standard works as Allbutts' System of Medicine, Erichsen's Art of Surgery, and Cheyne and Burghard's Manual of Surgery. The only account I have been able to find is in Taylor's Venereal Diseases, 1895, Vol. II, page 744, who devotes less than two pages to Gangrene and Gangrenous Ulcers.' From this short article I make the following quotations:—

"In some cases of syphilis, as a result of changes in the coats of arteries and veins, gangrene is produced, by which portions of the integument and extremities are destroyed. Until within recent years all ulcerations occurring in syphilitic subjects were regarded as evidence of the breaking down of syphilitic infiltrations. To-day we clearly recognize the fact that spontaneous gangrene of the skin and its resulting ulcers may be due to syphilitic arteritis or to endarteritis obliterans."

"This degenerative condition usually begins in persons of poor nutrition, in those who are debilitated in consequence of bad regimen or excesses, in subjects who have not been properly treated and who live in squalor.

"The first evidence of syphilitic cutaneous gangrene is a mottling, with perhaps some scaling of the skin. The color then changes to a greenish-brown, and it finally becomes blackish brown. In some cases this eschar is soft and succulent; in others it is tough, dry, and withered. In some cases there is local pain; in others a want of sensibility and coldness in the parts is complained of. Trauma, heat, cold, or caustic applications have nothing to do with these lesions."

Under the title "Primitive Gangrene" Fournier describes a syphilitic manifestation which Bazin called "tuberculo-gangrenous syphilide." He thus describes the morbid process: "The lesion as soon as it has been formed, takes a livid color in the centre and a chocolate color in the peripheral portions, with insensibility of the diseased part, for in reality the formation of an eschar takes place, under which the mortified, insensible, sloughy tissues are found; no external occasional cause being recognizable. The mortified parts take on the appearance of gangrene; they become detached and underneath the syphilitic ulcer is found at last."
Syphilitic Gangrene.

The author goes on to say that he has had several such cases under his care, and refers to cases reported by Podres, Lang, Cabot and Warren, Aune, Mendel, and Schuster, in which the upper and lower extremities were variously affected as well as localised and superficial areas of the integument. In Prof. Podres' case "microscopic examination showed inflammation of the external tunic of the arteries, degeneration of their endothelium, with thickening of their walls and obliteration of their calibre. There was also atrophy of the cutaneous nerves and glands. All of these changes were attributed by Podres to syphilis."

"Veins may be attacked by syphilis in much the same way that the arteries are, in both the secondary and tertiary stages. One or many veins may be attacked simultaneously or in succession. According to Mendel, the lesion is a gummatous deposit round the vessel."

The following cases, which have come under my notice during the past eighteen months, are offered as a small contribution to this subject:—

Case I. A man forty-eight years of age, very little above the beggar class, came to the clinic complaining that twelve days previous, while carrying a piece of timber, he had stepped into a hole and snapped his patella. I cut down, using the large horse-shoe incision and flap. The tissues were found mottled and discolored, and the bone so friable that the wire had to be passed through the tendon below. The wound healed by first intention, and for the first few days the result was satisfactory, but at the second dressing signs of gangrene began to appear in the flap. The eschar, which was dry and quite superficial, when it separated, left an ulcer about two square inches in size, which refused to heal till brisk anti-syphilitic treatment was administered. The mixed treatment caused stomatitis and had to be suspended for a time, during which there was a circumscribed necrosis of the new bone thrown out around the wire, with superficial abscess which had to be lanced, and later the wire was removed. He finally recovered with limited motion in the joint.

Case II. A chair-bearer, twenty-nine years of age, walked or rather hobbled into clinic, suffering from a diffuse, suppurating aneurism, extending from upper border of popliteal space to within six inches of heel, which had come on suddenly ten days before. I cut down and tied the artery just below the apex of scarpas triangle, evacuated the clots and drained. During the first thirty-six hours circulation was much impaired, but after forty-eight hours improved rapidly. Three days later a large spot of moist gangrene, involving the tissues down to the bone, appeared on the outer aspect of the leg; on the end of each toe there was also a spot of dry gangrene. The sloughs developed in what
appeared to be perfectly healthy tissues, and certainly those on the toes were not due to pressure. He made a fairly rapid recovery under anti-syphilitic treatment.

Case III. It was reported to me that a beggar was going round the streets with a pair of 'black legs and feet like a Chinaman's dress boots,' and a few days later he appeared at the hospital gate. He was suffering from symmetrical gangrene of feet and legs. The line of demarcation had formed slightly above the junction of the lower and middle third of each leg, and the bones at this point were quite bare for nearly an inch. The tissues were shrivelled, blackish, and almost dry, except in vicinity of line of separation.

The condition came on suddenly, following convalescence from an attack of fever. He had been exposed to cold while soldiering, but the possible effect of frost was excluded by the fact that he was in Szechuan several months before he was taken ill. Both legs were amputated just below the point of election, and the tissues, including the arteries, especially of one leg, were found friable and apparently of low vitality. He made a good recovery and grew fat on free anti-syphilitic treatment.

I have now in the hospital ward another case of diffuse popliteal (?) aneurism, extending from apex of scarpa's triangle to within five inches of heel. The history pointed to a rupture of the artery forty days before he came to the hospital and his leg was in a terrible condition; in fact he seemed to be dying. On the inner aspect of the calf was a large livid spot 2½ by 3 inches, which he said had developed within four or five days, and which next day began to separate in the form of a slough, leaving a punched out ulcer, extending to, but not involving the muscles. Owing to the late date of observation, I simply mention this case as being at least suggestive.

In conclusion I would present the following summary as pointing to syphilitic gangrene:—

I. With one exception the patients were young men, and were not so far as could be detected, suffering from general atheroma.
II. In each case there was reasonable proof of syphilitic taint.
III. In each case the rupture or occlusion came on suddenly, and if this occurring in the brain points to syphilis, as is claimed by some authorities; may not the same hold good for other parts of the body?
IV. No apparent or sufficient cause. This applies specially to cases I and III.
V. The eschars in their development, color, separation, and the resulting ulcers, closely resembled the description given by the author quoted.
VI. The therapeutic test.

On account of space I have confined myself to a bare outline of each case, but trust I have said sufficient to draw attention to an apparently frequently overlooked sequel to this extremely prevalent disease.
In the first volume of the Archives of the Middlesex Hospital there is a very interesting article on two cases of haemorrhagic typhoid fever, from which I thought it would be profitable to cull some extracts. I shall pass over the general history of the cases, merely noting that some of the usual signs of typhoid were absent, and that some of those present were not very marked. Ehrlich's reaction was not obtained on two attempts. Widal's reaction was tried four times. Three of these were negative, and one was so slight after ninety minutes' exposure that it was not considered definite enough to be of any diagnostic value. Haemorrhagic symptoms showed themselves by severe epistaxis, numerous ecchymoses, and large quantities of blood passed in the urine. The gums were spongy and bled at times.

The post-mortem examination was made sixteen hours after death. The large intestine contained a quantity of recently-effused blood; a few very small shallow ulcers were found at its upper end, and the mucous membrane generally was stained red. The mucous membrane of the lowest foot of the ileum was grey and shreddy, and there were several sharply-cut superficial ulcers. It was noted that all the ulcers here showed an early stage of the process of healing. Above this point some of Peyer's patches had a "shreddy" loose network appearance, but they were not ulcerated. A few small ulcers corresponding with solitary glands were seen. There was no reason to suppose that the haemorrhage into the bowel had arisen from an ulcer; all the appearances pointed to it being part of the general condition. The mesenteric glands were enlarged to a moderate extent, and were soft. There was no peritonitis.

Small haemorrhages were present all over the mucous membrane of the stomach.

The spleen weighed six ounces; it was enlarged, dark and unusually firm for a typhoid spleen. The kidneys were pale, and appeared to be normal, but there was extensive haemorrhage into the pelvis of each kidney and into the peri-renal tissue on the right side.

There were haemorrhages on the surface of the liver and into the mucous membrane of the bladder. The muscular tissue of the heart was pale, and there were numerous haemorrhages into its substance—in the valves and in the epicardium. The valves were otherwise normal. There were a few small haemorrhages on the surface of the lungs. The viscera generally were oedematous.

BACTERIOLOGICAL EXAMINATION.

The negative results obtained by the blood-test on 7th, 14th and 25th January have been already stated. The following specimens were examined by culture for the presence of bacteria:

1. A sample of blood and urine drawn off with a sterilized catheter on 24th January:

2. A few drops of blood which oozed from the urethra when a second attempt was made to draw off some urine on the same day. The bladder proved to be empty, but
after the catheter was withdrawn a little blood appeared:

3. Five c.c. of blood drawn off by a syringe from the basilic vein: and


From each of the specimens thus examined pure cultures of *B. typhosus* were obtained. The bacillus isolated was subjected to all the usual tests, including testing against an artificial typhoid serum with a dilution of 1:2000.

Case no 2 presented many of the same features, especially in the absence of Widal's reaction.

The post-mortem examination was made thirteen hours after death.

There were numerous hæmorrhages into the skin of the trunk and limbs.

In the lower two feet of the ileum there were several ulcers with sharply-defined margins; in some the floor was covered with a slough, in others only the peritoneal coat remained. In the ascending colon there were several ulcers.

The intestines contained recently-effused blood, and there were numerous hæmorrhages into the mucous membrane. The mesenteric glands were enlarged.

The spleen weighed 12½ ozs.; it was large and soft.

There were hæmorrhages into the pelvis of each kidney and into the wall of the gall-bladder.

The pericardium contained some slightly blood-stained fluid, and the membrane showed numerous hæmorrhages. The walls of the heart were pale and soft.

The lungs were deeply congested. Hæmorrhages were scattered over the pleura, and the mucous membrane of the larynx, trachea, and oesophagus presented similar appearances. Extensive bleeding had occurred in the rectus abdominis on each side, into the gluteus maximus and into many of the muscles of the neck.

**BACTERIOLOGICAL EXAMINATION.**

Culture-tubes were inoculated from: (1) the heart-blood, (2) the spleen (3) the lungs (4) the liver, (5) the kidneys, (6) the contents of the gall-bladder, (7) the hæmorrhagic area in the rectus abdominis muscle, and (8) a similar area in the gluteus maximus.

From the heart-blood and the spleen a pure culture of *B. typhosus* was obtained; and the same bacillus was identified in culture-tubes inoculated from the lungs, liver, and kidneys. From the gall-bladder, the rectus, and the gluteus maximus cultures of *B. typhosus* and *B. coli communis* were obtained.

The cultures of *B. typhosus* were completely identified, and were agglutinated by the blood of a patient with enteric fever, with a dilution of 1:100, and by an antityphoid serum from the horse, with a dilution of 1:3000.

The microscopical examination of the hæmorrhagic areas in the muscles showed the presence of a large number of large bacilli, which stained by Gram's method; the muscle fibres also showed the appearances which have been described as "Zenker's degeneration." The large bacilli present in the hæmorrhagic areas were not recovered on numerous culture-tubes inoculated with juice from the muscles and incubated under both aerobic and anaerobic conditions.

It is interesting to note that an examination of the temperature chart in the first case shows that the pyrexia was not marked, and that the hæmorrhages did not occur at the period of highest temperature, nor did they, when they occurred, cause a marked fall of the temperature. In the second case pyrexia was more marked, and on one occasion the temperature fell to normal after a hæmorrhage. In the intestinal canal the bleeding
appeared to be due to a general oozing, and the same be said of the hæmorrhages elsewhere.

The gravity of the prognosis seems to depend chiefly on the extent of the hæmorrhages. Two-thirds of the cases end fatally.

In connection with these two cases, two questions of special interest to the pathologist arise: (1) As to the exact causation of the hæmorrhagic condition, and (2) With regard to the failure of the diagnostic Widal test.

With regard to (1) the writers after referring to the opinion that a general hæmorrhagic condition in typhoid fever follows in every case on changes in the blood resulting from secondary infectious, and showing that hæmorrhage has occurred in cases of pure typhoid infection, e.g., case 1, and also in cases without any intestinal lesion, conclude by remarking:

Taking all the known facts into consideration it may, we think, be asserted that under certain conditions B. typhosus is able by itself to produce such changes in the quality of the blood that hæmorrhagic symptoms are manifested. Under what conditions this tendency to hæmorrhagic changes occurs we are without any knowledge, whether it is due to some special virulence of the particular strain of bacillus infecting, whether it is due to a naturally deficient power of resistance in the individual infected, or whether it is due to an unusually large dose of infecting organisms, so large that intense pathological changes are produced before the natural power of resistance to the infecting organism has had time to display itself.

The second question calling for special attention is the failure of Widal's diagnostic test, and closely related to this is the question of the value of that test for prognostic purposes.

Courmont and Etienne by a series of experiments obtained an "agglutination curve." The reaction was tested with serum dilutions of 1.10, 1.50, 1.100, 1.200, 1.300, 1.400, 1.500, two hours' contact being allowed. On comparing the curve with the temperature curve in an ordinarily severe case of typhoid fever terminating in recovery it was found that, with the first definite evidence of agglutination on the fifth or sixth day, the curve representing the gradually increasing agglutinative activity of the serum rose regularly, attained its maximum coincidently with the occurrence of the thermic defervescence, and commenced to fall immediately after the fall in the temperature curve. In cases which were clinically of an unusually mild type the appearance of agglutination was delayed, the agglutinative power never reached a high degree of intensity, and defervescence was rapid. In unusually severe cases the agglutination curve instead of rising regularly, parallel with the mean of the rising temperature curve, was irregular, and showed oscillations; the maximum reached was never high and the fall in the curve occurred without any corresponding fall in the temperature curve. The writers think that in the main we can accept these deductions.

It is obvious, however, that in such a disease as typhoid fever, in which a fatal result from perforation may occur in the course of an infection which clinically may be of the mildest type, the prognostic value of a good serum reaction must be rather doubtful.

A good serum reaction will suggest that the individual attacked has good natural power of resistance against the infecting bacillus and its toxic products, but cannot be expected to afford much guide as to the probability of what may be termed the accidents of the disease.
On the other hand, our own experience would lead us to believe that failure of the specific serum reaction in an undoubted case of typhoid fever is a sign of the gravest significance, and as a working rule for clinical practice we think that this generalization may be laid down: If in a case of suspected typhoid fever no definite specific serum reaction is obtainable by about the tenth or the fourteenth day of declared illness, one of two results may be expected—either the case will prove not to be one of typhoid fever, or else it will prove to be a case of typhoid fever of exceptional severity, and one in which a fatal result is probable.

Cases, again, in which the serum reaction develops slowly, and in which by about the twelfth day an agglutinative reaction is obtained only imperfectly and with low dilution, usually fall into two classes: rarely they will prove to be cases of typhoid fever of an unusually mild type; much more commonly they will prove to be what may be termed "severe" cases. In the "average" case of typhoid fever the serum reaction develops quickly and regularly, giving a good agglutinative reaction with a dilution of about 1:40 between the seventh and the tenth day.

These conclusions being arrived at from clinical experience, we may briefly refer to theoretical considerations which appear to support them.

We are still without any precise knowledge as to the nature of the substances which, accumulating in the blood as the result of a specific bacterial infection, ultimately confer immunity upon the individual and endow his blood with specific agglutinative properties. But we have every reason to believe that, in a case of natural infection, what may be termed "protective" and "agglutinative" substances are formed in response to the same tissue stimulus; and in response to that stimulus it is likely the formation of the two classes of substance progresses in equal grade.

A person becomes infected with B. typhosus, and in response to the stimulus of infection his blood gradually acquires the protective and agglutinative properties which characterize the blood of active immunity. The protective properties of the blood augment until a certain stage of active immunity is reached, and then the infection comes to a natural end. And this, according to the observations of Courmont and Etienne, corresponds in point of time with the attainment of maximum agglutinative activity by the serum. And it is in the highest degree probable that when the formation of agglutinative substances is prevented or checked, then also there will be defect in the formation of protective substances—a hypothesis which will readily explain the grave prognostic import of failure to obtain the specific serum reaction in cases of typhoid fever.

Some of the cases which we have quoted show that hemorrhagic complications in typhoid fever are not always coincident with complete failure of the agglutinative reaction; but none the less we cannot but think that there may have been some relation between the failure of the reaction and the severity of the symptoms in the two cases now recorded.

With regard to the use of antityphoid serum the writers say: "By the time the average case of typhoid fever comes under treatment the normal mechanism productive of active immunity is already in action, and no great effect should be expected from the giving of additional doses of protective substances. But, on the other hand, that when complete or partial failure of the specific agglutinative reaction indicates incomplete reaction to the stimulus..."
of infection, much more might be expected from the administration of a serum, which would supply the deficient protective substances." These remarks apply only to the administration of a "curative" antityphoid serum. The administration of a "protective" vaccine is not to be advised when the patient is already infected.

APPENDICITIS.

In the Therapeutic Gazette of December we find the following, which will be reassuring to those who are so situated that an operation for appendicitis is fraught with more danger than the simpler plan of assisting nature:—

In a recent number of the Presse Medicale the views of Roux on treatment of appendicitis are indicated in an article published by Dr. Gaudin, who acted as his assistant at Lausanne. With the help of Dr. Senn, he chose a number of typical observations of appendicitis and established five different types: (1) The usual form, with McBurney's point; (2) the retrocecal type, with abscess; (3) the mesoceliac form, where the appendix is found in the folds of the intestine; (4) the pelvic form, with abscess in the cul-de-sac of Douglass; and (5) a last form, very rarely seen, in which there is no peritoneal reaction; death taking place well-nigh invariably. There is a natural tendency to limitation, with the exception of this last form, provided the right medical treatment is carried out. According to Dr. Roux, ninety-five per cent. of all cases of appendicitis do not require operation if the following simple treatment is used: Absolute rest, the patient not being moved from the house. No purgatives, no solids nor liquids for forty-eight hours. In case there is any pain, laudanum may be given, or preferably opium suppositories. A few drops of liquid may be allowed at stated intervals, provided there is no vomiting. The ice bag is to be used when there is any dissention. No enemas are to be administered; a rectal tube serving to remove the gases. Only when there has been neglect will it be found necessary to operate, which should be done when the following symptoms make their appearance: discrepancy between the pulse and the temperature, suppression of free enuresis, dry tongue, very frequent pulse and high temperature, and a change in the expression of the face showing a severe infection. Local symptoms, such as fluctuation, would naturally justify an operation, which is rarely done in Roux's service, since the physicians of the canton of Vaud have ceased to give purgatives. In a small number of cases, the diagnosis having been previously made, it has been found advantageous to operate in the first twenty-four hours. A death from appendicitis, in Roux's service, is rarely seen, though the operation a froid is carried out as a routine measure when the patient has recovered from the acute attack.

CANCER.

The following notes on cancer show the world-wide attention given to the cure of this dread malady. Though so often baffled physicians and surgeons are still determined to rob nature of this weapon against the life of man.
Lomer* contributes a very important paper on the subject of curability of cancer. He shows that many cases of cancer are cured by the actual cauterity and by the electric snare, even when it is certain that all carcinomatous tissue has not been removed. Many cases recover to the great surprise of the operator who has applied the cauterity only for the purpose of doing something. The instances show that under some circumstances cancerous tissues are taken care of by the body. Lomer also points out the occasional curative action of fever upon cancer, the growth undergoing retrograde metamorphosis during the course of an accidental infectious disease. The action of erysipelas, the injection of streptoccci and infection by malaria could be classed among the febrile disorders which were apparently of benefit to cancerous patients, while severe burns and great loss of blood seemed to inhibit the growth of cancer. It is striking how well persons with carcinoma endure severe loss of blood and how, on the other hand, strong and vigorous individuals rapidly suffer from recurrence. Cancer is easily influenced in its cell structure, apparently, by deep changes in the blood like those mentioned. These considerations have led the author to experiment with a haemolytic serum on which he is, however, not yet ready to report. The treatment, so Lomer thinks, will be that which will place the organism in a position to destroy cancer tissue left after an operation.

Dr. Morestin* thus gives a description of his technique for removing cancer of the lower lip, an operation which is rarely carried out in a sufficiently thorough manner. The submaxillary glands should always be removed and a large portion of the lower lip. The incision should reach as far as the chin. Dr. Reynes, of Marseilles, operated last May on a woman presenting cancer of both breasts and performed Beatson's operation, or removal of the uterus and ovaries. A mircoscopical examination of the tumor was made by Cornil, who found it was a tubular epithelioma. A month afterward the mammary tumors had decreased noticeably in size; in two months the ulceration was healed. It is now five months since the operation was performed, and locally there is hardly anything apparent. The general condition is excellent. Dr. Doyen describes the effects which he has obtained in the treatment of cancer by using his serum. Out of eighty cases forty-eight were too serious when the treatment was instituted, and the results were negative. In thirty-two cases the results were favorable. It is true, however, according to Dr. Doyen, that twenty-two were operated upon and the treatment was purely preventive, and in only eight cases has sufficient time elapsed to justify considering them as cures. Ten cases, where no operation was possible, were ameliorated by the treatment. The method by which Dr. Doyen prepares his serum is still a secret and is only administered by those who obtain their supply from Dr. Doyen himself.

* Zeitschrift fuer Ceburtshilfe und Gynaekologie.

* The Therapeutic Gazette.
Skin Progress,
Under the charge of Kate C. Woodmull, M.D.

THE TREATMENT OF CANCER, LUPUS, AND OTHER MALIGNANT GROWTH WITH CONCENTRATED SUN'S RAYS.

O. U. Thayer more than thirty years ago commenced this form of treatment on diseases of the skin and its appendages. He has operated more than two thousand times with the concentrated sun's rays and has never noticed any permanent injury from them. No other remedy can compare with it as a curative power. Unlike other caustics and cauterities, it can be applied with perfect success to the most delicate membrane or tissue; the general system receives it kindly; the irritation and inflammation following its application are surprisingly slight and of short duration. The pain subsides immediately upon removal of the lens. Blistering is avoided as the tissues are carbonized. The morbid tissues, having less vitality than the normal or natural structures, succumb to the solar heat before the healthy tissues adjoining are injured. In the treatment of cancer and lupus, the remedy is at once safe and certain. Many less treatments are required than with the Rontgen rays; the cure is more certain, the wound remaining, heals sooner, and the skin is restored in great measure to its normal condition.—Pacific Medical Journal. Copied from Medical Record, November 7th, 1903.

X-RAY DERMATITIS AS INFLUENCED BY IDIOSYNCRASY.
By A. D. Rockwell, M.D., New York.

While it is yet too early in the use of the x-ray to enunciate positive and unalterable rules of technique, yet to avoid injury and accomplish good several important points must be considered.

No one wishes to produce a violent dermatitis; yet it is the easiest thing in the world to do this, and occasionally it is not very easy to prevent it.

To be forewarned is to be forearmed, and the beginner in x-ray work ought thoroughly to appreciate the fact that susceptibilities to x-ray effects vary as widely as to other physical influences. We do not question the existence of idiosyncrasies in relation to the direct action of the sun's rays, to various external and internal methods of treatment, to psychical influences and even to the food we eat for the preservation of life. Nevertheless it has been frequently stated that idiosyncrasy is a negligible quantity in the use of the x-ray, both in diagnosis and therapeutics.

Unpleasant and unsatisfactory results are too often ignored in many an elaborate clinical report. Failures as well as successes, injuries inflicted as well as the good accomplished, should be frankly told.

In this way and in this way only can any medical or surgical procedure be perfected with conservation of the best interests of both physician and patient.

While the condition and position of the tube and the time of exposure are the essential features in x-ray treatment, yet, with every ordinary precaution cases are sometimes met which defy them all, and a violent dermatitis suddenly breaks forth.

As an interesting and instructive illustrative case I refer to a patient sent to me for x-ray treatment by Dr. V. B. Gibney. Miss M. had suffered long and severely from a constitutional tuberculous condition chiefly affecting the spine. Her pain and deformity had been greatly
relieved by orthopedic treatment, but subsequently the glands of the neck became permanently enlarged. With a tube of medium penetrating power and a shield protecting the surface surrounding the two enlarged glands, the treatment was begun January 27th, 1903. The distance of the tube was eight inches and the time of exposure five minutes.

This treatment was repeated on the 31st instant, and on February 3rd and 7th, resulting in not the slightest symptom, objective or subjective. A new tube of somewhat greater penetrating power now replaced the old one, and in order to bring the lower part of the face which was distinctly nodular and hard, within the field of exposure, the shield was dispensed with. On February 12th the treatment was of five minutes' duration, at a distance of six inches. February 15th, time eight minutes, same distance; February 19th, time ten minutes, same distance; February 24th, time ten minutes, distance four inches.

With the exception of some slight itching, no symptoms had been observed, but on the morning following the last application, an intensely active and painful dermatitis suddenly developed.

This did not go on to the stage of actual necrosis, but there was widespread destruction of epidermis associated with profuse watery discharge. The corium itself was evidently somewhat involved, so that when perfect healing took place after the lapse of two or three months, the new skin formation was distinctly lighter in color than the old, which was perceptibly tanned. It remains to say that even this brief treatment was more or less effective in reducing the local pathological condition. The deposits along the angle of the lower jaw entirely disappeared, while the glandular enlargements decreased perceptibly in size.

Aside from indicating a marked susceptibility to the effects of the x-ray, this case is a strong argument in favor of the cumulative theory of x-ray action.

In no other way, it seems to me, than by this combination of idiosyncrasy and cumulative action, can we explain the fact that after conducted x-ray exposures extending over a period of one month, with no preliminary symptom of itching or burning worthy of mention, a violent and persistent dermatitis appears with hardly a note of warning.

Although a number of slighter burns have occurred in the personal experience of the writer—and, indeed, in a large proportion of cases it is quite impossible to succeed without exciting more or less surface redness and irritation—this is the only case in which, with every ordinary precaution, there was so severe an after-result. However rare such cases are, yet they do occur with sufficient frequency to demand constant watchfulness. Better far prolong the treatment than to run even a remote danger of an actual necrosis.

Above all never fail to interrogate each patient as to any special idiosyncrasy, such as to sunburn, to ivy poison or to any external application. In a recent article on "The x-ray and the Finsen Light in the Treatment of Lupus," I alluded to a case of such unusual susceptibility that the patient was compelled to abandon x-ray treatment for the actinic ray of light.

In this case, even when no appreciable dermatitis was evident, the slightest exposure caused most unpleasant sensations of burning and itching. In that article, however, I neglected to say that this patient told of a susceptibility quite as marked to the influence of poisonous ivy. I afterwards learned that she had three times been poisoned in this way, and on two of
these occasions she had not even been in contact with the ivy leaves or vines.

I agree with Freund, that in every case, without there are most important reasons for haste, there should be an interval of rest after the first two sittings. I would suggest that these first two sittings be three days apart, with an interval of ten days before the third sitting, one week before the fourth, and four days before the fifth. If in one week from the last exposure, there is no severe reaction, it will, I think, be perfectly safe to give treatment every other day and perhaps daily.

This method may, to some, seem an unnecessary precaution; but if the usual precautionary measures, even occasionally, fail, unusual ones, while perhaps burdensome, cannot be called unnecessary.

The treatment of advanced malignant conditions is quite another matter. A burn, even of some severity, may be of small account relatively; but in simple uncomplicated skin affections of a benign character, a pronounced dermatitis of the second or third degree might be regarded as worse than the disease itself.—Medical Record, January 16th, 1904.

AN ANGLO-INdIAN MEDICAL OFFICER ON OPIUM SMOKING IN CHINA.

The explorations in China in 1900 of Colonel Manifold, Indian Medical Service, described in a paper read before the British Association on September 11th, brought him into contact with opium smoking and cultivation. The visitor’s narrative confirms the statement about the extensive cultivation of the poppy in China; and it also shows incidentally, better than alaboured argument might do, how very different the Opium Commission’s Report would have been if the Commission had been directed—as it undoubtedly should have been—to carry on its inquiry and investigations in China instead of in India!

At Teng-yueh, where he was detained by the desertion of the mule drivers who absconded with the mules, Colonel Manifold found at the Magistrate’s yamen, Mr. Scott, of the Arracan Trading Company, who assured him that it was useless to hope to see the Magistrate before midday, as he was a confirmed opium smoker, and had never slept off the effect of the preceding night’s debauch before a late hour.

Describing the province of Yunnan, Colonel Manifold says:—

It is very rich in minerals, which have as yet been worked by inadequate and primitive means. The present population will never do much, as their energy is sapped by the abuse of opium.

A long acquaintance with the uses to which the people of India put the drug had led me to believe it did little harm, and to be sceptical of the stories I heard of it in China. In India, where it is chiefly swallowed in small pellets and seldom smoked, taken in moderation as it is by the majority of those races given to its use, it is a valuable restorative, and does little harm except to those who become its votaries; and these are, I believe, infinitesimal in proportion to the numbers who make a reasonable use of its valuable properties.

In Yunnan I saw practically the whole population given up to its abuse. The ravages it is making in men, women, and children, are deplorable, and though entirely out of sympathy with the violent views of faddists, and the extreme measures they would resort to in India, I was quite able to realise that anyone who has seen the wide abuse of opium in Yunnan would have an abhorrence of it that would lead them to take exaggerated views of the harm it did elsewhere. In Yunnan I felt that any measures would be justified that would save an intelligent and civilised population from being wholly demoralised in physique and energy, and from being ultimately extirpated by the fatal abuse of a valuable drug.

—from Britain’s Opium Harvest, December, 1903, p. 34.
"CHIEF AIM, QUANTITY OR QUALITY?"

We have been much interested to note the effect produced by the above question which occupies a small space in the statistics blanks issued by the JOURNAL in January. The question has been freely criticized and from various standpoints, more so even than we hoped, though not more so than we are glad of; and the answers to the same are very suggestive.

The question was not asked with the distinct object in view of making a disturbance, though it will be remembered by some that we said in our last issue that "a little wholesome abuse would be welcome" if it should but represent a lively interest on the part of our readers in JOURNAL matters. Nevertheless, we are happy to say that such has been the result and that we have been for the past month or so gratified by the fulfilment of our desire. We have received considerable kindly and wholesome and very interesting "abuse."

The first comment was made by one of our fellow-officers of the Association, who mildly inquired the why and the wherefore, for, as he said, No one will say—"Quantity—and the question may provoke criticism." He was almost right in both these surmises.

Let us begin by confessing that the question is ambiguous and, evidently, capable of numerous interpretations. This is simply a fact proved by the variety of reactions it has produced. Some few have taken it to be an attempt to call out an expression of the force which moves every medical missionary to undertake his life work and express the same in no uncertain terms, adding in some cases that they fear that the wording of the question "may give very wrong impressions when the statistics are compiled." The answers of these read "CHRISTIANITY, be it one or other or both," or "The spread of the knowledge of Jesus Christ," etc.
We were not, however, trying to obtain statistics on this point. No statistics are needed. The facts are known. Persons with any other CHIEF AIM do not become medical missionaries, or if they do they do not stay such.

Nor did we even mean Quantity or Quality as applied to the evangelical side of our work, though there are some Christian bodies and individuals who do place rather too much stress on church statistics.

The question was asked with no other thought in mind but that from our professional standpoint as physicians. (We have admitted the ambiguity.) It lies between two very mundane questions and belongs to this lower order. It does not even seek for a declaration concerning our views on the relief of suffering or the question of life saving. It seeks only an expression of practice concerning the relative importance of quantity of medical attendance and quality of the same. There is a vast difference of practice on these points, both at home and in the mission field. We all know that this is true. And we inserted this question because, professionally speaking, we believe it is the MOST IMPORTANT QUESTION OF ALL. We do not believe it matters at all for the future of China what our names are, nor what our Mission happens to be called. It matters very little in the long run whether we see five hundred or a thousand patients in a month, but it does matter for now and for all time whether or not the practice we establish here in China is mediocre or excellent, diluted or pure, sciolism or science. The foundations we lay will not be dug up in centuries. Let us then dig deeply and build solidly, even if slowly.

But why ask the question if no one will answer "Quantity"? Perhaps there are none in China to whom large figures are of too great importance. May it be so! Some have answered "Quality" without hesitation; others, very likely through modesty, have answered nothing; still others have said "Both," but, and this is the reason we took the liberty of inserting the question, ALL have faced the question and must answer it one way or the other in their hearts. Of those which clearly caught our meaning the most excellent answer so far comes from the south, and reads: "Quality; certainly could nearly double the quantity at sacrifice of quality." That is the professional spirit for which we plead.
THE COMING MEETING OF THE ASSOCIATION.

We would direct the earnest attention of all members of the Association to the President’s call for a general meeting of the Association to be held in Shanghai during next China New Year season. The preliminary meeting which took place in Shanghai last week and at which it was decided unanimously that a general meeting should be held as now ordered, was attended by as many members of the Association as could be gathered together at the time and, as said, there was no dissenting voice. There was not even a difference of opinion expressed as to the proper time and place for the holding of the meeting. At that time the exact days were not settled; the matter being left in the hands of the committee in charge of the arrangements, but this date has now been settled—namely—three days, beginning Monday, February 6th, 1905.

Nothing definite has yet been arranged in regard to the programme, but it will be the endeavour of the committee to prepare so good a feast as to make it well worth any member's while to come from the confines of China to partake thereof. It is purposed to make the programme a distinctly practical one and such as will bear as directly as possible upon China.

Please make large notes of the dates and do your utmost to keep the same open. Make no other engagements and no excuses, but fix things so that you may be in Shanghai at the time. The committee cannot undertake the question of travelling expenses, but will count it a privilege to arrange for the putting up and entertainment of all members who will give due notice of their purpose to attend this meeting. The Chairman of the Committee on Arrangements is Dr. H. W. Boone, and all communications, suggestions, questions, etc., in connection with this subject, should be addressed to him, 4A Minghong Road, Shanghai, or to the Secretary, Dr. W. H. Jefferys, 4B Minghong Road, Shanghai.

STATISTICS.

The answers received up to date have been extremely satisfactory, and if the present rate keeps up we shall have something as the result of the blanks issued with the last JOURNAL. So far about fifty out of some two to three hundred possible answers have
reached us, not much you say, but enough to be of some use. If we can hear from as many as one hundred we shall be doing well. Please answer if you have not already done so!

The writer of “Some Methods of Medical Evangelism,” which appeared unsigned in our last issue, was Dr. W. H. Dobson, American Presbyterian Mission, Yeun-kong, via Canton.

THREE LETTERS.

The Journal is recently in receipt of three letters, forwarded to it by friends in China, which have more than a passing interest for us as medical men. The first two are from Mr. A. C. True, Director of the Experiment Stations of the United States Department of Agriculture; and Professor W. O. Atwater, Ph.D., of Wesleyan University, Special Agent in Charge of Nutritive Investigations in the same department.

They desire to secure data in regard to the diet of the Chinese and the nutritive value of that diet, especially rice and such other cereals and vegetables as in most sections constitute the staple articles of food. Any assistance that members of the profession or others interested in these lines of investigation may be able to supply, will be most gratefully received.

Some blanks and dietary note books, together with one hundred copies of Farmers’ Bulletin, No. 142, Principles of Nutrition and the Nutritive Value of Food, by Professor Atwater, have been sent to Prof. C. M. Lacy Sites, of the department of Political Science, Nanyang College, Shanghai, who will be glad to forward them to any who are interested and are willing to assist in such investigations.

The third letter which comes closer to us professionally is from Dr. J. O. Cobb, of the Public Health and Marine Hospital Service, and asks for information in regard to the spread of tuberculosis through the medium of infected food and for other data. Asking for information he says: “Is it true that the Chinese cooks in kneading dough, supply the necessary moisture as they do in laundry work by taking water into the mouth and spraying it upon the work? If this be true, might it not be an important factor? In the making of bread the subsequent cooking would, I suppose, entirely destroy bacilli, but the same practice may be pursued in
making other foods that are not cooked or only partly. The opium pipe is passed from mouth to mouth, which might prove another source of infection through the alimentary tract."

In an article by Dr. Cobb in the *New York Medical Journal* of October 3rd, 1903, entitled Sources and Methods of Infection in Pulmonary Tuberculosis, he quotes statements on the subject kindly furnished him by Doctors Peck, Gatrell, Boone, and Macklin, through Mr. E. T. Williams, of the American Legation.

It seems as if much more extensive and valuable information might be obtainable if the profession would only take the trouble to record or investigate certain cases that come into their hands. The Editors well know what a busy life the average missionary physician leads in the multitude of his duties and with inadequate assistance which leaves him little or no time for investigation or even for writing for the *Journal*.

In the great mass of pathological material such as one finds only in a densely populated country in which medical science, though old as the country itself, has not yet outgrown its cradle, most interesting and instructive cases are lost to sight or forgotten by the overworked practitioner. If any of the profession in China have or can obtain any data on this line which they are willing to put into circulation, they would confer a great favor on the profession at large.

If they will send any data on the subject to Dr. Lincoln he will be very glad to forward it to Dr. Cobb, who will be only too glad to give due credit to the sources of his information. He says in closing his letter: "I quite realize that I am asking much of you, and the only way I can excuse myself is that I feel that when such good work for humanity is to be done, much can be expected of you."

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**A CALL FOR A GENERAL MEETING.**

A meeting of members of the Medical Missionary Association of China, who happened to be in Shanghai, was held on Tuesday, the 1st of March. The President, Dr. Neal, took the chair; Dr. Jefferys acted as Secretary. After some discussion it was resolved to hold a general meeting of the Association at Shanghai, beginning Monday, February 6th, 1905.
The President appointed as a local committee Drs. Reifsnyder Jefferys, and Boone, and they were empowered to make the necessary arrangements.

The meetings will be held for three days.

Members who wish to read papers at the meeting will please notify Dr. Jefferys at least three months beforehand, stating the subject chosen and other particulars. Members who wish to attend the meeting will please notify the Secretary, Dr. Jefferys, at least one month beforehand, in order that arrangements may be made for the entertainment of as many as we can find accommodation for.

Members who have been elected to read papers at the meeting will be duly notified by the Secretary, and they will receive definite information from him.

It is very important to have a full meeting of the members, and it is hoped that much good will be derived from the deliberations.

H. W. Boone, M.D., Chairman.
E. Reifsnyder.
W. H. Jefferys, Secretary.

ELECTION OF OFFICERS.

Constitution of the C. M. M. A.—Article V.

The Officers of the Association shall consist of a President, a Vice-President, a Secretary, a Treasurer, an Editor, and a Curator of the Museum, all of whom shall be elected biennially by a majority of the Members voting. No Member shall be eligible to the office of President for two successive terms. These officers shall have the power to elect executive committees from their own body, or from other active members of the Association, to fill up any vacancies (caused by death or otherwise) in the executive of the Association, and to take initiative action in all matters affecting the welfare of the Association.

The following Nominations have been made to serve as officers of the Association during the years 1905-6:—

President.—D. Christie, Moukden.
Vice-President.—J. M. Swan, Canton.
Secretary and Treasurer.—R. T. Booth, Hankow.
Editors.—
Curator of Museum.—C. S. F. Lincoln, Shanghai.
PRESIDENT'S LETTER.

The attention of members of the Association throughout China is particularly called to the Official Notice in this issue of the coming meeting of the Association in Shanghai next winter. This action was decided upon after consultation with the members of the Executive Committee, which is composed of the officers of the Association and with other members who were within reach. As will be seen by reference to the Correspondence columns, the local branch of the Association in Soochow has asked that a meeting be arranged for during the time of the General Conference of Missionaries, and thereafter at intervals of two or three years. As the next General Conference will not be held for three years, and as there are a number of questions pressing for decision in connection with our medical missionary work, it was thought best to call a meeting within the next year, with the expectation that at the time of the General Conference in 1907 another meeting may be held, after which possibly we may decide to hold either biennial or triennial meetings. Drs. Boone, Reifsnnyder, and Jefferys have kindly consented to act as a local Committee of Arrangements in Shanghai, and to them, or rather to Dr. Jefferys, who will act as Secretary of the Committee, all suggestions as to subjects for discussion, etc., should be sent at as early a date as possible. The Committee will welcome any suggestions whatever which will be likely to add to the interest and increase the benefit to be derived from the coming meeting. It is earnestly hoped that every member of the Association will bear this meeting on his or her heart and will not only plan to be present at it, but will do everything possible to make it a success. It will have been nearly fifteen years since the last meeting in 1890, by the time we get together again, so there should be no lack of subjects for discussion.

Membership of the Association.

In this connection may I suggest that a united effort be made to enroll every medical missionary in China as a member of our Association within the next few months, so that we may present a united front when we next meet, and may be able to show clearly what a force the medical missionary body is in China, scattered though it is over this vast empire. It might be well to remember
too that every fresh recruit means so much added to the income of the Association, through the annual dues of three dollars, which includes the subscription to the JOURNAL, thus making it possible to undertake work which would otherwise be impossible for lack of funds, such for example as the publishing of a dictionary of medical terms in Chinese, which will be needed as soon as the terms are definitely settled.

Nomenclature Committee.

This Committee has been at work in Shanghai during the past five weeks, and has pretty well completed the remaining lists, consisting of terms for Medical and Surgical Diseases, Eye and Skin Diseases, Gynecological and Obstetrical terms, and lists of Surgical Instruments and Operations, and has made plans for the Materia Medica terms. All the above lists, it is hoped, will be ready for distribution within a few months, and it is earnestly hoped that those who are specially interested in the formation of a uniform vocabulary will give particular attention to these terms and be prepared to criticise them at the meeting of the Association next winter. So far, with the exception of one man, there has been little criticism of their former list of terms in Anatomy, Physiology, etc., published in 1901, sent in to the Committee, so that it is very difficult to know whether or not their work meets the approval of the Association. At the coming meeting one of the most serious matters of business will be the reception of the report of this Nomenclature Committee and the determination of what shall be done with it. It should be clearly understood that the lists published in 1901 and again this year are issued for criticism, and are by no means final or authoritative until passed upon by the Association and adopted as its own.

Forthcoming Medical Books.

Those who are interested in the training of medical students will be glad to know that Dr. Whitney is steadily at work putting his new translation of Gray's Anatomy through the press, and that Dr. Cousland is also publishing a new and much-needed Physiology, a translation of Halliburton's Handbook of Physiology (formerly known as Kirke's). Both these translators are using the new terms published by the committee in 1901, so that members of the
Association who may wish to test the new terms in actual use could not do better than order copies of these books as soon as ready and try them in the teaching of their medical students.

Dr. Ingram, of Tungchow, near Peking, is also preparing a new Therapeutics, a translation of Hare's well-known book, in which the new terms will also find a place, and finally Dr. Gillison is about to issue the first volume of a new Chemistry, which will embody the chemical terms as determined by the Committee of the Educational Association and the Committee of the Medical Missionary Association acting together. What we urgently need just now is a fresh revision of Kerr's Practice of Medicine, brought down to date (or else a perfectly new translation of a good Practice) and a new Surgery to replace the poor books which are now out of date. Dr. Main is said to be preparing a translation of Caird and Catcheart's Surgical Handbook, which will be most useful for practical work, but in addition we should have a more elaborate book for systematic teaching.

Would it not be well for any who may be already engaged in the translation of medical books, or who are contemplating doing so, to communicate with Dr. Cousland, Chao-chow-fu, Swatow, the Secretary of the Nomenclature Committee, so as to prevent overlapping in such work?

J. B. N.

Shanghai, March 5th, 1904.
Correspondence.

The Executive Committee has much pleasure in submitting the following Report of the work of the past twelve months, and takes this opportunity of congratulating the Society on another year's successful effort.

With the memory of the past to stimulate, and with a good programme to look forward to, the year was started full of hope and in anticipation of much profit and pleasure. No anticipation of any break in our circle darkened our outlook, as for some years the circle of members had been unbroken, save by necessary furloughs. Now at the close in reviewing the year we have with sorrow to record two breaks in our circle: one, thank God! but temporary: the other, alas! permanent. Early in the year, ere three months in office, our President, Dr. Huntley, was stricken with pleuro pneumonia, which went on to empyema, laying him aside completely from his work, and so preventing him from fulfilling the duties of his presidential office. After some twelve weeks of anxious watching, we rejoiced in seeing him sufficiently restored to undertake the home voyage to England, where he arrived in August, completely restored to health and strength. We look forward to his return in the near future, and trust that he may be enabled to spend many years of useful work in our midst.

Later in the year, when, fresh from the cool heights of Kuling, we reassembled in our meetings, Dr. Margaret E. Bennett met with us in what seemed to be her usual health. We little thought that on the following Wednesday morning we should, with saddened hearts, carry her mortal remains to their last resting place, and standing by the open grave commit them to its keeping in the sure and certain hope of the glorious Resurrection. Seized with some severe form of toxic enteritis, in spite of all that skilled attention and loving care could do, she passed away on October 6th, entering within the veil to join Him, whose footsteps she followed and whose example she loved. Snatched away thus from our midst in the prime of life and fulness of work, we fail to understand the reason, and can but trust Him who has permitted it. We embody in our Report the resolution so suitably and thoughtfully sent by you to her sorrowing relatives: "The members of the Central China Medical Missionary Association desire to place on record the great loss we have sustained by the death of Dr. Margaret E. Bennett, of the Wesleyan Mission, Wuchang. We feel that we have lost a highly esteemed and most conscientious colleague, a regular and appreciative attendant at our meetings and an earnest co-worker in the missionary cause. We would further desire to tender to her family and her Mission our sincere sympathy in this great trial, and in the fact that her work just opened with such promise of success has been suddenly bereft of its beloved leader."

May her memory be ever fresh with us, and may her example ever stimulate us to renewed effort in the Master's service.

While such occurrences as the above not unnaturally threw a shadow over us as we met from fortnight to fortnight, we rejoice
that the work accomplished during the year has not been in vain. Our fortnightly reunions have continued to bind us more closely in brotherly love and unity, and the social aspect of our gatherings has not been the least attractive feature of them. Our efforts along the line of union have, during the past twelve months, received a fresh impetus from the action of the medical missionaries assembled in Conference at Kuling in August. The scheme for a Central Union Medical School to be established in this centre (Hankow), which was initiated at that Conference will, if carried to a successful issue, throw upon us in this centre much honour and responsibility. Only in true union can we undertake such responsibility and accept such honor. So your Executive Committee would urge more earnestly than ever, that you cease not in your efforts to attain such unity of thought and purpose.

Through no fault on your or your committee's part, we have to report failure as regards the memorial to the Consular Body in Peking, asking that body to approach the Chinese government as to the possibility of remitting duties at present levied on hospital stores. A petition, signed by some 230 medical missionaries in China, was forwarded in July through the British Acting Consul-General at Hankow. In October the response came, and we are grieved at having to announce that for the third time failure has attended efforts made to attain this worthy end.

We are pleased to be able to announce progress in the matter of the Manual of Nursing. Unexpected delays have occurred and prevented the book being published this year. It is hoped that early next year the book will be issued by the S. D. C. K., Shanghai.

Your programme for the past year had to undergo some alterations owing to unforeseen circumstances. Dr. Huntley's illness and subsequent furlough prevented him fulfilling his promise to give us a paper on "Native Medicine and Surgery, and some of their Sequelæ." Dr. Davenport kindly filled the gap with a paper on "Heart Disease." The paper on "Leprosy," to which you had looked forward, anticipating a repetition of former pleasure and profit, was unfortunately, owing to stress of work, unable to be completed in time. Dr. McAll in its place gave us a paper on "Necrosis." With these exceptions your programme has been fulfilled, and in looking at the list of subjects dealt with, your committee feels that as a Society you are to be congratulated on such a year's work. The following subjects were dealt with. In debate were discussed such important matters as "Venereal Diseases," and "Anti Opium Poisoning," while papers were read dealing with such varied subjects as: "Experiences in Abdominal Surgery," "Chinese Medical Phrases and their Significance," "Conservative Surgery of the Limbs," "Children's Diseases in China," "Chinese Dietetics and their Possibilities," "Recent Advances in Ophthalmology," "Heart Disease," and "Necrosis."

It would be invidious to single out one paper or discussion more than another for remark. Suffice it to say that one and all were practical and of great use to the members. In all eight papers were read and two debates held at ten meetings. There were five clinical meetings and one annual business meeting. The average attendance, without visitors, was 7.06; including visitors, 7.33; the lowest attendance being five and the highest being nine.

At the Chinese meetings, five in number, and at the ordinary meetings numerous cases were exhibited,
Correspondence.

either as cases of interest or for help in diagnosis. Some sixty cases were thus shown, and some twenty specimens,—macroscopic and microscopic,—were from time to time exhibited. We specially mention three cases as being of more than ordinary interest: (1). Dermoid of testicle. This specimen is now in the Museum of the Royal College of Surgeons, England, and Dr. Bland Sutton is writing a special article on it. (2). Multiple false neuromata, situated on fifth right cervical, twelfth left intercostaal, left radial and external poplilaeal and tibial nerves. (3). Odontoma of a lower molar tooth. The three elements —dentine, enamel, and cement—had been proved to be present by a specialist.

Under your auspices a conference was held at Kuling during the month of August. On the success of that conference you are to be congratulated. Four important topics were dealt with: (1). Asepsis and Antisepsis. (2). "The Microscope as an Aid to Diagnosis." (3). "Union Medical School Scheme." (4). "Methods of Medical Mission Work."

During the year at your meetings you have had the privilege of greeting visitors from other parts of this great empire, engaged in the same glorious work as yourselves. Dr. Young, of Manchuria, paid one visit, and Dr. Hewitt, of the C. I. M., on his way to open up work in Kansu, spent some time in your midst. We all welcome such opportunities of entertaining our fellow-workers, so promoting fellowship and brotherly feeling.

In concluding the report, your committee feels that some expression of regret should be made at the approaching departure of Dr. Sydney R. Hodge, of the Wesleyan Mission. One of the founders of the C. C. M. M. A., a past President of the C. M. A., and past Editor of the M. M. Journal, he has since the institution of the C. C. M. M. A. striven to further its interests and increase its usefulness. We shall miss him during his absence, and trust that this be but a temporary farewell to our circle. Our earnest wish is that his furlough may restore physical vigour, and we pray that his advocacy of missions in general, and of medical missions in particular, may be greatly blessed.

We close our Report in the hope that the coming year may be brighter and happier than this, and that no cloud may arise to darken the brightening horizon. Come what may to us individually or as a body of missionaries we trust that our work, which is His work, may never get any set back or reverse because of unfaithfulness on our part.

Signed on behalf of Executive Committee,

Cecil I. Davenport,
Vice-president.

R. T. Booth,
Hon. Secretary.

Dear Doctor: Replying to your favor of some time ago, Recipes. I give below a few recipes which we use here, none of which are original:—

R. 1. Alum ... 5 parts.
    Mix. Acetate of Lead ... 25 "
    Water ... 500 "

Apply locally in cellulitis as a wet dressing, adding more of the solution when dressing becomes dry. Should be made fresh, and need not be filtered. Especially useful if used in combination with Recipe 2.

R. 2. Carabolic Acid ... 95 per cent.

Apply locally to the skin by means of a swab of cotton in cellulitis or phlebitis, neutralizing with alcohol when the skin begins to turn white. It is equally good to cleanse foul ulcers when used in the same manner, and is said by the
late Dr. Phelps, of New York, to be a specific in erysipelas. Its caustic action can be perfectly controlled by alcohol.


A convenient cheap tonic. Useful for patients breaking off opium habit.

R. 4. Ung. Zinc Oxid... 1 ounce. Rhei Pulv.... ... 1 dram.

Useful in eczemas, especially the so-called parasitic eczema of the leg.

R. 5. Oil of Eucalyptus... 48 grains Thymol ... 60 grains. Menthol ... 10 Thym. Boric Acid ... 3 ounces. Dissolve the above in Alcohol ... 7 pints. And add Water ... 1 pint.

A cheap substitute for "Listerine." Add one or more parts of water when using for mouth wash, gargle, or spray.

The above Recipes may or may not serve your purpose; at any rate they are perhaps the most useful ones we call to mind for use in China.

I was much interested in your lumbricoid case. I think the consensus of expert opinion is that the eggs produced by the worms in the body do not develop in the body, but require to mature outside. Dr. Booth claims to have seen the lumbricoid worm moving in the shell also coming out of it, but in spite of the doctor's recognized ability, I am inclined to think that he mistook the egg of the ankylostomum duodenale for that of the lumbricoid. I have watched the former hatch, but have never seen any signs of life in the egg of the lumbricoid. It is possible that Dr. Booth's patient swallowed and passed eggs of the lumbricoid that had matured outside the body.

Yours truly,

O. T. LOGAN.

London Mission, 
Hankow, March 5th, 1904.

Dear Editors: I am writing about a matter which affects hospital economy and on which some reliable information would be of very great service to many of us medical missionaries in China. In such a matter I know we have your sincere sympathy, and I trust you will be able to help us through the pages of the Journal. We live here next door to Japan, where medicine and surgery have made such tremendous strides within recent years, and where there now are a number of firms who supply medical and surgical apparatus. Reference was made by Dr. Woodward in a recent number of the Journal to the fact that he had got from Japan much cheap and efficient apparatus for his operating room; and it will probably be possible in other things such as ordinary instruments and drugs to save considerably by dealing with Japanese firms. It is when one attempts to do so that difficulties occur; the catalogues of the Japanese firms are (some of them at all events) in a mixture of Japanese and Chinese character, and it is extremely difficult to make out the article and the price.

It would be an immense boon if information could be obtained (1) as to what good firms there are in Japan who publish English catalogues of the drugs and instruments they supply, and who are willing to send these catalogues to us in China (2) as to other good firms who have no English catalogues.

If there are no firms publishing English catalogues then we would be glad to hear the prices of some typical drugs and instruments that the other firms can supply (e.g. mag. sulph., sulphur, potass iodid., quinine sulph. and instruments such as scalpels, artery and dressing
forces, scissors, ligatures and many other drugs and instruments constantly used by all of us).

How this information can best be obtained, whether through Japanese missionaries or by dealing with the firms direct or otherwise, I leave to you. The point I would emphasize is this, that if you can put us in the way of getting good drugs and instruments from Japan at a lower figure than we are at present obliged to pay at home, you will very materially help in the efficiency of our work and the welfare of the cause that we have at heart. Information on this matter, published in the JOURNAL, will be a very great boon to us all. Hoping that you will see your way to take the matter up and assuring you in anticipation of our united gratitude for such help.

I remain,

Yours truly,

P. L. McAll.

[Note: The questions raised in this letter are most practical. We shall try to have it fully answered by one who knows, in our next issue.—Editors.]

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**Swedish Mission Society,**

**Shasi, February 9th, 1904.**

**DEAR EDITORS:** Hereby I send you a short statement concerning my medical work during the last year:

- **Out-patients**
  - New: 2,528
  - Old: 2,962
  - Total: 5,490

- **In-patients**: 190

- **Income from patients**: $263.53

Please don't put me down as a doctor. I am only a minister, and that has prevented me from sending any report for the JOURNAL. If it had not been for what you wrote in the No. 4 for last year I would not have mentioned my medical work.

I feel pretty sure that when you wrote about sending reports, you did not think of missionaries like me. To be sure I send you this note, which very likely has its proper place in the paper basket. In medicine I have got some working knowledge, besides some special instruction in eye operation, dental work and tropical medicine, having received the last when taking a course at the School of Tropical Medicine, London.

I am, Dear Sir,

Your faithfully,

**ANDERS P. TJEELLSTROM.**

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**CHINA INLAND MISSION,**

**IAO-CHEO-FU, KIANGSI,**

**Dec. 28th, 1903.**

**DEAR EDITORS:** I am sorry that it has been necessary for our President to remind us of our thoughtlessness with regard to the Medical Nomenclature. Surely with most if not all of us the slowness in writing to the Committee about the matter has been due, not to lack of interest, but because we feel our inability to improve on their work, or hope that after some months' use we may be able to offer better suggestions than we can now.

If published and uniformly adopted, even as they stand, the result would surely be better than the mixed nomenclature we have to use now. We wish them speedy success, and hope the editors of new books and new editors will show their appreciation of this committee's labours by uniformly adopting their terms—at any rate till better ones are agreed upon. If they are in need of funds please say so, and we will do our best to supply them.

Yours sincerely,

**FRED. H. JUDD.**
Dear Editors: By same post I send you a report and account of our first year's work in the Roberts' Memorial Hospital. This was built in memory of Dr. Fred. Roberts, late of Tientsin, by members of his family, and was just completed in 1900 in time to be destroyed by the Boxers. The Roberts' family again subscribed the funds for its rebuilding in 1902, and last February it was opened with a great local demonstration of goodwill. It has been a busy year, and our prospects are very promising. I enclose a rough list of operations done, etc., and with all good wishes remain,

Very sincerely yours,

Arthur D. Peill.

P'ang-chou, via Tientsin,

February 12th, 1904.

Dear Doctor: May I trouble you to write me a word as to whether the Medical Association has advised the use of any special form of record keeping or statistics? Possibly some recent number of the Journal has note of such, but I do not recall it, and, as with the new Chinese year we take more active charge, it would be as easy for us to use such suggested form as any other, besides thus using the experience of those long in the service here. Having had a sufficient dosage of keeping records in a hospital in America, I am of course anxious to waste less time in such a way here, and record only what seems likely to be of ready use.

Thanking you in advance for referring me to some source, or briefly outlining a plan that has received the endorsement of a number.

Perhaps "Medical Mission Statistics" just sent out (blanks) is what I might follow to advantage. There is a muchness in this for a busy M.D.

Sincerely,

F. F. Tucker.

New York, December 7th, 1903.

My dear Sir: You will, I am sure, in common with us, be interested in a project we have undertaken for a Memorial to Dr. John G. Kerr. The enclosed circular letter and accompanying pamphlet will more fully explain our plans and prospects.

We shall be glad of your kind co-operation in this matter through the pages of the Medical Missionary Journal, or in any other way that occurs to you. A few friends have given $200 to start the fund, and while we can build and furnish a cottage for $1,500, we would like to build a more substantial one for $2,500. You will be interested to note and possibly inform your readers of "Mountain Rest" its purpose, etc. We hope many of our medical and other missionaries will come there and "rest awhile." A hearty welcome awaits all comers in the Master's name and service.

Sincerely yours,

Geo. D. Dowkontt.

Memorial Cottage to Dr. John G. Kerr, of China.

New York City, December, 1903.

Dear Friend: As a member of the Presbyterian Church, to which we also belong, you will doubtless be much interested in the contents of the enclosed pamphlet, telling of Mountain Rest for missionaries.

The International Medical Missionary Society, of whose Board of Trustees we are members, offers to our denomination the privilege of sharing in the benefits of the gift which has come to them, by placing on their grounds a Kerr Memorial Cottage, comprising two stories and ten rooms, at the small cost, including furnishing, of $2,500.
Dr. Kerr went to Canton in 1854, and died at his post after forty-eight years of heroic and successful service. His widow has returned to her native land alone, and the Society would like to have her be the first to occupy a room in Kerr Cottage next summer.

Will you not therefore kindly aid in this by sending a gift to either of the undersigned, or to the Treasurer of the I. M. M. Society, Dr. J. Edward Giles, 288 Lexington Avenue, New York City.

Trusting to have your kind co-operation in this movement, we remain,
Yours in the service of our one Master,

Committee:
A. W. Halsey.  
Albert B. King.  
Chas. R. Erdman.  
Edward A. Jones.  
Silas F. Hallock.

PHILADELPHIA, Pa., Jan. 1, 1904.

Dear Doctor: I have the copy of your MEDICAL JOURNAL with notes on furniture of your dispensary, where I observe that you remember some of the things you have seen in Philadelphia. I also see the paper on a peculiar case of ascaris lumbricoides in which you make some very interesting points. In regard to the symptoms, I have long since concluded that to assume any definite train of symptoms as characteristic of any form of intestinal parasitism only causes confusion and mistakes. I have now under my care in the University Hospital a young woman from Syria, who has a degenerating taenia saginata and whose symptoms are those of tetany alone. I shall report this case. I recall a case of ascaris lumbricoides which occurred in an adult and in which the symptoms that called attention to his illness were those of an acute tonsilitis. The prompt subsidence of the symptoms which had been slowly developed and rather obstinate after the administration of remedies which dislodged the parasites convinced me that intestinal intoxication was operative.

Sincerely yours,
Alfred Stengel.

Siang-tan, Hunan,
March 5th, 1904.

Dear Editors: You kindly send around these statistical blanks. I have done my best to fill it out.

You see I have just been transferred by our Board from Hainan to Hunan, and from No-doa to Siang-tan.

I have only three months to write on, but would like to be represented since we have rented and opened a made over Chinese house, have put boards on floors, bought beds and have started in.

Am having trouble about getting a Chinese trained assistant. Do you know where a fully or partly trained one can be had? I trained one in Hainan thoroughly, but as he does not speak Mandarin, had to leave him behind. The one I have been having here has no good.

When Dr. Neal was editor, I managed to send up something for the JOURNAL once in a while. I hope to do so again when possible.

Wishing you God speed in your work, I am,

Very sincerely yours,
Ernest D. Vanderburgh.

Soochow, February 5th, 1904.

My Dear Dr. Beebe: At the last meeting of our Soochow Medical Association the subject of a general medical conference for China was brought up again, and the Society asked me to write you about the matter.

May we request you, as secretary, to convey to the President of the Medical Missionary Association our earnest desire that such a conference be arranged for the time when the General Missionary Conference is called?

I believe it is the desire of most or all of us that after that occasion
regular meetings should be held every two or three years; but that matter would naturally be settled at the first conference.

Very sincerely yours,

MARY ELLIOT FITCH.

CANTON, February 3rd, 1904.

DEAR DOCTOR: I am in Canton for a vacation. I brought an insane man to Dr. Kerr's Refuge, the husband of one of our Christian women. Dr. Selden, who has charge now, certainly deserves the thanks of the profession and the laity as well for his self-denying work. It is the only place where such unfortunates can be taken care of. We were at our wits end to know what to do with this man and were so thankful that Dr. Selden was willing to receive him.

Sincerely,

KATE C. WOODHULL.

MISSION HOSPITAL,
CHING-HOA, FORMOSA, JAPAN,
March 3rd, 1904.

DEAR EDITORS: I was much interested in reading Dr. Hill's article on Strangulated Hernia in your January number.

Hernia, generally inguinal, is very common in Formosa among the Chinese, and I have seen a very large number of cases since I came here eight years ago. The subjects of hernia often complain that they have occasional severe attacks of pain, accompanied with tenseness and irreducibility of the swelling; but somehow or other it seems nearly always to get better, sometimes after a dose of native medicine. The pain passes off, the swelling becomes less tense and the patient succeeds in reducing it. I have, however, come across two cases of strangulated hernia: one presenting a condition which, as Dr. Hill remarks, seems to be very rare, namely a large faecal fistula in the scrotum. Unfortunately this latter case proved fatal. The patient was a man about forty years of age, who was brought to me about a fortnight after his strangulated hernia had burst. Owing to tight constriction at the ring, the patient suffered a great deal from griping pain when the intestines contracted strongly in their efforts to drive the faeces past the obstruction. The ladder pattern was very well marked on the abdomen at such times. The man was a good deal emaciated, but he was eager for an operation on account of the pain and discomfort. I may say that all the faeces for a fortnight had been passing by the fistula and none by the anus, so that it was rather a case of artificial anus than of faecal fistula. The operation consisted in cutting down and opening the sac, dividing the constriction at its neck, freeing the bowel where it was adherent to the sac, especially about the neck, and drawing it down till healthy bowel was reached. The fistulous opening in the bowel was large, and it was necessary to remove four inches or so of bowel with a triangular portion of mesentery. The divided ends of the bowel were then united by a Murphy's button and returned to the abdomen. The patient suffered somewhat from shock after the operation, and his pulse continued feeble. He had very little pain in the abdomen and there were no signs of peritonitis, but sickness and hiccough became bad and he gradually sank and died on the fifth day after operation. After his death I got the consent of the relatives to open up the wound and remove the Murphy's button. On examining the small part of the bowel which
I took away with the Murphy's button I found that union was perfect for about a third of the circumference of the bowel in the part nearest the mesentery where I suppose the blood-supply was better. In the remaining two-thirds the union was gangrenous.

Perhaps I should have removed more bowel at the operation, as the ends of the bowel united by the Murphy's button were much congested.

My other case of strangulated hernia occurred in an infant; but it was reduced when the child was put under chloroform preparatory to operation.

Yours sincerely,

David Landsborough.

The following contributions have been received for the Medical Nomencature Committee's expenses:

- Rev. Edward M. Scheirer $5.00
- Mrs. E. C. Machle ... 5.00
- Rev. Rees F. Edwards ... 5.00
- From one interested ... 2.00
- $17.00

Robert C. Beebe,
Acting Treasurer.

[From New York and Philadelphia Medical Journal, November 7th, 1903.]

At a recent evensong, for the special benefit of physicians, at an uptown church, the lesson was from Ecclesiastes, xxxviii, 1-16. As this book is reckoned among the apocrypha and is unknown, save to members of the Roman and Episcopal churches, and, we fear, unfamiliar even to many of these, we venture to transcribe the verses read:

1. Honor a physician with the honor due unto him for the uses which ye may have of him: for the Lord hath created him.
2. For of the most High cometh healing, and he shall receive honor of the King.
3. The skill of the physician shall lift up his head: and in the sight of great men he shall be in admiration.
4. The Lord hath created medicines out of the earth, and he that is wise will not abhor them.
5. Was not the water made sweet with wood, that the virtue thereof might be known?
6. And he hath given men skill, that he might be honored in his marvelous works.
7. With such doth he heal (men), and taketh away their pains?
8. Of such doth the apothecary make a confection; and of his works there is no end; and from him is peace over all the earth.
9. My son, in thy sickness be not negligent: but pray unto the Lord, and he will make thee whole.
10. Leave off from sin, and order thine hands aright, and cleanse thy heart from all wickedness.
11. Give a sweet savor, and a memorial of fine flour; and make a fat offering, as not being.
12. Then give place to the physician, for the Lord hath created him: let him not go from thee, for thou hast need of him.
13. There is a time when in their hands there is good success.
14. For they shall also pray unto the Lord, that he would prosper that which they give for ease and remedy to prolong life.
15. He that sinneth before his Maker, let him fall into the hand of the physician.
Hospital Reports.

**Changte-fu, Honan.** Medical work has been carried on steadily during the past year with a very fair average attendance of patients, the hospital wards have been especially well patronized and the larger proportion of resident patients has rendered the work more satisfactory in every respect; we have had representatives from four provinces coming purposely for treatment; some of these travelling more than one hundred miles and on foot, making this long pilgrimage as their last resort—too often alas to be sorely disappointed.

The number of patients for thirteen months has been 3,946 and the number of treatments 16,244, an average of 4.1 treatments for each patient, and affording an average daily attendance of 47.77 as compared with thirty-five for the previous year. About twenty-five per cent. of the patients have been women.

During the early summer six chien of hospital wards were erected for women patients, and alterations made in an old building formerly occupied by the ladies as a residence, provided a bright and convenient waiting room and chapel; in consequence of this work among the women patients, both medical and evangelistic, has been much more satisfactory, and it was hoped that with new wards situated in a more private part of the compound, the number of women patients would largely increase, but in this we have been somewhat disappointed, for the increase has not been appreciable.

One hundred and seventy-seven operations have been performed during the year; of this number twenty-seven were for cataract, fifty-nine were operations on the eye other than cataract, and seven were for harelip. There has been little hesitancy on the part of patients submitting to operation when advised, and we not infrequently have definite requests made that we will use the knife or the needle.

In addition to our work in the hospital, a few visits have been made to the city, for which conveyance was provided and a small fee of 500 cash charged. This work has given us admission to homes among the better class of people, but we regret to report that almost without exception these visits have been apparently futile, for we are rarely invited till the patient is so sick that no hope can be held out of recovery, and it seems impossible to get these patients to follow out any systematic plan of treatment, and sometimes we are hardly out of their house when a native doctor (?) is called in. I have been assured that this is no mark of disrespect to a doctor, but the more doctors called to a house the better name does that house get for all the efforts made and money spent to effect a recovery.

Preaching has been carried on in the waiting room of the dispensary and daily worship has been conducted among the in-patients. Evangelistic work among this latter class is much more satisfactory than among the dispensary patients, and not a few have shown an intelligent interest in the gospel message, but out of these only ten have been recorded as catechumens, and we regret to say that unfavorable reports are heard of two of these; we may
frankly acknowledge that it is somewhat disappointing to find that only one patient in every four hundred treated makes a profession of Christ, and we are, at times, tempted to ask, "To what purpose is this waste?" Such small result is indeed an occasion for humiliation and a call for deeper devotion and closer attention to the spiritual side of the work. It is, however, unfair and impossible to tabulate the spiritual results, and we are assured that the seed sown will yet bear much fruit; to our certain knowledge, a large centre which previously had been indifferent and even hostile to the gospel, showed a complete change of attitude, which was ascribed by our native preachers as definitely due to the influence of the medical work.

We have found considerable comfort in doing away with the custom of presenting the doctor with presents, which were chiefly of uneatable eatables and substituting a subscription book for the use of grateful patients, forty-one of whom have contributed £15.00. While most of the contributions have been from the poor and are consequently for small amounts, yet in many cases they are the tokens of genuine appreciation and real thankfulness, and we hope this is but the beginning of making this work less of a charge upon the home church.

In closing let me express appreciation of the faithful service rendered by our senior assistant, Chang Ai-hsin, and by our two juniors. Association with these three and our "aye ready" to help gatekeeper has been very pleasant; the assistants all show a commendable wish to make themselves more proficient, and the work of the year has been carried on without the least sign of friction.

To our God and Saviour who has given us this ministry of healing be the praise and glory for any signs of good accomplished, for any suffering relieved and for any soul saved.

Percy C. Leslie.

Roberts' Memorial Hospital, T'sang-chou.

It was with difficulty that we were able to urge on the workmen and have all ready by the 16th of February—the opening day of the hospital.

Of the events of that occasion an account has already been written, and a few words must suffice for them here. For that day at least the foreigners and their good works were prominently before the minds of a great multitude of the people, and we have since found reason to believe that the good impression then made was both enduring and deep. All the officials and gentry graced the occasion by their presence, and we had the pleasure of meeting, to the number of some hundreds, with influential men of all classes, representing the entire light and leading of the county, besides many hundreds more of our less prominent neighbours, whilst outside was gathered a dense mass of spectators from miles around, who no doubt took mental notes of this change from 1900, of the confidence of their leaders in our work and of their apparently genuine goodwill to ourselves.

The only hospital in an area the size of Wales, our scope has not been small. Disease in its protean forms reeks no more of caste and creed here than it does in other places. City and hamlet, mansion and hovel own its fell sway in T'sang-chou-foo. So the General comes for treatment for his ear and sends an officer to the wards with malaria and a couple of privates to be cured of bullet wounds.

We are slow to baptize enquirers, and in this matter the hospital
is no exception to the other branches of the Mission. But one man, who had been in an extra long time, was baptized at Christmas time, and a good few more may be looked on as hopeful enquirers, as well as several women.

Our rule to admit as assistants only men guaranteed by their church, makes it difficult to add to their number, though it greatly increases their worth.

During the year we have built a commodious and very convenient inn, which is also a food-shop for the patients and an annexe to the wards, and the funds are now in hand for isolation rooms, thanks to the cheering and generous efforts of friends in Edinburgh.

Arthur D. Peill,
M.B.C.M., F.R.C.S.

Hwai-yuen Hospital, Year ending Aug. 31st, 1903.

Up to the middle of April the attendance in the dispensary was still small, and though numbers of surgical cases applied for treatment, none of them dared undergo an operation. In fact during the seventeen months we had been in Hwai-yuen, previous to April of this year, a general anaesthetic had been administered to only two cases, one of which was a trivial one. In April a number of patients applied at once, who were willing to submit to surgical treatment, and in ten days we did six major operations. Besides these a number of non-surgical cases applied for admission to the wards, and for two months our accommodations and energies were fully occupied.

As stated in last year's report, we have rented and put into repair a number of Chinese dwellings situated on a main street just outside the South Gate of the city.

The dispensary has been open 179 days, and 572 new patients registered. Counting first and later visits we have treated 1,803 patients. We have visited nineteen patients in their homes, of whom eighteen were attempted suicides—sixteen taking opium, one hanging herself and one taking a cosmetic powder made from lead. One opium case died, one was dead on arrival; the suicide by hanging, died, and so did a case of dysentery. The others recovered. There has been no death in the hospital.

Established Church of Scotland Medical Mission, Ichang.

Our statistics this year are not in advance of last year's, but we have been able to observe a deepening in the confidence of the people toward us, in that they are coming to trust us much more readily and to allow us to operate in cases which previously would have run away had we ventured to suggest the surgeon's knife as a remedy. That spirit of superstition and dread which was once against us seems now to be for us, and very often they come expecting, like Naaman of old, that we by a wave of our hands over the place will recover them.

This great faith in us has, too, its humorous side. An offending tooth has been removed from an old lady in her sixties, and she seemed grateful for the help we had rendered; but before leaving the surgery she asked, in all sincerity, if we would not give her some foreign medicine which would make a new tooth grow. Another lady, whose age had "fallen into the sea, the yellow leaf," and who was therefore long past child-bearing, asked for medicine that would enable her to have a child; and when she was told that there was not such a medicine, her face showed that she did not believe us, but felt that we had some reason
BOY PATIENT AT I'CHANG HOSPITAL.
of our own for refusing her the precious drug. In our out-patient clinique a man, said to be a new patient, came in for consultation. Seeing one of our hospital bandages fastened round his leg we fancied a mistake had been made and that he was a patient who had been seen and treated at our hospital before. "No, I have not been here before," he said. "Then how came you with one of our hospital bandages?" we asked. "Oh," he replied, "a friend of mine who had a bad leg was cured in this hospital, so he let me use the bandage which had done him so much good." And in the wards amongst the in-patients the application of the clinical thermometer is often believed to be more efficacious a charm than the line of treatment adopted. They feel ever so much better after the thermometer has been under their arms.

By far the largest majority of cases we see are due either directly or indirectly to syphilis, and this seems in accord with the experience of other medical missionaries in this land. With others, we feel we must protest against two very rash and unweighed statements which appeared lately in the columns of the China Medical Missionary Journal. The article in question was not written by a medical missionary, and it says of China: "Prostitution, with its evil train of disease, is comparatively rare," and again, that "in comparison with alcohol the evil wrought by opium is trivial. The opium habit is perhaps more nearly equivalent to tea-drinking or tobacco-smoking." To these two statements we give an absolute denial. The evil train of disease following prostitution is seen to a far greater extent in China than at home, where early treatment is usually adopted. Here the disease runs its course unchecked, causing ghastly and disgusting disfigurements of the whole body; in many cases more loathsome even than leprosy. And although the post-mortem table can show no changes attributable to opium, yet the moral death and wrecked conscience of the individual, his ruined home and family, bear loud witness against the evil of China's great curse. We acknowledge that a few can be moderate opium smokers, for we have seen men (they have all been strong country fellows) come in, who for twenty or more years have not exceeded the daily dose of one drachm of raw Chinese opium; but we are not exaggerating when we say that such cases form at most one per cent. of opium smokers.

Malaria is extremely common, and especially in the country districts where the rice fields form such ideal abodes for malaria-bearing mosquitoes. The benign forms of the parasite are by far the commonest, but just lately a man has been with us with malignant malaria; his blood being full of crescent bodies. But besides malaria there are many undescribed fevers which puzzle us extremely.

Leprosy we rarely see, and the one case this year was not a native of the place. Considering the amount of syphilis in China, one would expect to meet a larger number of the diseases of the nervous system, said in the books to follow that affection. But those nervous cases that in home hospital, while the joy of the professor are the bane of the students, are rarely met with. Locomotor ataxia we have never seen, and from the reports of other hospitals in China that affection seems rarely met with anywhere in this land.

Fuh-ning Medical Mission, 1903.

It has been a year of quiet progress bringing to our wards an appreciable increase in the number of patients.
The fact that we have obtained the confidence of the people is evidenced by their being willing when ill to pay us an early visit, not waiting until all the native remedies have had their trial. Fuh-ning people are unenterprising; even in the matter of idol worship they are lacking in zeal, and so it is no easy matter to interest them in the claims of a foreign religion. Medical work is a most effective means of arousing this interest not only in this city but throughout the entire district. This year our hospital became closely linked to the Dublin University Fuh-kien Mission and now forms an integral part of the Mission's agency.

For the past six years we have in our men's hospital been working under very disadvantageous conditions. The wards are totally unsuited to our present needs.

We exercise strict hospital economy, and there is really nothing unnecessary in use.

The operating table, the cost of which was less than thirty shillings, consists of a lacquered slab of hard wood in one piece, supported on four legs, and with a slightly concave surface; the head is higher than the foot, so that fluids may fall into a tray which fits in under the projecting rounded end. For about the same sum we purchased a large camphor wood press capable of containing instruments and the year's supply of hospital dressings. A few small tables, also made locally, for holding lotions, enamelled bowls and trays, complete the furniture of the operation room.

The Women's Hospital has had 306 in-patients during the year. This is an increase of ninety over the previous year, for which we are most thankful. The increase undoubtedly is due to the entire isolation of the female wards from the men's hospital which was effected early in the year.

Purulia, India, Leper Asylum. Its aim is to acquaint the lepers with the gospel and to mitigate their sufferings by giving them shelter, food, and medicine. For this purpose it supports asylums of its own and assists such as have been established by other societies. The Mission to Lepers being interdenominational, does not send out missionaries of its own, but utilizes existing agencies.

Excepting eleven persons, all of the 576 lepers in the Asylum come from the district of Manbhum, and among those eleven who are not Manbhumites, six have come from the Chota-Nagpur districts of Singhbum and Hazaribagh, where there is no leper asylum. Of the remaining five strangers, one came from Bilaspur, C. P., one from Calcutta, one from Morbhaj, and two from Oudh. The chief contingent of lepers is supplied by the Kurumbi caste, next follow the Bauris and the Telis; there are only a few Doms and Chamars among the lepers at Purulia.

Segregation being necessary, even if leprosy be contagious and hereditary only to some extent, as held by the Leper Commission, the sexes are strictly separated, and no marriages allowed in this Asylum. A wall six feet high divides the men's quarters from those of the women, and the quarters of the tainted girls are secluded by a wall. Lepers are strictly prohibited from leaving the Asylum and going to town, and a watchman is employed by night to see that the rules are not infringed. At the shop inside the Asylum, as well as at the dispensary, men and women are served on opposite sides. There are four couples, in which both husband and wife are lepers. They too, have been separated, the men living in the men's quarters, the women in those for the women. There are seven couples in which healthy wives accompanied their
Husbands in coming to the Asylum. These have been separated, the men only staying at the Asylum, and the wives staying near the mission compound, supporting themselves by daily labor. The rest of the married lepers, both men and women, came to the Asylum, having been abandoned by their partners on account of their leprosy.

Men receive nine chataks rice per diem and five annas, nine pies per week, in cash; women eight chataks rice and four annas cash. There is a shop inside the Asylum, in which the inmates purchase their requirements of dal, salt, spices, vegetable, oil, tobacco, etc. The reason why the lepers are allowed to cook their own food and to do a little shopping is to occupy them in a manner most agreeable to themselves and conducive to their health. The money received in the shop from the lepers is disinfected before it is taken into use. Those who are unable to cook for themselves receive their food from the kitchen in which food is prepared for the tainted children.

Special diet is given to those for whom the doctor prescribes it.

For the natural wants of the people no latrines have been provided for them, their usual practice of using the woods having been recommended by the Inspector-General of Civil Hospitals, Bengal, as the best, so long as a thoroughly equipped arrangements for cleaning the latrines by hydraulic power cannot be provided. Reservoirs have been built at the head of each drain, out of which the drains are flushed every morning with a Phenyl solution, to carry away any waste or polluted matter.

Rev. Theo. F. Hahn, M.D., is in charge of the medical branch of the Asylum. He is assisted by a Christian native doctor, who received his diploma from the Medical College at Agra. The treatment aims at an amelioration of the condition of the patients rather than a cure of the disease since no remedy has been found as yet which may effect a cure. For the disease proper remedies are applied, both externally and internally. Ulcers and foul-smelling wounds are cleaned and treated with such antiseptics as iodoform, boric acid, acetanilid, carbolized vaseline, while the natives themselves are accustomed to cover their wounds with tar and charcoal or phenyl. For the extensive burning accompanying each new febrile attack, such remedies as cochra and gurjun oil are applied externally, and chaulmoogra oil in internal doses.

The average number of deaths per annum is twelve per cent. Last year out of 569, there were twenty deaths, and in the current year up to date out of a number of 632, there were sixty deaths. Since the opening of the Asylum in 1889, no less than 1,777 have been received, out of whom 894 died in the Asylum and 268 left or were discharged.

There are at present in the Asylum ninety-five children, forty-seven of whom are boys and forty-eight girls. About half of these are already grown up. These children and young people are taught the rudiments of knowledge, besides religion, singing and drill. The girls have to cook for them all and wash their clothes. Two of them are helping in teaching the women. Nearly all these children are the offspring of leprous parents, or have been brought to the Asylum by their leprous relatives. There are five children, who have healthy parents, that brought them to the Asylum for support, since the inhabitants of their respective villages would not allow of their staying at home.

In the Home for untainted children there are at present twenty-seven boys and thirty-one girls, all
children of leprous parents, except a few, that were brought here by their leprous relatives, on whom they were dependent for support. No healthy children over three years of age are allowed to stay with a leprous mother, an inmate of the Asylum. Every other child brought by lepers is separated from them at their arrival. In the Children's Home the boys and girls are taught Lower Primary course. Some of the more gifted boys learn up to the Upper Primary examination.

Two boys have passed the U. P., and one the L. P. examination, up to this time. Special stress is laid on drill. At the coronation festivities the boys of the Children's Home carried off several prizes, one of them even receiving the first prize, a silver watch and chain. The girls learn sewing and have to cook the food for all the children, to work and mend their clothes. The boys having learned some trade, and the girls being able to support themselves, they are allowed to marry, and must leave the Home and settle in life independently. Thus twelve families have been formed out of these children. Two boys have become carpenters, two bricklayers, three teachers, one a compounder, and three are menial servants.

During the last two years three boys and two girls of the Children's Home developed the initial symptoms of leprosy and were transferred to the Asylum. Two more boys were suspicious and are under observation, being kept outside of the Children's Home as well as the Asylum.

In connection with the Children's Home there is an Industrial School in which the grown up boys learn a trade. At present two boys are learning carpentry, one boy is learning tailoring, one weaving and one bricklaying.

In connection with the Dispensary of the Leper Asylum a class has been opened by Dr. Theo. F. Hahn for the purpose of training young men of the Children's Home and other Christian boys for the office of caretaker in leper asylums, compounders and catechists for missionary charitable dispensaries. At present there are five students, three of whom have come from the Children's Home. The thought has been considered that if government recognize the school, as it has done with regard to the Medical Mission at Hazaribagh and Kalimpong, this class might become a still more useful institution.

Religious instruction is given every day. Services are held twice on Sundays, besides a Sunday School for all those that want to attend and who wish to receive such instruction. None is compelled to do so, and no material advantages of any kind are granted to those who embrace Christianity.
BIRTHS.
At Shanghai, March 19th, to Dr. and Mrs. W. H. Jefferys, a daughter.
At Tai-chow, March 20th, to Dr. and Mrs. S. N. Babington, C. M. S., a son.

ARRIVALS.
December 29th, O. S. Behrents, M.D., American Norwegian Mission, for Ru-ning-fu.
February 9th, Dr. Howard Taylor, C. I. M., from America.

DEPARTURES.
January 1st, Dr. L. L. Moore, wife and daughter, S. P. M., of Hsü-chow-fu, for America.
January 10th, Dr. F. E. Wills, L. M. S., Tsao-shih, for England.
January 30th, Dr. J. N. Stevens, A. C. M., Shanghai, for America.
February 22nd, Dr. Howard Taylor, C. I. M., for England.
February 27th, Dr. S. R. Hodge and wife, W. M. S., Hankow, for England.
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