probable that it may be widely prevalent in a district, and yet never be recognised, deaths, from it going to swell the deaths from fevers, which bulk so largely in the mortality returns.

The following theory will, I think, afford as adequate an explanation of the presence of the disease in this jail as the state of our knowledge at present justifies. The specific micro-organism was at some time introduced, and finding a suitable nidus in the dust or soil of the jail, has continued to grow and thrive, at times increasing in virulence in its saprophytic stage of existence under conditions that are not understood, until it manifests itself in an isolated case or an outbreak, which subsides again, especially when the soil is saturated and the dust laid. The process then again going on as before. As the disease is known in the district, it is possible that re-infection may at any time take place. This theory is in accordance with the bacteriological experience of Germano and Kamen above quoted, and with the experience of the practical conditions of life in the jail.

Measures for prevention.—Finally, I suggest the following practical measures for its prevention:—

(1) Provision of better sheds for rice and grain-cleaning, etc., with *pucca*, smooth walls, and rounded off angles to ensure the possibility of removal of all dust.

(2) Provision of better sheds with thorough ventilation for carpenters, smiths, etc., and substitution of *pucca* roofs for the present tiled ones in the old sleeping wards.

(3) Prevention of overcrowding.

(4) Eviction of all cattle from the inside of the jail.

(5) Thorough drying of all grain in the sun for prisoners' use before stocking in the godown or issuing for use.

(6) Regular watering of the jail inside. A few water-carts should be sufficient for the purpose. Jail cattle and prisoner labour will supply the power.

(7) Wearing of cloths over the mouth and nostrils in all dusty forms of labour.

(8) Disinfection of the wards or workshops, as far as practicable, with strong solution of perchloride of mercury where patients attacked have been sleeping or working.

Precautions 3, 5 and 8 are already in force; 6 and 7 are carried out to some extent, but the want of a cart prevents the full advantages of watering, and it is difficult to ensure cloths being worn in all cases except in the gangs in the grain-cleaning sheds, where it is insisted on.

1 and 2 necessitate some considerable outlay, but are, I think, very necessary.

Number 4 would involve small expense, and is an urgently-required reform, especially now when the jail population has so largely increased.

The following officers were in medical charge during the period under report:—

Major W. J. Buchanan, M.B., D.P.H.,—August 1900 to June 1901.

Captain C. R. Stevens, M.D., F.R.C.S., I.M.S.,—July to September 1901.

Captain E. A. R. Newman, M.D., I.M.S.,—October 1901 to date.

EXPERIENCES IN A CHINESE HOSPITAL.

BY T. H. FOULKES,

CAPT., I.M.S.

IN the spring of 1900 I was asked to take charge of hospital for Chinese under the auspices of the British Police Commissioners, Tartar City, Peking, corresponding with that run by Captain Walton, I.M.S., in the Chinese City.

As I had several cases worth reporting, and as I had opportunities for making enquiries into matters of professional interest, I make these my excuses for writing this note.

Having no fluency myself with the "monosyllabic music" I had to get an interpreter and he rather increased than diminished my difficulties. Chinese is a very difficult tongue, but I am not sure if it is more difficult than the interpreter's English: as an instance, I will quote one sentence which I frequently had to ponder over. "He says his chest not thoroughly." I discovered after a time that this meant that he had shortness of breath. The hospital was advertised to open on a certain date, unfortunately this date came round before the supplies had arrived from Shanghai. As it would have been fatal not to have started on the advertised day, a pair of field panniers was borrowed, and work was begun with these. For the first three days all comers were treated with Turpentine or Liquor Ferri Perchloride internally and externally; apparently much to their satisfaction. Among these earlier cases was a man with very well marked lupus erythematosus, who was—*faute de mieux*—treated with a 4 gr. solution of zinci-sulphas.

Next time he came he said he felt much better, so it was continued, and in a few weeks he had a large patch of normal skin on each cheek which had previously been covered with the disease. He then stopped attending saying he was well.

My experience of the ordinary run of out-patients was much the same as Captain Walton's (*Indian Medical Gazette*, September 1901).

Tuberculous disease of almost every joint and organ was seen. I suppose this tendency to tubercle is mainly due to the way the Chinese seal up their paper rooms. They are very stuffy and ventilation is unknown.

Skin diseases were very common, most of them due no doubt to the personal uncleanliness

of the Chinese. Scabies and eczema were the commonest affections, and, as these readily yielded to treatment, confidence in the hospital was quickly established.

I saw a fair number of cases of cancer; only two, however, were operated on. One, a large epithelioma of the whole lower lip and chin which, together with some glands, was excised, the gap being closed with flap from the cheek. The other, a case of malignant stricture of the œsophagus in an old man aged 73 years, on whom a gastrotomy was performed with success.

The following cases are, I think, interesting:—

Axillary Aneurism.—A man came, complaining of loss of power and sensation in his right arm. He had wrist drop. On closer examination, it was found that the loss of power was not complete. He had a small amount of control over nearly all the muscles of the arm and forearm, but he could not flex his index finger nor could he work the long flexor of the thumb. There was absolute paralysis of these muscles. A small hard tumour was found in the right axilla just under the anterior fold, and extending deep into the axilla. There were two small scars, one in the front and one in the back fold of the axilla. These, he said, were due to a bullet wound. They were the kind of scars one would expect to see resulting from a clean small bore bullet. On compressing the subclavian the tumour could be reduced in size, but for this it more resembled a fibrous tumour than an aneurism; it was very hard and pulsation could be felt with difficulty. Operation was proposed, and the man left to consult his relations. He never returned. The curious point about this case was the total paralysis of only two muscles—the long flexor of the thumb and the deep flexor of the index finger. It will be remembered that these two muscles are supplied by the anterior interosseous branch of the median nerve given off in the forearm. It is hard to see how the fibres going to form this branch could be specially picked out by a tumour pressing on the main trunks in the axilla.

A well nourished healthy looking young cooly came up one day complaining of shortness of breath on exertion. On looking at his chest the apex beat was seen, rather diffuse, and as far as one inch outside the right nipple. It was thought at first that this would be a case of transposition of viscera: however, on percussion, the left side of his chest was found to be absolutely dull all over. He also had a mitral systolic murmur. He said he had had no illness except a little cough ten months before. There was no redness or œdema over the chest wall nor was there any tenderness anywhere. It was evident that he had a large quantity of fluid in his left pleura. Here was a man, with a displaced heart encroaching on his right lung. His left lung must have been practically all collapsed, yet he was doing cooly work, and a Chinese cooly has to work hard.

On exploring with a hypodermic syringe pus was withdrawn. The state of his thoracic organs did not seem to justify any large operation, in fact I did not feel very keen on giving him chloroform. There seemed no likelihood of his lung expanding. He was therefore aspirated, the state of his heart being carefully watched. Eighty ounces of pus were let out, and he was put to bed. There was a large quantity of pus left in the chest, but he was beginning to show signs of weakness, so it was not thought advisable to let out more. Next day his lips were a little blue, but, with rest and cardiac stimulants, he soon got fit again, his only complaint being the splashing in his chest. The heart's position was not altered when he left.

I had intended to aspirate him again, but I left soon afterwards. Presumably this was a case of tuberculous pleurisy, but he looked very well in spite of it.

A young man very thin and pale, came up with a sinus two inches internal to his right anterior superior spine of ilium. The probe went in some distance superficially in various directions, so he was put under chloroform and the sinus opened up, when a large cavity over the abdominal wall was found. This was scraped and washed out, three counter-openings being made. There was slight discharge of pus during the next few days, and then he called attention to a "ball" on his back. Two large abscesses were found one on each side of the spine in the lumbar region. They were both opened and much pus evacuated, but no dead bone could be felt. I presume that the abscess on the abdomen was due to his spinal caries, but it was never found possible to irrigate between the two cavities. He was considered too weak for any large exploratory operation and he subsequently died.

A girl aged 17 came with a large cylindrical tumour above and to the outer side of the right breast. The tumour projected about six inches, was two inches in diameter, and had a large mushroom-like fungating extremity, from which blood was oozing. She was said to have had this for four months, and to have lost much blood from it. She was given chloroform, and the tumour was shelled out amidst tremendous hæmorrhage. Two smaller tumours were found by the side of the large one. After the bleeding was stopped, the breast and pectoral fascia were examined and found unaffected. By this time she was nearly collapsed from loss of blood, and the respiration had become sighing. A large enema of salt and water, with a dash of rectified spirit, soon brought her round, and she made a good recovery. Microscopic examination showed the tumours to be pure-spindle celled sarcomata. I do not know from what it originated; pre-

sumably from the skin, though the two smaller tumours were subcutaneous.

It was soon found that the history given by patients had to be completely ignored. Most diseases according to their possessors were caused by "the wind hitting them."

One man with a dislocated hip, insisted that this was the origin of his trouble, and nothing more could be got out of him. He stated that on getting out of bed one morning he found his leg in this state, the wind having hit him during the night. I was also unable to reduce his dislocation which was a year old.

Another man was brought in by our police, covered with blood from a scalp wound over the upper frontal region. He stated that three robbers had set on him and on his refusing to part with his property, which probably was not worth quarrelling about, one of them had struck him on his head with a sword. This was not an uncommon occurrence, and it seemed a likely story. When I saw him, the wound had been washed and dressed by the Chinese doctor (a mission graduate whose services had been lent by the S. P. G.).

The bleeding had stopped and his temperature was normal, so I left him alone.

However, after four days the temperature rose, and on probing the wound, something smooth was felt at the bottom of it. He was put under chloroform, and the skull was exposed when an oval hole through the bone was found. This was about 1½ inches long, ½ an inch broad; in the middle of this was a peg of glass, tightly fixed, and broken off flush with the bone outside, but penetrating the dura mater and brain for nearly ¾ inches. It looked like a piece from a broken beer bottle. The glass was removed with difficulty, and a button of bone was removed by trephine on each side of the fracture. Some small splinters of glass and bone were cleared out. The dura mater was black under the seat of the fracture. This man died of septic meningitis, but declared to the last moment of consciousness that a robber had cut him with a sword, and he knew nothing about any glass.

I saw one well-marked case of spastic paraplegia. He was a big man about 40, and was brought in supported by two friends. As he came in he brought to mind at once the pirate swash-buckler of the provincial theatre: his back was slightly arched, his chest well forward, and his head thrown back; with this there was an exaggerated swagger, a peculiar rolling gait. He had a prominent red nose too which added to the effect. The knee jerks were much increased, and there was ankle-clonus. No loss of control over bladder or rectum. No sensory or speech defects. He and his friends stated that he had been quite well up to six months before.

It may be of interest to mention two customs practised in China, *viz.*,—foot-binding and the making of eunuchs; regarding the first I had several bad cases of ulceration and necrosis of bone from bad binding. On enquiry, I was told that this practice is begun at the age of about 7, when the girl's muscles are fairly developed. There are professional foot-binders who do the work as a rule. In all the cases that came under notice the mothers, from motives of economy, had gone in for amateur bandaging, and with disastrous results. The effect, in a properly conducted case, is to stunt the growth of bone and bring about an exaggerated condition of Pes Cavus. The weight of the body in walking, or rather in waddling, is borne on the os calcis which is bent forward.

The victim really walks like a person who has undergone Pirogoff's amputation. The eunuchs are made for the Imperial Palace. I had the opportunity of examining one who was attending for phthisis. With the idea of making things quite safe, the men or boys (for both are converted) are deprived of both testicles and penis. The one I saw had a stump of penis about half an inch long. I was informed that the parts are preserved in a special building and, on the death of a eunuch, they are called for and buried with him. Whether each gets the organs originally grown by himself is open to question.

The operation is performed by one of the senior eunuchs, and being, as far as I could ascertain, the only surgical operation practised by the Chinese, it is as simple as one could expect. A string is tied round the penis and scrotum close to the pubes and they are cut off beyond this. I was told that death not uncommonly results. For a country boasting of such an old civilization one would expect to find some interesting remnants of knowledge concerning our art among the Chinese; such, however, seem to have no existence.

Chinese practitioners seem to vie with one another to produce the filthiest "remedies." Apparently fæces and urine of various animals, including human beings, form the basis of most of their prescriptions.

Apart from these fæcal exhibitions the only treatment they have to fall back upon seems to be needling. Many patients came to hospital who had previously undergone native treatment. This consisted in passing long needles into their interiors, usually into the different regions of the abdomen. The theory is, that diseases are caused by the residence of devils in internal parts of the body who cause the various symptoms by their activity. These devils are not necessarily in the diseased parts. The art then is to locate the devil and discourage him by prodding him with needles. I was told that the needles were passed in several inches deep, and one may imagine what complications might be found in operating on a case of abdominal tumour that had been treated by a Chinaman. Yet I was told in a very patronising way by a mandarin who came to visit the hospital that

all the wonderful operations we did we had learnt from a gentleman who flourished in the Han dynasty. How the knowledge had been lost he could not explain. My interpreter, however, told me that the reason was, because the rich men who might learn, ruin themselves body and mind by opium smoking and other vices, "but clever men like me are poor."

I must apologise for bringing in the personal element, but I cannot refrain from giving my interpreter's parting speech. He had evidently been persuaded to say something nice to me, and this is how he did it. He said "the people are very glad you have worked in this hospital, you have been very kind, you are quiet with them," and then, with a smile, he raised his voice to a shout of triumph at having got the right word "you are *tame*."

Having said so much in the first person, I feel bound to mention that I received the greatest help from Lieutenant-Colonel Rainsford, R.A.M.C., and Lieutenant Megaw, I.M.S. These officers were always ready and willing to help me with advice or assistance at the shortest notice.

THE INUNCTION TREATMENT OF SYPHILIS AS CARRIED OUT AT AIX-LA-CHAPELLE.

By C. C. BARRY,

CAPTAIN, I.M.S.

THE treatment of syphilis by inunction of mercury is seldom nowadays resorted to, on account of the method being both troublesome and messy; but it occasionally happens that this is the only form of administration by which a patient can take mercury. Most patients, it is true, can take mercury by the mouth, but it happens I think more frequently than many are aware that mercury given by this method produces diarrhœa and other disturbing symptoms to such a degree as to necessitate its abandonment. I met at Aix-la-Chapelle a considerable number of patients suffering from syphilis, who told me that they had been obliged to give up taking mercury by the mouth for the above-mentioned reason. The symptoms produced were chiefly of the nature of diarrhœa, and this, in spite of the combination of the mercury with opium. The patients had all been under the care of medical men, and had given the method of administration of mercury by the mouth a fair trial.

While home on leave I had occasion to accompany a relative suffering from syphilis through a course of treatment by inunction both at Aix-la-Chapelle and at Harrowgate, and my experience at these places may be of interest, more especially as I found great difficulty in finding out any details as to the technique of this method of treatment before going to Aix-la-Chapelle. Some details are, it is true, given in the last edition of Jonathan Hutchinson's Handbook on Syphilis, but one or two details which I believe to be of importance are omitted. It is by attention to these details which makes the inunction method of administering mercury capable of being easily and successfully carried out.

The following are some details I believe to be of importance:—First as regards the ointment used for inunction; this is usually the unguentum hydrarg. of the British Pharmacopœia in cold weather; at any rate this is as a rule too stiff for thorough inunction, and requires to be made thinner with vaseline. This can easily be managed at the time of rubbing in the ointment, though at Aix-la-Chapelle it is usually done for one by the chemist, a very little practice soon teaches one the amount of vaseline suitable.

The amount of ointment rubbed in at a time varies from one to two drachms, the smaller quantity is begun with for four or five days, and then, if no symptoms of mercurialism appear, the quantity is increased. As a rule, however, the amount is not increased beyond one and-a-half drachms. Occasionally if it is desired to produce the effects of mercury quickly the amount rubbed in is increased to two or three drachms given by two rubbings daily. Dr. Meyer, who has had 40 years' experience of the inunction method at Aix-la-Chapelle, told me he was not in favour of the patient rubbing in more than a drachm and a half of the ointment at a time, nor of ordering more than one rubbing a day.

I have seen considerably larger quantities of mercurial ointment rubbed in daily than those mentioned above, but I have not been able to satisfy myself that any real benefit resulted.

It is part of the routine treatment at Aix-la-Chapelle to use a strong menthol and alum mouthwash very frequently throughout the day, and by this method symptoms of salivation from mercurialism are retarded, but other symptoms are apt to occur if mercury is given in these large quantities. These symptoms, namely, quick irritable pulse, slight tremors, and occasionally albumin in the urine have to be carefully watched for, and on their appearance the dose of mercury at once reduced.

In two cases where the so-called double rubbings were administered, the patients lost condition, and got quick and irritable pulses, and they both had to discontinue the treatment.

The method of inunction is as follows:—The patient takes a hot bath of sulphur water in which he stays for 20 minutes to half an hour, after which the ointment is well rubbed in for 15 to 20 minutes, the clothes are then put on, and the ointment kept on till the bath the following day when the ointment left is washed off with soap and water. Definite parts of the body are rubbed daily in rotation, the great point being to cover each day a large surface of skin.