had been supposed. The incision was deepened between the recti, and then a layer which at first was taken for peritoneum, but which later was seen to consist of transversalis fascia only, was picked up and divided, when it was found that tissue resembling bladder wall had been opened into. Although the patient had passed water immediately before the operation commenced, it was deemed advisable to pass a catheter, but only about an ounce of urine was drawn off. As a further precaution a fresh portion of supposed peritoneum was picked up, this time a little more than an inch below the umbilicus, but again the same tissue was opened into. It was therefore decided to explore this tissue carefully, and, on introducing the finger gently, it was found that a separation between it and the transversalis fascia was easily effected. The separation was accordingly continued until there was exposed to view a soft, bulky, rather gelatinous mass, which both in size and contour somewhat resembled the distended bladder. To ensure no mistake being made, a sound was now introduced into the bladder, when it was found to pass to the right of and behind the tumour. With the sound in position it was easy to separate bladder and tumour. At this stage it was a question whether this tumour had any connexion with the mass in the labium.

Once, however, this gelatinous and apparently cystic mass had been separated from the surrounding parts so that it could be lifted out of the abdomen, it was found to form only the upper end of a large tumour which extended deeply into the pelvis in front of and to the left of the bladder. The pelvic portion was cylindrical in section, and about 3 in. in diameter. It was composed of firm, white, and somewhat gelatinous tissue which stripped off in layers, making it rather difficult to determine how much was normal tissue and how much tumour, there being no capsule. The relationship of the tumour to the bladder was so remarkable that, now the upper extremity could be drawn out of the abdomen, the opportunity was taken of exploring its other relations. It was found then that the tumour occupied not merely a large portion of the pelvis, pushing bladder and uterus backwards and to the side, but that it reached to within 1½ in. of the umbilicus, pushing the peritoneum, which therefore had not been opened by the abdominal incision, upwards to that extent in front of it. It was also observed now, on pulling upon the abdominal mass, that the distended labium decreased in bulk, and this feature became more and more noticeable as the separation of the tumour from the surrounding structures was proceeded with. This separation became increasingly difficult as the deeper portions of the pelvis were reached, and while it had been hoped to remove the whole tumour through the abdomen by invaginating the labium, and thus avoid the necessity of a perineal wound, the pelvic portion of the tumour ultimately became detached from the labial. As the patient was rather exhausted it was determined to delay the final steps of the operation on the labial portion of the tumour; and, as there was general oozing from the raw surfaces, it was deemed advisable to pack the wound.

Second Operation.

Two weeks later, the patient having in the meantime regained her strength, and the raw surfaces being now covered with granulations, an anaesthetic was again administered, and an elliptical portion of the skin of the distended labium, together with the remainder of the labial portion of the tumour, was removed, care being taken while so doing not to injure the urethra or vagina, which, while not adherent, were close to the mass. In appearance and structure this portion resembled the stalked pelvic portion, and, after its removal, there was a wide communication between the labium and the abdomen above the pubes. The whole wound was now packed, the packing being decreased as the wound filled up. The patient made an uninterrupted recovery. One noticeable feature was the rapidity with which the peritoneum descended and filled up the abdominal cavity, this being to a large extent completed within a few days of the first operation.

Description of Tumour.

The tumour thus removed might be roughly compared in shape to a mushroom, and consisted of three parts: an expanded abdominal portion which was soft and rather gelatinous, and in size and shape resembled the distended bladder—it gave the impression of being cystic, and was of a reddish-purple colour; the stalked pelvic portion was firmer than the abdominal, but still gelatinous, and also sodden; it was cylindrical, about 6 in. long, and was much paler in colour than the abdominal portion; the labial portion closely resembled the pelvic portion in consistence and colour, but was bulbous in shape.

In order to ascertain the structure of the tumour it was frozen and cut in longitudinal strips. Contrary to expectation, no cysts were found, but the whole tumour consisted of a loose spongy network, somewhat resembling the structure of a loofah sponge. Microscopical sections were also prepared from various portions, and these showed the structure to be of the character of soft fibroma; it was extremely vascular, the larger vessels possessing remarkably thick walls, while numberless smaller branches ramified throughout the tumour in all directions.

The tumour was fully a foot in length, and weighed almost 3 lb.

The most striking point about this tumour was its resemblance, both in external appearance and physical characteristics, to a hernia. The earlier history of easy reduction, and disappearance on lying down, and the later

of partial reduction, frequently accompanied by a slight gurgling sound, and the diminution in bulk when the patient was confined to bed, could hardly have been more typical of a partially incarcerated hernia.

Probably the tumour originated in the ischio-rectal fossa, and extended from there into the labium, and also upwards (perforating the levator ani and fascial layers) in front of the bladder, which was pushed backwards and to the side towards the abdomen. The abdominal portion appeared to be the most actively growing part of the tumour, but the recent rapid increase in the size of the labial swelling may point to activity at that end also, or may have been due simply to gravity acting upon the increased mass. On the other hand, the tumour may possibly have originated in the pelvis, and have reached the labium by pushing down the vaginal wall in front of it, and displacing the levator ani to the side.

The amount of space which the tumour was able to occupy, not only in the abdomen and pelvis, but also in its exit through the perineum to the labium, without causing any serious consequences, was also striking, as was, further, the readiness with which the displaced viscera, carrying before them the peritoneum, reoccupied the space of which they had so long been deprived.

THREE CASES OF TROPIC LESIONS OCCURRING SYMMETRICALLY ON THE EXTREMITIES.

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IN No. 2 of the new series of the *Journal of the Malaya Branch of the British Medical Association*, published in December, 1905, I called attention to "a hitherto undescribed form of superficial dermatitis probably trophic in origin," and briefly described a typical case of the disease. Since then I have met with several other cases of this disorder, three of which are at present under my observation. The following record of these cases may prove of interest:

CASE I.

A Chinese food-seller, aged 23, was admitted to the gaol hospital on September 16th.

He had syphilis three years ago. He was thin, of cachectic appearance; the nose had been partially destroyed; the thoracic and abdominal organs were healthy. The urine was free from albumen and sugar.

Occupying the dorsum of each foot, from the root of the toes to the front of the ankle-joint, was a blister. The skin on the dorsum of the hands and on the distal two-thirds of the extensor surface of both forearms showed signs of recent blisters which had burst. The epidermis over the affected areas which had not been destroyed by the blisters was markedly pigmented. Sensation to touch and temperature was lost over the whole area above described on both upper and lower limbs. Pain sensation was unaffected. The knee-jerks were slightly

exaggerated; there was no ankle clonus and no loss of motor power.

On October 8th the whole of the affected areas were covered with healthy epidermis. On the upper limbs pigmentation was still very marked. Touch and temperature sensations were still in abeyance over the parts before mentioned, and also over the extensor surface of the legs. The anaesthesia over the legs may have been missed in my earlier examination.

CASE II.

A Chinese coolie, aged 30, was admitted to hospital on September 20th.

His illness had begun two years earlier with skin trouble of the right hand. About six weeks ago the left hand and both feet became similarly affected. He had had no other illness, but had suffered great privation of recent years. There were no signs of syphilis.

The patient was emaciated. The thoracic and abdominal organs were healthy, and the urine free from albumen and sugar.

On the right upper extremity the skin on the dorsal surface of the fingers, the hand, and the forearm to just a little above the elbow, and the fingers, presented an excoriated appearance with black pigmentation and thickening of the edges of the excoriated surface. There was a small patch of erythema on the flexor aspect of the limb extending just across the wrist-joint. The nails presented a remarkable appearance. They were partially destroyed; the stumpy remains of them were greatly thickened, heaped up, and irregular in outline. On the left side there was a dusky erythema on the extensor aspect of the limb, extending from the fingers to a little above the elbow. There was no apparent heat and no swelling of the part. Sensation to touch and temperature was absent over the whole area above described. Pain sensation was present. Motor power was normal.

The left lower limb on its extensor aspect from the foot to the knee presented a patchy erythematous appearance, as did the dorsum of the right foot. The sense reactions on the lower limbs, over the affected areas, were similar to those on the upper limbs. The knee-jerks were absent.

CASE III.

A Malay fitter, aged 23, had suffered from malarial fever a year or so ago. His present illness began about six weeks ago with tingling sensations in hands and feet. When seen by me about September 15th the dorsal surfaces of the hands, forearms, and feet presented a dusky, erythematous appearance. The zone of junction of skin and mucous membrane around the mouth had a similar appearance. Tactile sensations were absent over all these areas. Pain sensation was present. Temperature sensation could not be tested. The knee-jerks were present. This patient was under the care of a private doctor, to whom I am indebted for permission to include the case in my list. He was treated with tonics and rest. No blister formed in the erythematous areas. The skin cracked in many places. When last I saw him sensation was returning over the previously insensitive parts.

This form of neuritis is, as far as my observation goes, far from uncommon in the Straits Settlements. It would be of interest to ascertain whether it has been observed elsewhere. As to its causation, I can only repeat what I stated in 1905—that a lowered vitality, whether this result from syphilis, beri-beri, privation, or any other cause, seems to play a prominent part. In the three cases above recorded it will have been noticed that one patient had had virulent syphilis, another had been the subject of great privation, and the third had had malarial fever.

The symmetrical and wide distribution of the lesions suggests an origin in the central nervous system, possibly in the ganglia of the posterior roots.

In the BRITISH MEDICAL JOURNAL of February 22nd, 1908, Mr. G. Lenkhal Cheatle raised the interesting question whether cancer may be rendered possible only when there is a disturbance of the nerve supply of a part.

The comparative frequency with which cancer of the extremities is found located on the dorsal surfaces of the hands and feet, taken in conjunction with the possibly frequent occurrence of such trophic lesions as I have described, would seem to lend some confirmation to Mr. Cheatle's views.

I am indebted to the Principal Civil Medical Officer for his kind permission to publish these cases.

THE annual dinner of the medical students of the University of Liverpool will take place at the Adelphi Hotel on Saturday, December 19th, when the chair will be taken by Mr. Robert Jones, F.R.C.S.E., at 7.30 p.m. Tickets, 7s. 6d. each, and all further particulars can be obtained from the Honorary Secretaries, Mr. A. Adams and Mr. S. V. Tinsley.

WE notice that of the candidates who presented themselves for both parts of the Final Examination for the M.B., B.S. degree of London University in October, and were successful, as many as 18, or over 25 per cent. of the total were students of the London School of Medicine for Women. One of them was awarded honours in pathology. The University medal was borne off by a student of Guy's Hospital, Mr. H. O. Brookhouse, who was awarded honours in three subjects—medicine, surgery, and midwifery and diseases of women.

A NOTE ON THE ETIOLOGY OF BERI-BERI AND THE PRESENCE OF ARSIN IN RICE.

By C. N. SALDANHA, M.D.,

FORMERLY MEDICAL EXAMINER OF STATUTORY INDIAN EMIGRANTS.

THE medical officer of health for the Witwatersrand, Dr. Sansom, recently reported as follows to the Transvaal Health Department:

When importation of Chinese coolies was sanctioned a Government department was organized to deal with these labourers, called the Foreign Labour Importation Department, and I was appointed medical officer. In that capacity I was called upon to deal with the outbreak of beri-beri amongst Chinese in the Transvaal.

My reports show that up to date there have been 880 serious cases of beri-beri, and of these 120 proved fatal. Nearly all these cases occurred amongst the first shiploads arriving here recruited in Southern China, being mostly Cantonese. The disease showed itself very shortly after arrival here, and those who had to deal with these cases are convinced they were not recent ones, but that the disease had been dormant for some time, and that altitude and arduous labour made it disclose itself.

Beri-beri amongst these coolies was so severe, and treatment having failed to do any good, it was decided to repatriate sufferers, many of whom showed marked improvement directly they reached sea level; the most prominent symptoms were tachycardia and heart failure.

After this outbreak recruiting was stopped in Southern China; since then very few cases are notified to me amongst those coolies shipped via Tientsin.

The dietary scale on the mines is liberal, well-cooked, and of very good quality. I have taken samples from time to time, and the Government analyst has always given me a very satisfactory report on them; the rice is "cured" rice, and of very good quality.

I considered it advisable to have all the premises thoroughly disinfected after removal of beri-beri cases.

I cannot say what kind of rice the diseased coolies were in the habit of eating before they came here, but some people have told me that the rice in Southern China which the lower orders consume is unsatisfactory.

My investigations do not lead me to think that beri-beri originates here.

Since attention has been paid to the rice, and the coolies have been restricted to "cured" rice only, there has been practically no beri-beri during the last four years, though the number of the Chinese has increased to 50,000 or 60,000.

Rice, as harvested and with the husk still on, is called "paddy"; rice exhibits more varieties than any other known grain, and incidentally is subject to many ailments. Among them is a fungoid disease, which causes beri-beri in man, the active principle of which I have called "arsin."

In the process of curing rice, arsin undergoes fermentative changes, and is rendered inert and innocuous. If, out of a stack of diseased and arsin-containing paddy, one half be prepared as rice for the market by the "cured" process and the other half be converted into "uncured rice" by machinery, the cured rice will be comparatively safe, whereas the uncured will contain active arsin, mostly in the rice dust, which is simply fine bran not removed by winnowing, but bagged with the rice for the market.

Uncured rice has a more pearly and otherwise more attractive appearance than the cured; the custom is to pass the rice direct into the cooking pot as bought from the shop, dust and all. The poorer classes among the Chinese consume not only the rice but also the water in which it is boiled, which would contain most of the dissolved arsin. Hence beri-beri is generally prevalent among the poor Chinese, Malay, and other Mongolian races, who habitually use uncured rice. And at each meal they take unwittingly a small dose of arsin when their rice supply comes from mildewed paddy.

In some cases it causes diarrhoea, and the poison is probably thereby eliminated. The natives ascribe the diarrhoea to eating new rice. Generally toleration soon becomes established, and when the use of diseased uncured rice is persisted in, beri-beri results.

Arsin-containing rice emits an alliaceous odour when boiling. The fumes inhaled cause a pleasant sensation of fullness and exhilaration, somewhat resembling the effects of minute doses of alcohol. Arsin is a cumulative poison. In its initial action it is a cardiac sedative. In sows fed on the bran of the diseased rice oestrus is retarded,