Post-mortem examination.

Pleuræ adherent on both sides. Lungs showed a marked hæmorrhagic infiltration at their base. Bronchi contained clots. Heart healthy. Root of the aorta showed a marked general dilatation, some fibrous thickening and atheroma. Left subclavian and common carotid arteries slightly dilated at their origin. Innominate artery dilated, and ½" below its bifurcation there was an aneurysmal sac about the size of a small pigeon's egg, almost completely filled with a fibrinous blood clot of dark colour. On opening the trachea, the anterior surface 2" below the cricoid cartilage showed a perforation large enough to admit the end of a probe and communicating with the sac of the aneurysm For ½" above this opening the trachea was thinned out and almost ulcerated through in two places The stomach contained some blood clots but was otherwise healthy as also were the other organs in the body.

(11) A CASE OF PHOSPHATIC DIABETES TERMINATING IN PHTHISIS.

Dr. Rose Bradford says "Of 18 cases of phosphatic diabetes under my care six have developed phthisis and died." Osler and others have demonstrated that the excretion of phosphates is increased in phthisis

On the 1st November 1908 the patient, named Govind, was admitted to hospital suffering from general anasarca. The history given was that an attack of dysentery occurred in April of the same year and was followed subsequently by the condition of general anasarca. The latter began originally in the lower extremities and gradually spread to all parts of thebody.

On admission the patient was found to be a well-nourished person, 30 years of age, who gave an account of having had gonorrhœa and syphilis in his younger days and of being in the habit of taking country liquor occasionally. The swelling of the body generally which commenced 6 months ago, was observed by the patient to go down somewhat whenever the flow of urine was greater. An examination of the urine yielded the following results. Quantity in 24 hours, 48 oz ; specific gravity, 1012 ; reaction, acid ; sugar, *nil ;* albumen, present in traces ; casts, *nil ;* phosphates, present ; chlorides, 0·9 per cent.

The other systems of the body were found to be normal, and as the urine examination also gave no evidence of any organic disease being present, the blood was examined and the excretory quotient was determined. The former showed 4,200,000 r. b. c , 5,100 w. b. c. and 72 per cent. Hb. The latter gave : Hæmosozic value of urine 0·98, and that of serum 0·8 per cent., in terms of NaCl ; Excretory quotient = 1·25, a normal condition. This result pointed to the albuminuria being merely functional and taking the slight degree of anæmia present as the probable cause of it, the patient was given an iron mixture from the 3rd November. From the 6th the urine appeared to increase in quantity (*vide* Chart till the 12th on which day he passed 138 oz. of clear pale urine, 1005 in specific gravity but containing no sugar or albumin. He had at this time a pain in the limbs and back and some amount of thirst On the assumption that the case might be one of diabetes insipidus, Validol was ordered in m. x doses thrice daily. As will be seen from the chart this had no effect on the quantity of the urine he passed, and on the 16th, when the urine was again examined, there was no sugar or albumen found but the total phosphates amounted to 3 grammes (the normal for Indians being 0·9 gramme) Validol was given a trial for 7 days. About this time the swelling began to disappear. On the 19th urotropine and a soda benzoate mixture were ordered. This too had no effect on the urine (*vide* Chart), and was replaced with the acid tonic mixture. On the 4th December the patient began to get slight evening rises of temperature and developed a cough. On physical examination it was found that the left side of the chest showed a patch of diminished resonance but nothing more definite was made out. The patient was given guaiacol carbonate thrice daily.

10*th December.*—Tincture of iodine was painted on the left side of the chest, where the patient complained of having a pain. There was an evening rise of temperature. Some harsh breathing and slight dulness were detected over the left chest. The sputum contained a large number of (?) pneumcocci but no tubercle bacilli.

15*th December.*—Tubular breathing over the left chest and an evening rise of temperature. The X-rays showed on this day a triangular shadow over the right lung, with its apex towards the axilla and the heart shadow enlarged towards the right.

20*th December.*—Evening rise of temperature. Persistent pain over the left side and a slight pain over the right side of the chest. The urine still the same in quantity.

25*th December.*—Oppression in the chest and flatulence after meals.

30*th December.*—Tubular breathing over a patch on the left chest. Stomach washed out with soda bicarbonate lotion. Urine still large in quantity.

5*th January* —Condition of the left lung as before. The urine still large in quantity. Collargol ordered for three days and then creasote administered.

9*th January* —144 oz. of urine passed in last 24 hours Evening temperature 100°F. A slightly dull patch over the right chest with harsh breath-sounds and some metallic râles. Sputum muco-purulent, showing no T. B.

14*th January.*—Calmette's reaction gave a positive result within 4 hours.

18*th January.*—Diminished vocal resonance and fremitus and absence of breath-sounds over the lower half of the left chest. Dulness on percussion over the same area. Some difficulty in breathing and owing to this sleep disturbed. A suspicion of effusion into the left pleural cavity.

20*th January.*—Pleural cavity explored with a needle and 20 cc of clear fluid drawn out. This on centrifugalisation showed an excess of mono-nuclears and a few T. B There was a sudden remarkable diminution in the quantity of urine.

23*rd January.* - Fluid drawn out again and phosphates estimated both in the effusion and in the urine. The total quantity in the urine still about 2 grammes in the 24 hours and that in the fluid about 0·06 per cent. (as against 0·28 per cent. in the urine).

29*th January.*—Patient still continues the same.

A Mirror of Hospital Practice.

NOTES ON TWO UNUSUAL SEQUELÆ OF PLAGUE.

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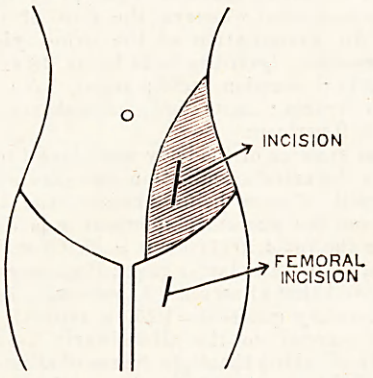
THE two following cases present some points of interest as regards the remote sequelæ of plague—in both, a suppurative condition supervened requiring surgical interference :—

Case I.—Duffadar F. K., age 32 years, of XIIIth Mule Corps, contracted plague on 8th October 1906, during a severe epidemic in Poona. He developed a left femoral bubo. He was transferred to the General Plague Hospital, and was one of the few cases treated by Roux serum. He recovered from the attack and left the plague hospital on the 25th October, and was admitted to the Staff Hospital, Poona, to convalesce. A few days after it was noticed that the left foot was swollen and slightly œdematous. There was no rise of temperature. Within a few days gangrene of the toes developed, accompanied by pyrexia and much

pain. The usual treatment for gangrene, *viz.*, elevation of foot, warmth, opium was given, and shortly a line of demarcation showed itself over the dorsum of the foot—convexity of line being towards the ankle. The patient looked very ill, had high fever, rapid pulse, and in spite of antiseptic precaution directed towards the gangrenous parts an offensive odour developed. It was decided to amputate the foot, and on the 18th November preparations were made for a Syme's amputation. No sooner had this knife entered the ankle joint, than a quantity, about 2 oz. of very offensive pus was discovered in the joint and around the ligaments. The blood vessels were found thrombosed, and on removal of the tourniquet very little hæmorrhage occurred. It was decided to give the flaps a chance, as the skin and subcutaneous fat appeared healthy. Free drainage was provided for and the space between the flaps daily irrigated through the drainage tube. The patient's condition improved at once, but it soon became apparent that the flaps would slough. This they did, leaving the stump of tibia and fibula covered with the granulation. As there appeared to be no possibility of the bones being covered by anything more than granulation tissue, a second operation was proposed on 26th February 1907. The lower three inches of bone were removed and new flaps made from healthy skin. The wound healed well and the patient made a satisfactory recovery. He was invalided out of the service and granted a compassionate allowance.

Remarks.—There can be little doubt that the plague toxins influence in some way the blood supply of the left limb, leading possibly to thrombosis with resulting gangrene of the foot. The relationship between the *left* femoral bubo and the diseased condition of the *left* leg might be mere coincidence, on the other hand it may have been the determining cause of the disease in that leg. The insidious formation of pus in and around the ankle joint is hard to explain, unless it were infection from the gangrenous toes and yet a well formed line of demarcation occurred which should have constituted a barrier to infection. Doubtless it would have been better surgery to have at once amputated through the lower third of the leg, on finding the parts around the ankle joint infiltrated with pus—but owing to the extremely weak condition of the patient, it was decided not to prolong the operation and subject him to the shock of a second amputation. Subsequent events showed that the cause taken was probably the safer one. Whether there was any connection between the vascular disease and the use of Roux serum, I am unable to state. The serum was on its trial in Poona, and has since been given up in the plague hospital, the results being apparently no better with it than without. I have considered this case to be one showing a sequela of plague rather than a complication, as although the time of onset of the gangrenous condition was only some three to four weeks after the infection by plague, yet the patient left the plague hospital apparently cured, his condition being one of debility only.

Case II.—Driver B. D., age 21, XIIIth Mule Corps, contracted plague on 30th August 1908, in Poona, at the beginning of a short but severe epidemic. He had been inoculated on the day previous with antiplague vaccine, at the time of inoculation there was no suspicion of the patient being in the incubation period of the disease. He was in the plague hospital for nearly two months being discharged on the 18th October 1908. He had a left femoral bubo which was incised and treated in the usual way. On his discharge from the hospital the wound was quite healed. He was granted three months' sick leave. He returned to Poona on the 11th December, before the expiry of his leave, and was noticed to be limping, the left thigh being slightly flexed on the abdomen. He was admitted to the Staff Hospital, Poona. During the next fortnight he remained in bed, and the thigh became more and more flexed, the patient refusing to allow any attempt being made to straighten it owing to the pain produced by such. No constitutional symptom developed. No swelling in the groin or around the side of the femoral incision.



Towards the end of December the patient commenced to have pyrexia in the evenings and shortly afterwards a swelling was noticed about Poupart's ligament extending upwards to the left loin. It was tender on palpation, resonant on percussion and quite fixed. During the next three days the swelling got perceptibly larger and extended to the middle line about 3 inches above the pubis. The accompanying diagram illustrates the condition. The tumour was still resonant on percussion, and more tender on palpation. A diagnosis of iliac abscess was made.

On the 8th January 1909, the patient was placed under chloroform and an incision about 3 inches long made, 2 inches above the anterior superior iliac spine. The abdominal wall was brawney and infiltrated. A good deal of hæmorrhage occurred from the upper deep angle of the wound, but no pus found. I was on the point of ceasing further attempts, thinking

that I had operated before pus had actually been formed when it was noticed that the blood issuing from the wound was slightly turbid and discoloured. On pushing a long pair of forceps into the wound a gash of pus took place, and on enlarging the operation, about 20 ounces of inodorous pus poured out. Preparation had been made to secure a specimen of the pus for bacteriological examination, but unfortunately owing to an accident it was found impossible to secure an uncontaminated specimen. After evacuation of the pus a large cavity was found extending upwards to the left kidney. A full-sized drainage tube was inserted and the wound packed with gauze to avert the oozing of blood.

That evening the temperature rose to 104°, but afterwards soon dropped to normal, the cavity was irrigated daily and the patient rapidly became convalescent. On the 18th January some oozing of this sero-pus was noticed from the site of the original femoral incision, but no communication could be detected between it and the large abscess cavity above. This latter was also found to extend downwards to behind the symphysis pubis.

Remarks—The source of infection of the large abscess remains undiscovered. It seems fairly certain it must have had some connection with the femoral wound below. In this case about five months elapsed from the date of infection by plague to the discovery and opening of the abscess. There was no evidence of pre-existing kidney disease, nor did the tumour present the usual features of a perinephric abscess; it commenced just above Poupart's ligament and extended upwards, apparently pushing the intestines upwards and towards the middle line, much as occur in some cases of appendix abscesses.

NOTES ON TWO CASES OF EXCISION OF THE RECTUM FOR CARCINOMA.

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1. Hinniappu.—An ill-nourished Singhalese male, about 40 years old, was admitted into the General Hospital, Colombo, under the writer's care in August 1907, with symptoms of intestinal obstruction. His abdomen was much distended and painful. Vomiting was frequent and emitted a fæcal odour. Has not passed any fæces or flatus for the past three days. Difficulty in passing stools set in about 6 months previous to admission. At first he was relieved by aperients and purgatives, but latterly even these failed to give him relief. On examination his rectum was found involved in a growth, situated about 2½ inches from the anus, and completely obstructing the lumen of the gut. The tumour was friable and bled very readily. It was freely moveable laterally. A blood-stained offensive discharge escaped from the anus. Pulse frequent and of low tension, about 90 per minute. Heart, lungs, liver and spleen were normal. Gave a history of syphilis.

As his condition was very grave, a left inguinal colotomy was performed with very good immediate results. His general condition improved during his stay in the hospital and he left the hospital to recruit his health.

He was re-admitted on the 17th December 1907, for the removal of the growth which was found to be a columnar carcinoma of the rectum. He had picked up a good deal and appeared fit for the radical operation. The tumour too had not extended much. It was yet freely moveable from side to side, showing that there were no adhesions to the neighbouring organs.

Operation.—On the 19th December 1907, the patient was anæsthetized with chloroform and placed on the right lateral position with a sand bag beneath the hips and the left thigh well turned over. I prefer this to the lithotomy position recommended by some which is no doubt suitable for the removal of growth involving the anal canal by the perineal method. In the right lateral position, the rectum occupies the highest point and all manipulations are rendered very easy. By raising the hips on a sand bag, the coils of small intestines are made to slip back into the abdominal cavity from the pelvic basin.

An incision was made from the posterior margin of the anus along the middle line as far as the middle of the sacrum. The skin with the subcutaneous tissue was reflected to the fullest extent on each side of the incision. The origin of the left gluteus maximus was exposed and detached from the lower two pieces of the sacrum and coccyx and from the posterior surface of the great sacro-sciatic ligament. The sacro-sciatic ligaments were next detached from the left side of the sacrum and from both sides of the coccyx. The coccyx and the lower two pieces of the sacurm were freed from the structures in front. The coccyx was next removed. As the upper limit of the tumour extended higher up, the space thus exposed was found inadequate for getting well above it. So, much to my reluctance, I was obliged to resect the lower two pieces of the sacrum according to Bardenhaüer's modification of Kraske's operation, having first cleared the right side of the lower two pieces of the sacrum from its muscular and ligamentous attachments. The bleeding vessels were next tied. The levator ani was next separated from the rectum along the median raphe and the posterior and the lateral surfaces of the rectum were thus cleared. The anterior attachment of the rectum alone remained to be dealt with. I did not encounter any difficulty here. With a sound passed into the bladder as my guide I was able to separate the rectum from the bladder and the prostate in front with a pair of blunt-pointed scissors. Up till now I had not opened into the peritoneal cavity. As I had great difficulty in bringing the tumour