is eventually present it is due to the admixture of ordinary micrococci with the special actinomycetes.

Of the 75 cases recorded, 29 were inoculated in the neighbourhood of the lower jaw, floor of the mouth and throat, 9 in the upper jaw and cheek, 2 in the oesophagus, 1 in the tongue, 11 in the intestine, 14 in the air-passages and lung, 7 unknown; 55 were males, 21 females.

Actinomycosis of the upper jaw appears to offer a worse prognosis than that of the lower jaw. In the majority of cases the individuals affected belonged to callings which did not bring them into direct contact with diseased cattle.

The cases observed in the *Tübingen clinique* were 10 in number; to these is added 1 from Königsberg. Of these 11 the disease started in the lower jaw in 6; in the upper jaw in 1; in the cheek over the upper jaw in 2; in the lungs in 2. In 4 of the 6 cases in which the disease began in the lower jaw the onset was accompanied by severe toothache; the same was the case with 2 out of 3 of the upper-jaw cases. It started just as frequently around sound as carious teeth.

The first visible evidence of actinomycosis is always a hard, smooth, or elastic (often painless) tumour, apparently seated under the periosteum. This swelling spreads to the soft parts around, sooner or later, either by direct extension or through lymphatic channels, and forms nodular masses with white shreddy or granular foci. On incision into the swelling, serum containing little white granules escaped, but no pus in simple cases. In one simple case with sinuses the temperature was normal. In another, where sinuses had formed, there was high fever.

All the jaw cases recovered after operation except one (upper jaw), the two lung cases died.

The operative measures embraced incision and thorough scraping with sharp spoons.

When starting in the jaws the inoculation always appeared to take place around a molar tooth.

The characteristic actinomyces were demonstrated microscopically in every one of Moosbrugger's cases.

ACUTE OSTEITIS OF THE NECK AND HEAD OF FEMUR.

By C. MACNAMARA, F.R.C.S., F.C.U.,

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ACUTE inflammation of the neck and head of the femur, occurring in young people, is not unfrequently met with, the severity of the disease varying under conditions which are but little understood. Osteitis in this locality, however, is always alarming, as it may lead to suppurative inflammation of the bone and synovial membrane, and so to dangerous septicæmia. In the majority of these cases the symptoms are preceded by an injury to the joint in a child or young person; the soft and growing tissues at the junction of the neck with the epiphyseal disc of cartilage of the head of the bone is bruised, and there seems reason to believe that in the injured tissues a specific micro-organism finds a congenial soil in which to grow; rapid suppuration follows, with its attendant evils. In these cases, therefore, we have not only to deal with the suppurative synovitis of the hip-joint, but also with an acutely inflamed portion of bone, and it is this complication which renders these cases so difficult to treat with success. The joint can be drained without trouble, but I have failed as yet, in disease of this kind, efficiently to drain the head and neck of the femur. The following case demonstrates the advantages attending excision of the affected bone in an early stage of the affection.

E. E., aged 14. This girl was sent into the Westminster Hospital by Dr. Ferris, of Uxbridge, on the 12th of March, 1887. Her family history was good; her parents are alive and healthy, and the patient had always enjoyed excellent health until the commencement of her present illness. A fortnight before E. E. came into the hospital she injured her right hip in jumping off a dust heap, but the pain passed away in the course of a short time, and she ran about as usual during the remainder of the day; at night, however, she awoke with violent pain in the hip-joint. The following day the pain was worse, the patient was unable to leave her bed, and was seen soon afterwards by Drs. Ferris and Davidson; she had high fever, and in the course of a few days there was great swelling of the soft parts about the hip-joint. The medical men in attendance on the patient recognised the necessity for the speedy and effectual drainage of the joint; they therefore arranged for her being removed to the hospital.

E. E. was admitted under my care on March 12th. Her temperature was 105°, the heart's action extremely feeble. She was somewhat delirious and in intense agony. The right hip was greatly swollen,

and deep fluctuation could be felt in the part. The patient was at once removed to the operating theatre, and, an incision having been made over the greater trochanter of the femur, the joint was opened. About an ounce of pus escaped outwards. On introducing the finger into the joint, the neck of the bone was found denuded. The external incisions were therefore enlarged, and the femur was divided below the greater trochanter, and the head and neck removed.

The relief of pain and other symptoms was marked from the time of the operation, and the patient has since made an uninterrupted recovery, leaving the hospital for the seaside on May 14th; but the wound had completely healed three weeks previously, and she has considerable movement in the hip; in fact there is every reason to believe that, with a properly made boot, the patient will have perfect use of the limb.

The fresh pus taken from this patient's joint was immediately examined by Dr. Hebb, and found to be crowded with micro-organisms (*staphylococcus albus*?). On making a section through the head and neck of the bone, the soft tissues within its cancellous tissue, especially those in contact with the epiphyseal cartilage, were in a state of suppuration. The fresh pus within the bone was swarming with micro-organisms. The neck of the femur was entirely denuded of soft tissues.

In several instances of this kind I have endeavoured to save the head and neck of the bone by drilling into them and draining the cancellous structure through the greater trochanter, but I have not as yet succeeded in thus effecting a cure in a severe case of acute osteitis. Sooner or later the head and neck of the femur have had to be removed, generally after the patient has gone through great suffering and danger to life. It was this consideration which induced me to excise the parts at once in this case, and the result has certainly been most satisfactory. It is remarkable that two days after E. E. was admitted into the hospital another child suffering from acute osteitis of the diaphysis of the left fibula was placed under my care. In this instance the whole of the diseased bone was immediately removed, and the patient made a rapid and satisfactory recovery. I found the pus both outside and within the bone crowded with micro-organisms. The tibia, fibula, and most of the long bones can be successfully drained in the early stage of acute osteitis; but I think, when the head and neck of the femur are affected in this way, unless the symptoms yield speedily to treatment, it is advisable to excise the diseased bone without delay.

ON SOME OF THE RARER FORMS OF RECTAL FISTULÆ.

By F. SWINFORD EDWARDS, F.R.C.S.,

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BEFORE entering upon the subject with which this paper more especially deals, I would like to say a few words on the diagnosis and treatment of fistula in ano generally. At St. Mark's Hospital I am constantly reminded of the fact that medical men and, indeed, hospital surgeons, do not take sufficient pains when operating upon fistula to lay open all sinuses. The one most often left is that which extends from the internal opening upwards under the mucous membrane, though I have frequently met with cases in which other tracks have been overlooked. In speaking thus I am not referring to those cases of extensive fistulæ which one now and then meets with in hospital practice where the buttocks are riddled with sinuses, resembling, as one author puts it, a rabbit warren. Here we must use our judgment as to how much cutting the patient can stand; for, as a rule, such cases are of long duration, and the patient is often much weakened from continuous discharge. It is better, under these circumstances, to lay open the main track with one complete division of the sphincter, and trust to injection of the branch sinuses with some stimulating fluid to effect a cure.

Another common error in operating is not keeping to the fistulous track, but, either owing to impatience or insufficient delicacy in manipulation, the point of the director is thrust through the sinus-wall, and is then free to roam whither the operator wills in the cellular tissue of the part. In this way I have seen a portion of the main track of the fistula left, whilst considerable incisions through skin and subcutaneous tissue have been made which were wholly unnecessary.

This accident can always be avoided by taking plenty of time over the operation, and by careful sponging of the track already laid open, which ought always to show the granulation-tissue lining it.