TREATMENT OF MIDDLE-EAR SUPPURATION.*

BY

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DISEASES of the middle ear, whether of the dry or suppurative type, tend to run a chronic course unless they are dealt with promptly and energetically. Adequate treatment can be ensured only if the patient is seen regularly; but in hospital practice, where patients are drawn from the working classes, one often finds that the patient's regular attendance can be secured only at the risk of his losing his work.

Dry conditions of the middle ear which have failed to derive benefit from catheterization and massage frequently respond to treatment by intravenous injection of colloid iodine; suppurative otitis media is, however, a far more serious and dangerous type of disease, and failure to treat it adequately has undoubtedly been responsible for a large number of operations on the temporal bone.

I have been able to cure many cases of chronic ear suppuration by the subcutaneous or intramuscular injection of milk boiled for three to ten minutes and injected at body heat. The treatment has two advantages: it is cheap, and it is within the province of the general practitioner. One injection is sometimes sufficient to stop discharge, though in cases with small granulations and a fetid discharge several injections may be necessary. The injections are often followed by severe general symptoms closely resembling those of an attack of influenza. Sometimes there are rigors, and vomiting may occur. Among patients observed under hospital conditions the reaction was found to begin within an hour or two of the injection, reaching its maximum in six to twelve hours, when often the temperature would rise to 103° or 104° F., and then return to normal in about twelve hours. Most of the effects passed off within twenty-four hours, but in view of the fact that there is sometimes pyrexia for two or three days, rest in bed should always be enforced.

When I first instituted this treatment I refrained from giving it to young children; with further experience I have been able to regulate the dosage, so that children may now submit to the treatment without suffering unduly. Treatment is contraindicated in patients with cardiac or renal disease, and the risk of anaphylaxis must always be considered and guarded against. The following is a short outline of a few of the cases treated by this method.

Case 1.—A girl, aged 6, had suffered from fetid discharge of the right ear for four years. She was given an injection of 1 c.cm., to which she had the ordinary general reaction. Two days later the discharge stopped completely. After five days a further 2 c.cm. were injected, again producing a general reaction. The condition appears to have cleared up and the ear is absolutely dry.

Case 2.—A man, aged 20, was admitted to hospital on June 11th, 1928, with a fetid discharge from the right ear, from which he had suffered for seven years. There was a posterior perforation, and small granulations were present; 5 c.cm. of milk were injected, and the temperature rose to 102°. On June 14th there was less discharge, but the fever continued; 10 c.cm. were injected, and though there was again a general reaction, there was a diminution both in the amount of the discharge and in the fever following. On June 20th another 10 c.cm. were injected and improvement was sustained. After similar injections on June 24th and July 1st, 4th, and 15th, the patient had rather more severe general reactions, but the discharge stopped. On July 28th the ear was still dry.

Case 3.—A male infant, aged 2, was brought to me with a post-operative sinus leading to the tympanic antrum, and with fetid discharge from the ear. A Schwartz operation had been performed, but during convalescence the patient fell into the Nile, and the operation wound became septic. Healing occurred, but the granulations were indolent and fetid discharge continued to appear from the external meatus. Following a milk injection of 1½ c.cm. he had a general reaction, but there was a diminution of the discharge and fever, and the granulations began to heal rapidly. After the third injection there was no discharge or odour from the middle ear.

These cases are in every way typical of a large number I have successfully treated by the method of milk injection.

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tions. The immediate reaction of patients treated by this method is admittedly unpleasant, but I have no doubt that if its use becomes general there will follow a great reduction in the number of operations performed on the temporal bone. The radical mastoid operation will be resorted to only in cases of cholesteatoma or when intracranial complications are threatened.

SLIPPED EPIPHYSIS OF THE HEAD OF THE FEMUR.

BY

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CONSIDERABLE interest has recently ranged around the problem of separation of the upper epiphysis of the femur, and particularly where the separation has taken place without the aid of trauma. Such a case recently came under my care, the features of which may be interesting to record.

A boy, aged 14 years, was admitted to hospital as an emergency case. He was in great distress, complaining of severe pain in the left hip-joint. Voluntary movement of the left leg was quite impossible, and even to touch the region of the hip-joint caused him to scream. As the boy lay on his back the thigh was slightly flexed and the foot everted. Over the greater trochanter there was quite a marked swelling, extremely tender to touch. The general disturbance was considerable; the boy looked ill; his pulse was 124 and temperature 100.2° F. An x-ray photograph of the hip-joint was taken, and it showed a true separation of the upper epiphysis of the femur, the head of the bone remaining in the acetabulum, the neck slipping proximally.

The history of this case prior to coming to hospital is that for some five to six months the boy seemed off colour. His appetite had diminished, and he appeared less energetic than was usual. Five weeks previous to my seeing him he commenced to complain of an aching pain in the left hip-joint, which came and went with the degree of rest he gave it. Occasionally the pain caused him to limp. At midday of the day of admission to hospital he was standing talking with his brother when something suddenly happened to his left hip-joint which caused him to drop upon the ground. From that moment he was unable to move the limb, and the pain he suffered was extreme. There is a very bad history of tuberculosis in his family. On his mother's side eight out of ten have died from the results of bone and joint tuberculosis.

The next features of interest were noticed during the course of his treatment.

The limb was placed in flexion, abducted by the aid of a Thomas splint, and 15 lb. extension applied by means of strapping, this following manipulation under a general anaesthetic. The result was good, and complete relief from pain was at once obtained. In two days the temperature and pulse subsided to normal, and at the end of five days the periarticular swelling and tenderness had gone. On the eighth day I measured the limb, and found it to be over-extended by fully half an inch. The weights were therefore reduced to 8 lb., and on that same night the pulse and temperature again rose. For three days I allowed the reduced weight extension to remain, and each day the swing in the pulse and temperature became greater. No pain, however, had returned. At this point the weights were increased to 12 lb., with the immediate effect of reducing the pulse and temperature to normal. During the next three weeks this amount of extension was allowed to remain, and no abnormal symptoms of any sort were present. To permit of more movement it was then decided to reduce the weight extension to 7 lb., but again disastrous results followed. The temperature and pulse immediately began to swing. After three days the 12 lb. were reapplied, the result being that symptoms again immediately subsided. Although active and voluntary movement was now encouraged, so long as this extension was maintained everything remained normal.

Two weeks later the extension and splinting were removed. Function was good, and all movements were performed without pain. Only in abduction was there some limitation of movement. In spite of this, however, from the moment extension was removed the pulse and temperature again began to swing—the pulse from 80 in the morning to 110 at night, and the temperature from 98° in the morning to 100° at night. After waiting for one week to see if these would subside, and failing to get such a result, it was decided to apply a hip plaster in an abducted position. This was done, and in twelve hours everything returned to normal, and has since remained normal.

The principal features of this case are mentioned chiefly because of their etiological significance. All history of