Medical Memoranda

Cl. welchii Infection of the Eye

Panophthalmitis caused by *Clostridium welchii* is a rare condition, and the following case is presented for addition to the literature. Walker (1938) reviewed twelve cases, and in 1946 Capus reported on one.

CASE HISTORY

An apprentice plumber aged 15 sustained an injury to his right eye at 2.30 p.m. on Sept. 27, 1948, while using a steel chisel on a brick wall. A fragment of the metal broke off and became lodged in his eye. He was taken to the local hospital, where removal of the foreign body was attempted without success. Penicillin, 200,000 units, was given approximately two and a half hours after the injury was received. He was transferred to the Aberdeen Royal Infirmary, arriving there about 2.30 a.m. on the 28th. On admission he was examined and given 300,000 units of penicillin, this being repeated three-hourly.

Examination revealed the following: the pupil of the right eye was very small; the iris pattern was indistinct and the anterior chamber shallow; an incision of the cornea had been made running from 6 to 9 o'clock, and there was a wedge-shaped foreign body lying about 8 to 9 o'clock, with some bleeding beside it; no red reflex was seen. At 9 a.m. he was re-examined. The cornea was found to be bright and there was no obvious sign of infection. The foreign body appeared to be lying about 10 mm. behind the cornea. Twelve hours later the eye was septic and proptosed, so that enucleation became necessary. This was carried out by Dr. J. Mutch. During the operation gas and blood-stained pus escaped freely. Afterwards the socket was dusted with penicillin. When the eyeball was examined it was found to be distended with gas and pus. There was retinal detachment.

Post-operative recovery was rapid and the patient was discharged on Oct. 11 with a clean, well-healed socket.

Bacteriological Investigation.—The contents of the eyeball showed pus cells, diphtheroids, and Gram-positive rods. A loopful of pus was inoculated into Robertson's meat broth and litmus milk. A typical "stormy fermentation" reaction was obtained from the latter. A subculture plated on horse-blood agar and incubated anaerobically for 48 hours gave a heavy pure growth of *Cl. welchii*. The colonies were haemolytic. The Nagler reaction was positive. A broth culture filtrate made from the plated colonies was lethal to mice, 0.2 ml. of an 18-hour culture causing them to die within three to four hours.

COMMENTARY

Apart from the rarity of this type of case, it is interesting that panophthalmitis should ensue in spite of the early administration of penicillin in large amounts. It has been shown experimentally (von Sallmann, 1944) in rabbits that before a panophthalmitis can be produced *Cl. welchii* has to be introduced into either the lens or the vitreous, and as penicillin fails to diffuse into the latter in any appreciable quantity this would probably account for its failure to arrest infection in this case.

I am much indebted to Drs. Law and Mutch for permission to use their case notes.

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REFERENCES

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Dislocation of Hip-joint at "Rugger"

Dislocation of the hip is uncommon even in rough games, and occurs only as a result of great violence. It is seen in young people whose femur is strong and resilient enough to escape fracture of the neck. Nevertheless, in the course of twenty years of a busy undergraduate practice between the wars, among the many college and university players at Cambridge no case had been encountered at rugby football until the one now reported.

CASE HISTORY

On Jan. 29, 1948, I was called to a college ground where the captain of the home side was lying in agony, in drenching rain, while two friends held his right lower limb with the hip and knee joints flexed, and the thigh adducted, as requested by the patient. The slightest movement provoked cries of pain. Morphine was given at once. A brief examination indicated a diagnosis of dislocation of the hip-joint, and, not without difficulty and anguish, the patient

was placed in the waiting ambulance, his friends maintaining their attendance during the journey to the local nursing-home.

Reduction.—He was anaesthetized immediately with thiopentone, and the diagnosis of dorsal dislocation was confirmed. We were prepared for a long pull in a very muscular ex-Serviceman, but trial was first made of simple manipulation. The hip and knee were flexed, followed by simple movements of rotation while in this position. The head of the femur suddenly slipped easily back with a click into the acetabulum, and full movements were at once restored.

In view of the rarity of this accident at rugger, it is of interest to see how it happened.

Patient's Story.—The patient, a hefty centre three-quarter, stated that the ground was very wet, making swerving and even running at speed very difficult. "I had the ball and was running at medium pace, when a wing-forward tackled me from behind. I resisted the tackle, which stopped my forward momentum. As I continued to resist, the pressure was downwards and backwards, with my knees bent, and the strain taken in my hips. Gradually my legs bent wider and I fell sitting as they shot out in front. I think the joint was 'out' then—I certainly felt a great deal of pain—but as I sat down a second opponent kicked and swung the right leg across to the left. My leg remained sticking up in the air, held up by my own hand and subsequently by others. Any movement was agonizing."

From the above account it would seem that, with the feet everted to try to retain a grip on the slippery ground, the limbs were steadily forced into flexion while in a position of wide adduction, until the head of the femur became dislocated on to the dorsum ilii. The subsequent kick, swinging from without inwards, would merely serve to aggravate the displacement and to accentuate the pain.

Massage and infra-red rays were given daily at first. On the sixth day the patient got up on crutches and was bearing some weight, but he had pain on "swivelling." He returned to his rooms in college that day. On the seventh day he went up and down a flight of stairs to the w.c. On the tenth day he walked 1½ miles (2.4 km.) and next day he rode a bicycle. After two months he played golf, tennis, and squash. Recovery was uneventful.

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Diphtheritic Vaginitis

The following report of a case of leucorrhoea due to an infection by the Klebs-Loeffler bacillus is worth recording because of its rarity.

CASE HISTORY

A married woman aged 33 was referred to the gynaecological out-patients department because of increasing leucorrhoea. This had been present in a minor degree for about a year, but during the past month had become profuse and offensive. Stovarsol pessaries, prescribed by her doctor, had had little if any effect. She had had one pregnancy three years previously, which was terminated after a long labour by an incision of the cervix and a forceps delivery. Menstruation was regular. Her general health was excellent and she had had no serious illnesses in the past. No history of contact with a diphtheritic case could be obtained.

Examination of the vagina revealed a profuse watery dirty-coloured discharge, which had the odour encountered in the breath of patients suffering from faucial diphtheria. After cleansing the vagina by dry swabbing, the cervix was seen to be covered by large superficial discrete ulcers, the surface consisting of a greyish exudate which was adherent and could be removed only in small portions by very firm swabbing, leaving a raw bleeding area. The whole vagina was reddened and inflamed, and the upper two-thirds contained numerous pin-head ulcers. Examination did not cause undue discomfort. Specimens of the discharge sent for laboratory investigation revealed the presence of a pathogenic strain of the diphtheria bacillus.

The patient was transferred to the isolation hospital, where she was given a single intramuscular dose of 40,000 units of antidiphtheritic serum, and penicillin 100,000 units twice daily for three days. This treatment caused an almost immediate improvement of the vaginitis, discharge being absent after one week. Three further specimens from the vagina, at weekly intervals, gave negative results for the diphtheria bacillus. Examination of the vagina and cervix one month after she was first seen showed a normal mucous membrane with no sign of the previous ulceration.

COMMENT

Diphtheritic infection of the vagina is rare, but if it occurs it presents a clinical picture which is so typical that it can cause no difficulties in diagnosis, provided the possibility of such an infection is borne in mind.

I wish to thank Mr. H. A. Hamilton, gynaecologist, Gloucestershire Royal Infirmary, for permission to describe this case.

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