MYOSITIS OSSIFICANS IN HEMIPLEGIA

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A seventy-four years old woman was admitted to hospital with left-sided hemiplegia of one day's duration. Movements of the arm and leg were weak, and there was an extensor plantar response on the left side. She was disorientated and had some difficulty in speaking.

The patient’s condition remained unchanged until a month after admission, when she complained of pain in the left groin. A swelling was found on the antero-medial aspect of the upper part of the thigh. It was firm and tender and had only limited mobility, but the overlying skin was not adherent or inflamed. No focus of infection could be found in the area drained by the inguinal lymph nodes; there was no evidence of intestinal obstruction and the vertebral column appeared normal. Apart from one rise of temperature to 100 degrees Fahrenheit, there was no pyrexia. The Wassermann reaction and Kahn test were negative, and radiographs of the left hip region showed no abnormality. The swelling was thought to be an abscess, perhaps arising from a strangulated femoral epiplocele or a deep inguinal lymph node, although the possibility of a soft-tissue sarcoma was borne in mind.

Treatment and progress — Penicillin (1,000,000 units) and streptomycin (one gramme) were given twice daily for ten days, but the swelling increased in size, eventually measuring 6 x 3\(\frac{1}{2}\) inches (15 x 9 centimetres). It gradually became bony hard and quite fixed. There was no active or passive movement at the hip joint, which was held in flexion, abduction, and lateral rotation. At this stage radiographs showed an irregular ossific mass in the adductor region of the thigh, with no obvious origin from femur or pubis; it resembled closely the myositis ossificans found in certain cases of traumatic paraplegia (Fig. 1). This extensive change had occurred in the short space of five weeks. Death occurred three months after admission without further apparent change in the local condition.

Post-mortem examination — There was atheroma of the cerebral arteries with a large area of softening in the right cerebral hemisphere, extending from the precentral gyrus to the basal ganglia. There was patchy left basal bronchopneumonia, and there was pyelonephritis of the left kidney. No evidence of an abdominal hernia was found. In the upper part of the adductor group of muscles of the left hip was a bony mass measuring 5\(\frac{1}{4}\) x 3\(\frac{1}{4}\) x 2\(\frac{1}{4}\) inches (14 x 9 x 6 centimetres). Its cut surface showed cancellous bone arranged for the most part in thick, irregularly disposed trabeculae, between which were islands of grey gelatinous
tissue which appeared to be atrophic muscle (Fig. 2). The new bone was firmly fixed to the periosteum of the pubis, but only loosely adherent to that of the femur. The left hip joint was normal. Histological examination of the lesion confirmed the naked eye appearances. Areas of cancellous bone were separated by loose oedematous connective tissue, in which were scattered large numbers of skeletal muscle fibres. The latter were somewhat atrophic, but in many places cross-striation was quite well marked.

COMMENT

Localised myositis ossificans appears to have some connection with disease of the central nervous system, but the nature of the relationship is obscure. Heterotopic ossification has long been recognised in cases of traumatic paraplegia, and more recently it has been described in anterior poliomyelitis (Costello and Brown 1951). Brailsford (1948) emphasised the similarity between the radiographic changes seen in myositis ossificans and those occurring in the soft tissues in the neighbourhood of neuropathic joints. This led him to suggest that, in all cases of localised myositis ossificans following contusions, a lesion of the central nervous system might be present, even though it were only a transient vascular disturbance produced by the trauma.

The case reported here is one of hemiplegia due to cerebral haemorrhage, in which myositis ossificans of the adductor muscles of the paralysed hip developed rapidly and caused a swelling in the groin.

We wish to thank Dr A. Barham Carter for permission to record this case, Dr J. A. Brocklebank for the use of the radiograph, and Miss B. E. Nicholson for the drawing.

REFERENCES