ACUTE EPISODES WITH CALCIFICATION AROUND THE HIP JOINT

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Calcification in the supraspinatus tendon at the shoulder is well recognised as a cause of shoulder pain. Sudden onset of very acute pain and gross limitation of movement may follow the rupture of such a deposit, but with rest and sedation the condition clears up spontaneously with the absorption of the calcified material (Blundell Jones 1949). There have been many descriptions of calcification occurring in tendons and ligaments in the neighbourhood of other joints, including the hip joint, but the author has been unable to find any reference to acute episodes in the hip similar to those seen in the shoulder. The following seven cases are therefore reported.

CASE REPORTS

Case 1—A man of twenty-nine was suddenly seized by agonising pain in the right hip while climbing some stairs. He was unable to move further and was admitted to hospital. The hip was held in 30 degrees of flexion, abduction and lateral rotation, all movements being restricted by pain and muscle spasm. Radiographs revealed calcification just above the hip joint (Fig. 1).

![Fig. 1](image1)

Case 1. Figure 1—Initial radiograph. Figure 2—Four weeks later.

With rest in bed and sedatives the pain gradually subsided and full painless movement was regained in two weeks. He resumed normal duties in four weeks, and radiographs then showed absorption of the greater part of the calcified deposit (Fig. 2).

Case 2—A woman of forty-one attended first with an acutely painful shoulder due to rupture of a calcified deposit in the supraspinatus tendon (Fig. 3). This cleared up with rest in three weeks and the calcified deposit absorbed spontaneously. One year later she sought advice for pain in the right hip of sudden onset, which immobilised her. The clinical signs were not so marked as in Case 1: adduction and rotation were most limited, while flexion and abduction were painful only in the last quarter of the range. Radiographs revealed calcification above the greater trochanter (Fig. 4). Rest in bed for two weeks with progressive exercise restored full movement. After four weeks she had full function, and radiographs showed the deposit absorbed (Fig. 5).

Case 3—A woman of forty-nine was confined to bed with a "chill" for a few days and on getting up was seized with pain in the right hip, which she was then more or less unable to move for a
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Fig. 3
Case 2—Radiograph of shoulder showing calcified deposit in the supraspinatus tendon.

Fig. 4
Case 2. Figure 4—Initial radiograph. Figure 5—Four weeks later.

Fig. 5

Fig. 6
Case 3. Figure 6—Initial radiograph. Figure 7—Three months later.

Fig. 7
week. When first seen she still experienced pain on walking, and abduction was a little limited though other movements were free. Radiographs showed calcification above the hip (Fig. 6). Some symptoms persisted for three months, but by the end of that time she had regained full function and radiographs showed the deposit absorbed (Fig. 7).

Case 4—A woman of forty-two developed sudden pain in the right hip, necessitating rest in bed for a few days. When she was first seen two weeks later the pain had gone and there was normal movement in the joint. Radiographs revealed a calcified lesion similar to that seen in the previous cases (Fig. 8). One month later the deposit had been absorbed and she had full function (Fig. 9).

Case 5—A farmer aged thirty-five felt sudden severe pain in the right hip while walking, and had to retire to bed four days later. Pain was severe and required morphine for relief. The clinical signs were like those in Case 1. Radiographs showed a calcified deposit (Fig. 10). Two weeks later he was able to do light work and five weeks later the hip was normal (Fig. 11).

Case 6—A farmer aged fifty-six developed gradually increasing pain in the left hip and limped for two months, but was able to continue at work until sudden onset of very severe pain immobilised him in bed. When first seen two weeks later he had almost full painless movement. Radiographs showed a calcified deposit well on the way to absorption (Fig. 12).
Case 7—A man of forty-five stumbled and twisted his left hip. Severe pain followed, with marked limitation of movement and muscle spasm. Radiographs revealed calcification as in previous cases (Fig. 13). In two weeks movements were practically full and one month after the onset the calcium was absorbed (Fig. 14). Function was then normal.

DISCUSSION

Goldenberg and Leventhal (1936) reviewed radiographs of 550 hips in patients between the ages of fifteen and sixty-nine, and found calcified deposits near the greater trochanter in thirty (5.4 per cent). They studied twenty-five of these cases in detail and concluded that the calcification occurred in three situations: 1) In the tendon of the gluteus medius; 2) in the bursa between the tendon of gluteus medius and the greater trochanter; and 3) on the under-surface of the gluteus medius and not connected with the trochanter.

Most of these cases appear to have been of the chronic type, analogous to the painful shoulder with an unruptured deposit, and surgical removal of the deposit was recommended.

In the present series, with the exception of Case 2, in which the deposit was in the position of the gluteus medius tendon, stereoscopic radiographs suggested that the calcified material
was either on the under-surface of the gluteus medius or in the capsule of the joint. The physical signs immediately after the onset of severe pain were those of acute synovitis of the hip, movement being limited and painful in all directions, the hip being typically held in a little flexion, abduction and lateral rotation. This suggests that the deposit ruptured into the hip joint, rather than from tendon into soft tissues or into bursa. The material is extremely irritant and provokes a hyperaemic reaction with acute synovitis, which facilitates its spontaneous absorption.

It may be that this fourth type of calcification in the joint capsule is particularly liable to give rise to an acute episode because rupture into the joint occurs easily.

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REFERENCES
