

A 45-year-old woman complained of severe left hip pain after a splits in the bathroom in January 2011. On physical examination, her left lower limb was found to be shorter (Fig 1) and was excessively externally rotated (Fig 2). There was an abnormal mass bulging over her left groin region which was bony in consistency (Fig 3). Upon neurological examination of her left lower limb, she was found to have a left femoral nerve palsy with failed active extension of her left knee; the circulation of her injured limb was satisfactory. Radiographs of her left hip revealed the femoral head proximally displaced, and in the lateral view it was obviously anterior to the acetabulum (Fig 4). In addition a large part of lesser trochanter was clearly seen, together with the bony bulging mass over her left groin region, the clinical diagnosis of anterior dislocation of hip was confirmed.

Closed reduction was attempted under intravenous sedation but unsuccessful, because of severe pain causing muscle spasm. Closed reduction was performed again under general anaesthesia, whereupon the hip could be reduced easily when gentle traction was applied to the limb longitudinally. Subsequent computed tomography (CT) of her left hip showed a concomitant fracture of the anterior acetabular wall, which was treated conservatively due to its small size. Upon follow-up half a year after the injury, she could walk freely without hip pain, and her femoral nerve palsy had recovered completely, and the radiograph of her left hip showed no suggestion of osteonecrosis.

Discussion

Anterior dislocation of hip is rare, and accounts for only 10 to 15% of all traumatic hip dislocations.¹ The usual mechanism is a fall with an abducted, externally rotated and extended limb. This was exactly reflected by what was happened during a fall with a splits, in which the extended leg was forcefully abducted and external rotated and as a result the femoral head was levered out of the acetabular socket. The clinical features include shortening of the lower limb which



FIG 1. Shortening of left lower limb



FIG 2. Excessive external rotation of left lower limb



FIG 3. Abnormal swelling in left groin region (circled) due to anterior dislocated femoral head

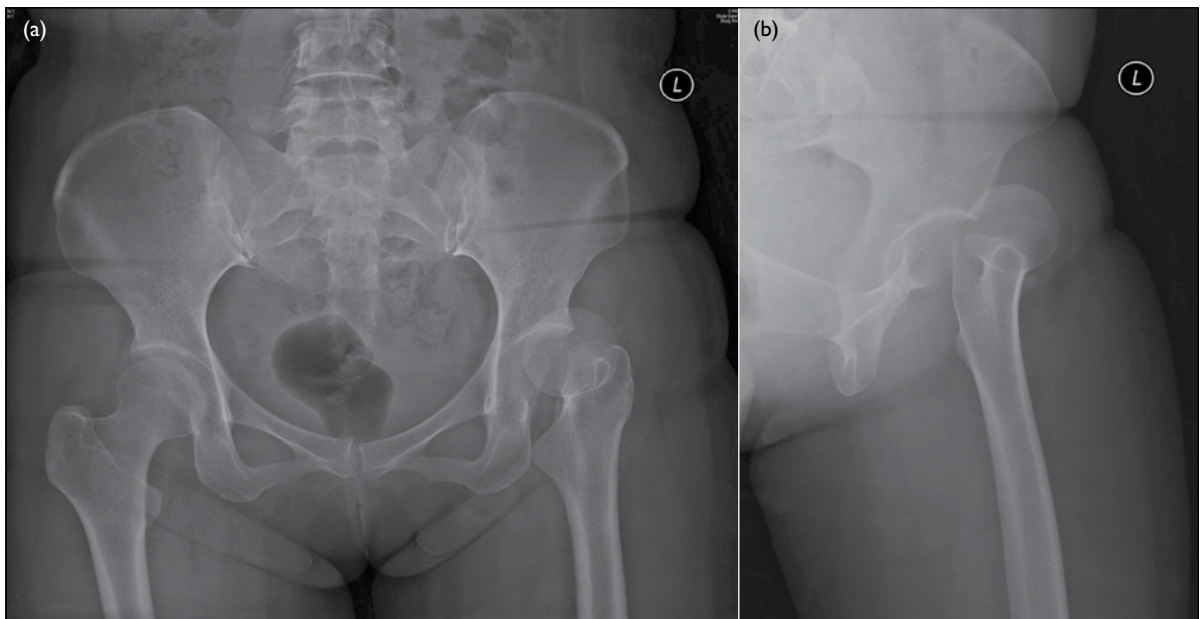


FIG 4. (a) Anteroposterior radiograph of both hips, and (b) lateral radiograph of left hip

remains in marked external rotation. In addition, the dislocated femoral head gives rise to a mass or swelling in the ipsilateral groin region. As in all other types of hip dislocation, detailed neurological and vascular examination of the affected limb is mandatory, especially to check for the integrity of the femoral nerve. This is because the femoral nerve and artery lie almost anterior to the femoral head, from which they are separated just by the anterior hip joint capsule. Thus, any insult causing the anterior hip dislocation definitely compromises them. Relevant radiographs can demonstrate the dislocated femoral head out of the acetabular socket and the more prominent lesser trochanter.²

Closed reduction should be performed promptly once the diagnosis is established in order to reduce the chance of femoral head osteonecrosis and post-traumatic osteoarthritis of the hip joint,

which ensues in 13 and 23% of instances, respectively.³ Direct pressure over the dislocated femoral head in the groin region should be avoided as it may injure the femoral neurovascular bundle. Open reduction should be considered if closed reduction fails, as the femoral head might become buttonholed and trapped within the torn anterior hip joint capsule.⁴

Further imaging including CT should be considered after joint reduction, to rule out associated injuries like impaction fracture of the femoral head (35%) as well as anterior acetabular wall fracture⁵; any intra-articular bony fragment is also best visualised by CT.

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