Case reports

Recurrent anterior dislocation of the hip joint—a case report

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In February 1997, a 38-year-old woman fell down while working which forced her hip joint to extend and rotate externally. She felt severe pain in her right hip and could not move it. After a few minutes she recovered somewhat, and the pain diminished.

The same right hip pain recurred and she complained of "locking" on 8 occasions when her hip joint was rotated externally during her daily activities. On each occasion,the discomfort diminished within a few minutes.

On November 17, she felt severe pain in her right hip when she rotated her hip externally. She consulted the emergency department of a local hospital. Radiographs revealed an anterior iliac type dislocation of her right hip joint (Figure 1). During transportation to the operating room to reduce the dislocation, the hip spontaneously relocated. After bed rest for 2 weeks, she was referred to our hospital for evaluation.

On physical examination, she had a feeling of instability when we extended and externally rotated her right hip. Patrick's sign was negative. The hip joints showed a similar range of motion with flexion 130°/extension 10°, abduction 35°/adduction 20° and internal rotation 45°/external rotation 50°.

A plain radiogram revealed dysplasia of the right hip joint. The center-edge angle (CE angle) was 2° in the right hip (Figure 2). A CT scan showed that the femoral anteversion was 18° in the right hip and 10°in the left. Arthrograms showed hardly any change in the limbus and no significant leakage of contrast medium. A CT scan performed after arthrography, however, showed leakage of air and contrast medium in front of the capsule (Figure 3). These findings indicated some damage to the anterior capsule.

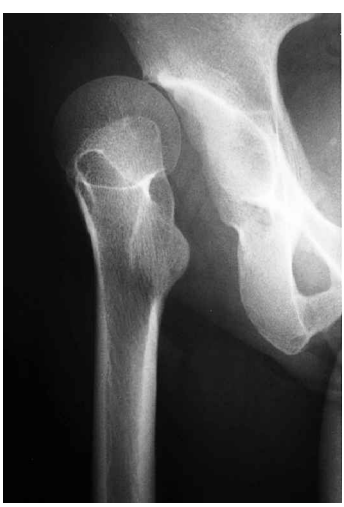

Figure 1. The right hip with anterior hip dislocation but no fracture.

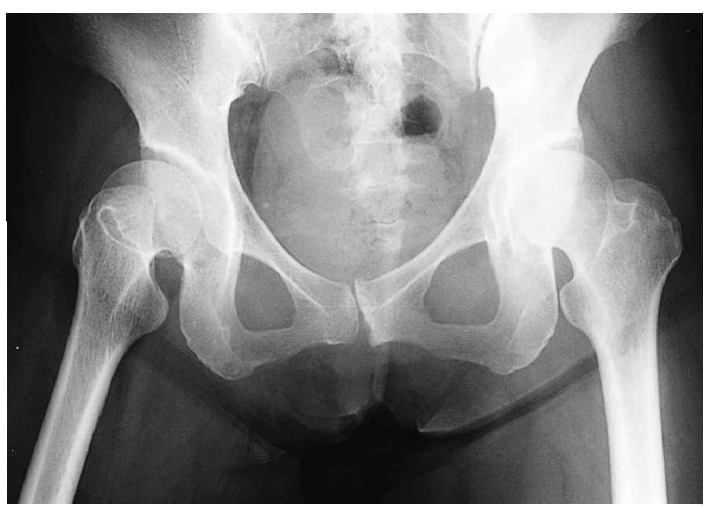

Figure 2. Relocated.

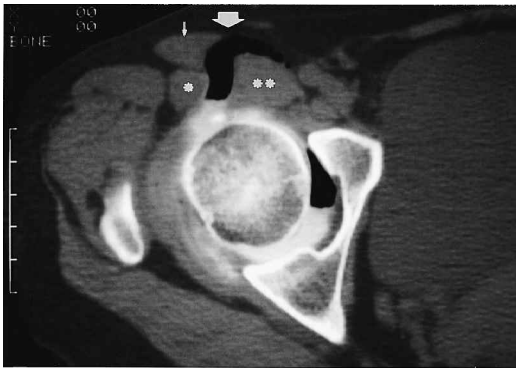

Figure 3. Preoperative CT scan after arthrography with leakage of air and contrast medium in front of the capsule. Wide arrow: leakage of air and contrast medium, small arrow: sartorius, *: rectus femoris, **: iliopsoas)

On January 23 1998, the patient underwent surgery under general anesthesia, in the left lateral position. We made the same incision as that used in rotational acetabular osteotomy (Ninomiya and Tagawa 1984). The defect in the anterior capsule was located on the medial side of the insertion of the direct rectus femoris head, and was covered with an attenuated fibrous membrane. This membrane was resected and the femoral head exposed. The capsule was continuous with a bursal sac (Dall et al. 1970) into which the femoral head could be dislocated. Arthroscopy was then carried out. No degeneration of the acetabular cartilage was present, but we found a rupture of the anterior limbus which had not been detected on the arthrogram. In the anterior part of the femoral head, there was some flaking of cartilage. The defect in the anterior capsule was plicated and a rotational acetabular osteotomy was performed. The patient was confined to bed rest for 10 days, and then allowed to bear weight, using two crutches for support.

A radiograph after surgery showed improvement in coverage of the right hip and a CE angle of 35° (Figure 4). Arthrography and CT showed a decrease in the leakage of air and contrast medium. 2 years after surgery, the patient has no restriction of activities, no pain and no instability in the right hip. Flexion was 120° (130° in the left hip) with full extension, abduction was 30° (35° in the left hip), and adduction was 25° (25° in the left hip). Internal rotation and external rotation in flexion were 30° and 45° (45° and 60° in the left hip). The osteotomy site had united.

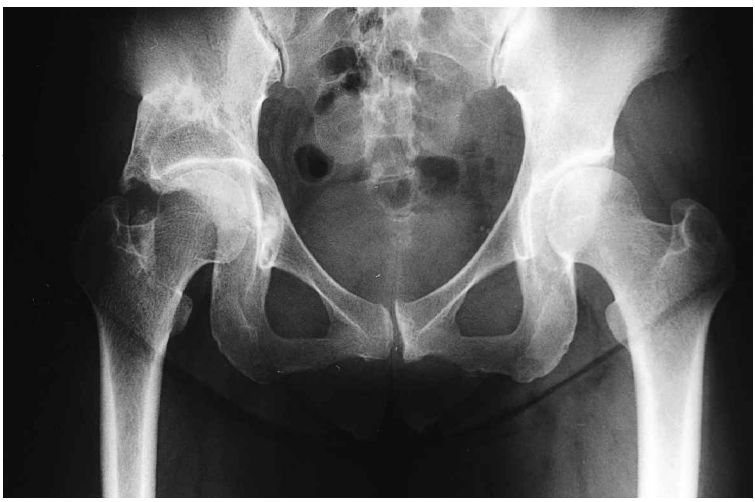

Figure 4. 2 years postoperatively.

Discussion

Traumatic anterior dislocation of the hip is rare. It was reported to be 9% in a series of hip dislocations by Thompson and Epstein (1951). We found 9 reports of recurrent anterior dislocation of the hip in the literature (Dall et al. 1970, Scudese 1972, Haddad and Drez 1974, Vichard et al. 1980, Guyer and Levinson 1983, Beaty and Sloan 1989, Nakasone et al. 1989, Otani et al. 1990, Matsuda et al. 1996). 6 patients were adults and had had traumatic dislocation. The trauma was minor except in one case where the patient fell from the third floor of a building. Abnormalities of the connective tissue and dysplasia of the hip joint were thought to be risk factors in some cases of recurrent dislocation.

Scudese (1972) reported good results with a hip spica cast for 8 weeks, following manual reduction. Otani et al. (1990) noted poor results in cases treated with bed rest for 3 weeks.

In the reports of Dall et al. (1970), Guyer and Levinson (1983), Nakasone et al. (1989) and Matsuda et al. (1996), good results were reported with surgical procedures. They described the leakage of air and contrast medium from the capsule, and performed capsulorrhaphy and femoral derotational osteotomy.

We performed capsulorrhaphy and rotational acetabular osteotomy, because of the dysplasia, on our patient. 2 years later, she had no pain and no "locking" with daily activities.

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Pigmented villonodular synovitis of the wrist invading bone—a report of 2 cases

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Case 1

A 47-year-old male farm worker complained of pain and limited movement of the right wrist in the preceding 2 years. The pain which radiated to the 2nd and 3rd finger had gradually worsened and the patient was at times unable to sleep. The wrist was swollen and Phalen's maneuver and Tinel's sign were positive. Laboratory findings, ESR, leukocyte counts and C-reactive protein were normal. However, radiographs showed cystic lesions in the scaphoid, capitate and hamate bones (Figure 1). Electromyography showed signs of median nerve entrapment. A Tc-99 bone scan revealed increased uptake in the right wrist; on MRI (Figure 2), joint effusion and volar hypertrophy of the synovial membrane were noted. The patient underwent carpal tunnel release and synovectomy; the synovial membrane was hypertrophied and dark brown. Histopathological examination identified the lesion as pigmented villonodular synovitis. Although symptoms improved over the next few months, 1 1/2 years later the patient was readmitted, complaining of pain and severely limited wrist movement. Arthrodesis of the wrist was performed.

Case 2

A 32-year-old man was admitted complaining of pain in the left wrist for the past 8 years. 7 years ago, when the pain had become more intense, he noted reduced wrist movement and attended another hospital, where radiographs revealed a cyst in the lunate (Figure 3). Fine-needle aspiration led to a diagnosis of an intraosseous ganglion, and the patient was treated with NSAIDs. Several months