

Subluxation of the hip from osteoid osteoma

Report of two intraarticular cases

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Two cases of histologically verified intraarticular osteoid osteoma caused subluxation of the hip.

Case reports

Case 1. An 11-year-old girl was well until she fell from a bicycle, striking her left hip region. Five days after the fall, she had increasing pain and gradually developed contracture of the left hip in the adducted and external rotated position so that she could not bear weight on the affected limb.

The initial radiograph taken by the patient's physician 4 weeks after onset was negative (Figure 1). The second radiograph, taken another 3 weeks later, showed a small area of bone atrophy and barely perceptible, radiopaque elevation at the superior region of the acetabular floor, and slight widening of the medial joint space.

Six months after the onset of pain, she was admitted to our hospital. She had lateral protrusion of the greater trochanter, an external rotation contracture of 20°, and limitation of abduction to 10° in the left hip. Laboratory findings, including sedimentation rate and urinalysis, were normal. Radiographs showed a bony protrusion into the hip joint from the acetabular floor and subluxation of the femoral head. Tomography showed a well-defined, oval, 1.8 x 1.0-cm radiolucent lesion in the bone mass, which protruded from the superior area of the acetabular floor. Our diagnosis was chronic osteomyelitis with Brodie's abscess.

Arthrotomy was performed through a lateral approach, detaching the greater trochanter. The joint contained a small amount of yellowish serous fluid. A reddened, hard mass was removed from the upper portion of the acetabular floor. Cultures of the joint fluid were negative.

Pathologic examination of the surgical specimen

showed irregular trabeculae and bone surrounded by osteoblasts and vascular connective stroma. It was histologically confirmed as a nidus of osteoid osteoma.

Fourteen months after resection of the tumor, the girl remained asymptomatic, with complete recovery of hip motion. The last follow-up radiograph showed no abnormalities, except slight widening of the medial joint space.

Case 2. A 13-year-old girl experienced right hip pain without any history of trauma or joint diseases. The pain was aggravated by walking and relieved by rest. She was seen by a physician and was treated for "inflammatory arthritis." Her laboratory findings were normal. A radiograph showed a slight widening of the medial joint space. Four months after onset, she was admitted to our hospital. She had not complained of nocturnal pain.

The right hip had limitation of flexion to 105°, abduction to 15°, and internal rotation of 10°. The laboratory examinations were normal. Radiographs showed a barely perceptible, radiopaque mass in the joint and subluxation of the femoral head (Figure 2). Tomography clearly revealed a radiopaque mass in the acetabular floor. A radiolucent lesion in the bone mass was observed by computerized tomography.

Arthrotomy was performed through a lateral approach. The joint contained a large amount of yellowish serous fluid, of which cultures were negative. The bone mass surrounded by a fibrous tissue was removed from the acetabular floor. It was histologically identified as a nidus of osteoid osteoma.

Discussion

An intraarticular osteoid osteoma, which forms a bone mass within a joint, is distinctly rare. Since Sherman (1947) first reported the lesion, a few authors described similar cases in the elbow and knee joint

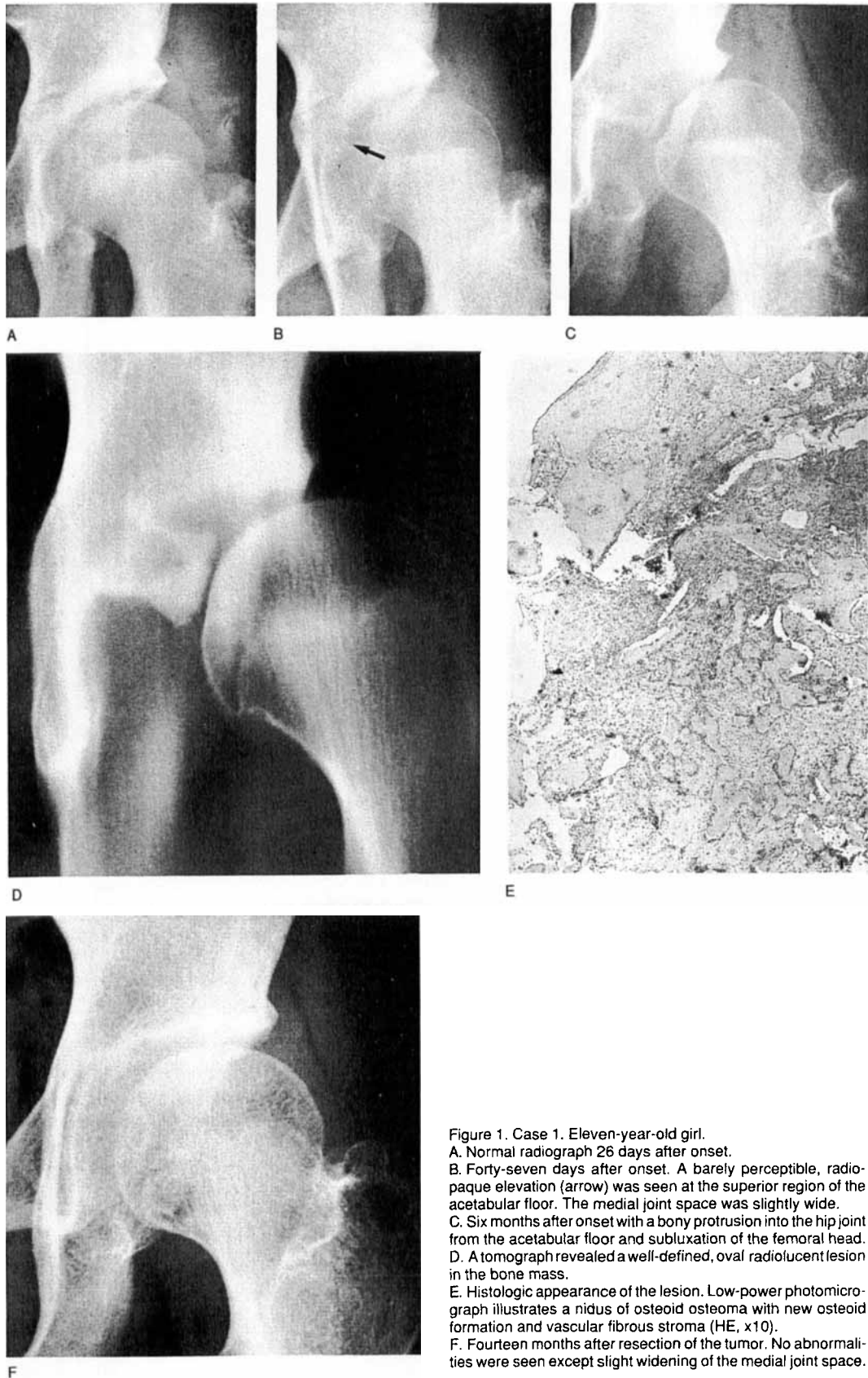


Figure 1. Case 1. Eleven-year-old girl.

A. Normal radiograph 26 days after onset.

B. Forty-seven days after onset. A barely perceptible, radiopaque elevation (arrow) was seen at the superior region of the acetabular floor. The medial joint space was slightly wide.

C. Six months after onset with a bony protrusion into the hip joint from the acetabular floor and subluxation of the femoral head.

D. A tomograph revealed a well-defined, oval radiolucent lesion in the bone mass.

E. Histologic appearance of the lesion. Low-power photomicrograph illustrates a nidus of osteoid osteoma with new osteoid formation and vascular fibrous stroma (HE, x10).

F. Fourteen months after resection of the tumor. No abnormalities were seen except slight widening of the medial joint space.

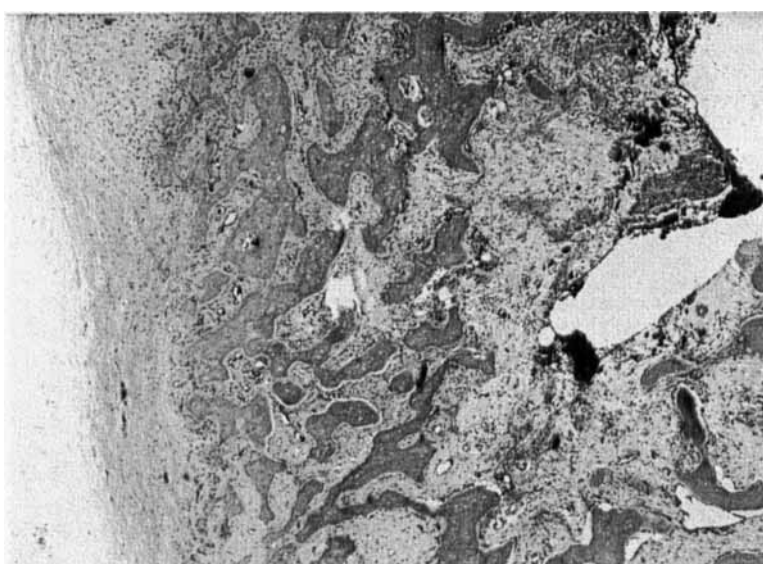
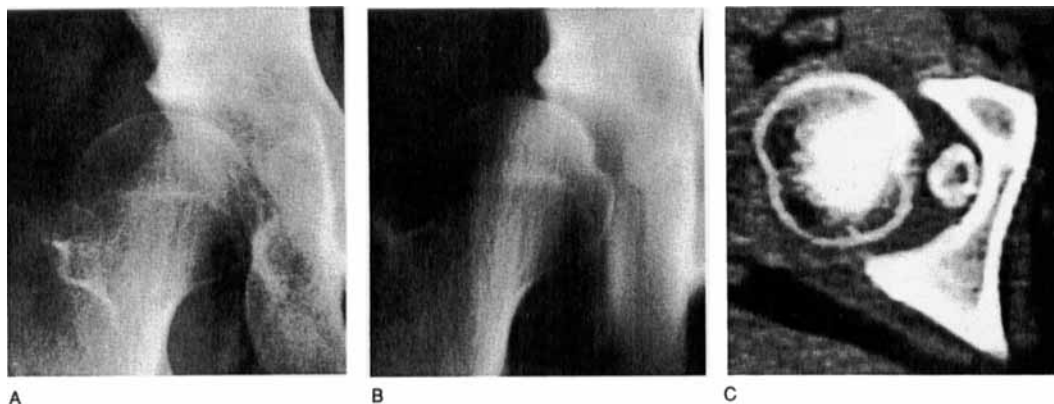


Figure 2. Case 2. Thirteen-year-old girl.

A. Radiograph taken on admission (4 months after onset) with the subluxation of the femoral head.

B. Tomograph taken on admission. A bone mass from the acromioclavicular joint thrust out the femoral head laterally.

C. Computerized tomography. The small, round, radiolucent lesion was revealed in the bone mass.

D. Histologic appearance of the lesion. Irregular trabeculae of osteoid are separated by vascular connective tissue. Osteoblasts are prominent (HE, x10).

D

(Marcove and Freiberger 1966, Shifrin 1971, Snarr et al. 1973, Corbett et al. 1974, Cronemeyer et al. 1981)

Our 2 cases are rare in the sense that the rate of the

intraarticular growth of an osteoid osteoma could be observed by the retrospective study of radiographs. A bone mass grew rapidly into the joint, with a well-defined radiolucent lesion in its center.

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