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RECURRENT DISLOCATION OF THE HIP

Report of two children

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Recurrent dislocation of a structurally normal hip is rare. Only a dozen case reports on adults and children have been published in the literature to date (Hensley & Schofield 1969). In relation to this incidence it is surprising that the Children's Hospital in Helsinki has treated two children with recurrent dislocation of the hip joint.

CASE REPORTS

Case 1 was a boy with no familial history of musculo-skeletal diseases. His birth weight had been 3450 g, and the delivery had been normal. Several clinical examinations during the neonatal period and infancy recorded normal hips. The mother, however, had noted a snapping noise in the region of the hips while tending the child. The boy started walking at the age of 11 months, and at 18 months he began to click his hips by placing his knees in semiflexion, crossing his ankles, and rotating them inward. He gradually learned to tease the family by the loud noises he made with his hips.

The boy was admitted to the Children's Hospital at the age of 5. Examination disclosed that he walked and ran without a limp. Hip movements were good and the tendon reflexes of the lower limbs were symmetrical. The Ortolani test was bilaterally negative but the provocation test bilaterally positive. In addition, the patient could, on request, easily dislocate and reduce both hips. The posterior and lateral dislocation of the femoral head could be heard, seen, feelt and roentgenologically verified (Figure 1). Unfortunately, attempts at arthrography had failed.

Treatment with various dressings and the Denis-Brown abduction splint produced no result. The boy found out how to click his hips even while wearing them. All treatment was therefore abandoned. At the age of 8, the boy still continued with this bad habit but later on he gradually gave it up.

The boy is now 16 years old. His hips are stable and move normally, and roentgenologically their structure is also good (Figure 2).

Case 2 was a girl whose mother had had a bilateral recurrent dislocation of the humerus and unilateral recurrent dislocation of the knee. The girl's birth weight had been 3140 g, and the delivery was by caesarean section. Clinical examinations

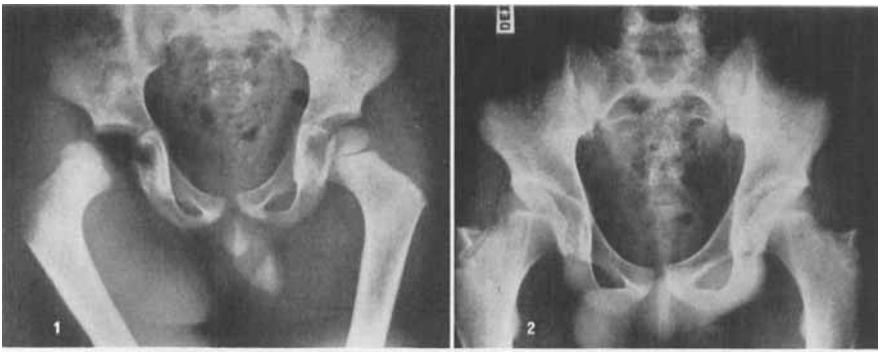

Figure 1. Radiograph of the hips of the boy (case 1) at the age of 5 years. The right hip has been dislocated by provocation.

Figure 2. Radiograph of the hip of the boy at the age of 16 years.

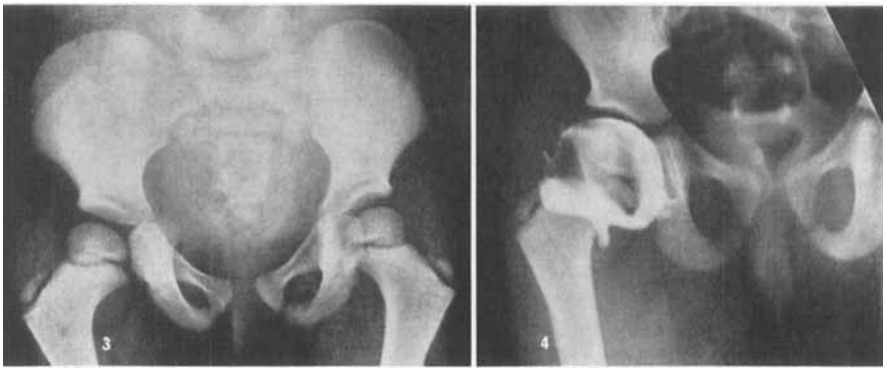

Figure 3. Radiograph of the hips of the girl (case 2) at the age of 3 years. No pathological findings could be elicited except a slight widening of the medial part of the joint space in the right hip.

Figure 4. Arthrograph of the right hip of the girl at the age of 3 years.

made neonatally and during infancy revealed no abnormality of the hips. But when the girl began to walk at the age of 14 months, her mother noticed that she limped slightly with the right leg. Before the age of two the child had begun to click her right hip in bed. On a few occasions the hip became locked in a faulty position, and the parents had to reduce it by traction. From time to time the hip was painful.

The mother brought the child to the Children's Hospital for the first time at the age of 3. The girl was found to limp slightly while walking. The legs were of equal length, there were no signs of muscular atrophy, the tendon reflexes of the lower extremities were symmetrical, and the hip movements were good. Slight hyperflexibility and hyperextensibility were noted in the finger joints, wrists, and knees. The Ortolani test of the hips was negative, but the provocation test showed

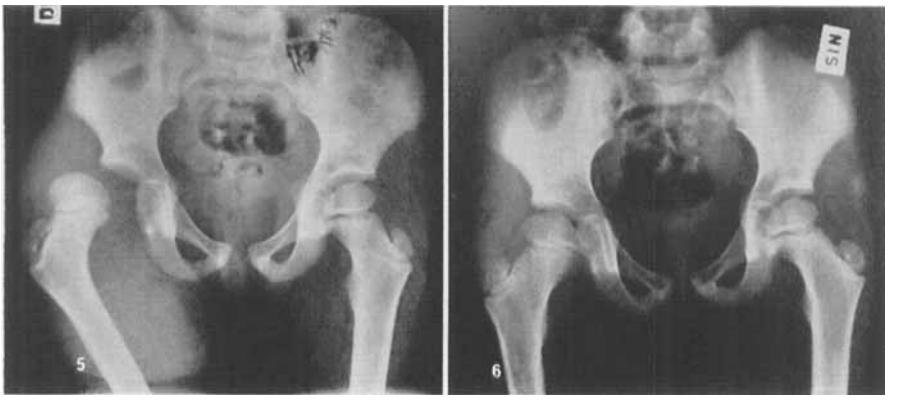

Figure 5. Radiograph on the right hip of the girl at the age of 5 years during provocation test.

Figure 6. Radiograph on the hips of the girl one year after the operation.

symptoms of slight instability or laxity on the right side. For this reason, the hips were radiographed and arthrographed, but there were no pathological findings except for a slight widening of the medial part of the joint space in the right hip, as can be seen from Figures 3 and 4. It was decided to observe the development of the symptoms.

At the age of 5, the girl was re-admitted for examination. The symptoms had progressed somewhat. The child still showed a slight limp, and the hip had begun to click more and more disturbingly and she complained of pain. Muscular atrophy of 1.5 cm had developed in the right thigh. The provocation test was now manifestly positive on the right side. On request, the patient dislocated and reduced her right hip. In this case, too, the resulting posterior dislocation could be heard, seen, felt, and roentgenologically verified (Figure 5).

Because of the progressive symptoms, operation was considered necessary. The joint was explored via a posterior Osborne incision. The joint capsule was wide but intact. It gave ample room for posterior dislocation of the femoral head on the operation table. The labrum glenoidale, femoral head, and acetabulum were clean. Ligamentum teres was absent. The posterior capsule was overlapped and plicated, and subsequently the dislocation could no longer be provoked on the operation table. After the operation the hip was immobilized with a hip spica plaster cast for 3 months.

It is only one year since the operation was performed. No spontaneous dislocation of the hip has taken place post-operatively. The provocation test is now negative, and the hip movements are good. However, the girl still walks slightly asymmetrically, and the right thigh is 1 cm thinner than the left. The structure of the hip is roentgenologically normal (Figure 6).

DISCUSSION

Trauma has been a component factor in most recurrent dislocations of the hip reported in the literature (Sullivan, Bickel & Lipscomb 1955, Aufranc, Jones & Harris 1964, Hensley & Schofield 1969). The medical history of the present patients, however, contained no trauma. These patients also differed from most of the others reported in that they could dislocate and reduce the affected hips at will. A similar ability has been reported in the patient described by Cooper (1844), and in the patients of Ombredanne and Heulley mentioned by Speed (1942).

The syndrome of both of the present patients started before the age of two. The early age is probably no mere coincidence, for a child's hip is definitely more easily dislocated than that of an adult (Glass & Powell 1961, Funk 1962). It is possible that recurrent dislocation of the hip of the kind described is more frequent, especially in early childhood, than could be assumed on the basis of the literature to date.

Aufranc, Jones & Harris (1964) reported on a boy aged 6 years in whom the recurrent dislocation of the hip was caused by a local defect in the posterior capsule. Of the present patients, the girl was found to have an intact joint capsule, and the boy's spontaneous recovery seems to suggest that the capsule could not have been defective.

Since the present patients had no trauma, no capsular defect, no dysplasia of the acetabulum or femur, no arthritic joint changes and no muscular paresis, the dislocation in these cases can probably be best interpreted on the basis of ligamentous and muscular laxity. This would explain the spontaneous recovery of the boy as his muscles developed. The laxity in the case of the girl seemed to be hereditary.

The snapping hip, uncommon in itself, usually develops on the basis of a periarticular defect. The aponeurosis of the gluteus maximum slips back with a snap over the greater trochanter. But because of the few cases described in the literature and the present cases, it is useful to bear in mind the possibility of an articular occurrence in which the femoral head escapes, laterally and posteriorly, with a snapping noise from the articular socket (Figures 1 and 5).

SUMMARY

The main symptom in two children, a girl and a boy, was the snapping hip. In these cases the snapping was not periarticular as usual, but indicated a recurrent dislocation of the hip which could be easily provoked at will. This could be shown by radiographs in both patients. Its

onset in both cases occurred at the age of 18 months. Neither showed any trauma in the medical history, no dysplasia of the joint, no arthritic changes, no capsular defect or muscular paresis. The boy recovered spontaneously and the girl underwent operation at the age of 5.

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