TRAUMATIC DISLOCATION OF THE HIP IN CHILDHOOD

Report of a Case

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Traumatic dislocation of the hip joint in a child is rare. It appears from a close study of the literature that the number of recorded cases in the last thirty-two years is eighty-eight. The youngest patient was aged eleven months and the oldest fourteen years. The average age was seven years.

Maffei (1922) found that, of 1,842 hip dislocations treated at the Rizzoli Institute of Bologna up to 1901, only three were in children. Choyce (1924), in a detailed survey of the published reports, including Maffei's study, collected fifty-eight cases and added one of his own. Clarke (1929) reported another case, and Glynn (1932) described the injury in patients aged three and seven years. Elmslie (1932) presented to the Royal Society of Medicine of London the case of a child who subsequently developed Perthes' disease. Elmslie had already made a similar contribution which was recorded by Choyce. Haines (1937) added another case in a child aged six years. Banks (1941), in a comprehensive survey of the literature of avascular necrosis of the femoral head, recorded four further cases of traumatic dislocation of the hip in children and added one of his own. These five children all developed Perthes'
disease and are included in a series of seven. The other two cases were previously described by Choyce. Paus (1951), in a clinical review of the late results of traumatic dislocation of the hip, mentioned a patient aged four years, and Thompson and Epstein (1951) in a similar communication recorded a series of seventeen children aged between six and fourteen years. Watson-Jones (1952) described one further case of dislocation of the hip in a child who subsequently developed Perthes' disease.

**CASE REPORT**

A boy aged one year and eleven months was brought to the hospital by his father. One hour before, while playing ball on the sand, the father tripped and fell on his son and partly buried him in the sand.

*On examination*, the child, normally developed for his years, was lying quietly on a couch, apparently in no pain. The left hip was held in flexion and adduction, and only on attempts to move the leg did the child protest. The right hip was normal.

*Radiographs* confirmed a posterior dislocation of the left hip (Fig. 1). The capital epiphysis was of normal size and shape, and in normal relation to the neck of the femur. The acetabulum and pelvis showed no abnormality.

*Treatment*—The dislocation was reduced under general anaesthesia. After flexion of the hip and rotation into a neutral position the head of the femur was easily lifted into the acetabulum. Fixed traction on a Thomas's splint was applied, and a radiograph showed full reduction. Light traction was maintained for six weeks and weight bearing was allowed after two months.

*Progress*—Ten months after the injury the child was walking normally and had a full range of powerful hip movements. The radiograph at this stage showed normal appearances (Fig. 2.)

**DISCUSSION**

Posterior dislocations of the hip joint are usually caused by a direct thrust in the long axis of the femur with the knee flexed and the hip adducted. A child is rarely exposed to violence of this nature, and this may explain the rarity of the condition in childhood.

In the case reported here, the child was in the "knee-elbow" position on the sand, probably with his knees together, and the father's knee landed heavily on his son's left buttocok.

The interest in this unusual injury lies in the development of avascular necrosis of the upper femoral epiphysis. Traumatic dislocation of the hip is necessarily accompanied by rupture of the ligamentum teres and tearing of the joint capsule. There is a corresponding loss of blood supply in the region of the fovea and an impairment of the blood supply to the rest of the epiphysis. Banks (1941) described seven cases of avascular necrosis of the head of the femur after dislocation of the hip in children aged between four and twelve years. To this series can be added Elmslie's (1932) second case and the case described by Watson-Jones (1952).

These nine patients, who are included in the eighty-nine described above, appear to be the only examples of Perthes' disease complicating hip dislocations in childhood reported in the literature between 1922 and 1954. The incidence of Perthes' disease was therefore 10 per cent.

It is of interest that Nicoll (1952) in a follow-up of 144 adults who had sustained dislocations of the hip, recorded a 10 per cent incidence of avascular necrosis of the femoral head.

**SUMMARY**

1. The literature of dislocation of the hip in childhood from 1922 to 1954 is reviewed. A total of eighty-eight cases have been recorded.
2. A further case, in a child of one year and eleven months, is described.
3. Nine of the children whose cases have been recorded developed Perthes' disease of the hip after the dislocation, an incidence of 10 per cent. A similar incidence of avascular necrosis of the femoral head has been reported after dislocation of the hip in adults.

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REFERENCES


