Sports accident in children: a rare cause of traumatic hip dislocation

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ABSTRACT

Traumatic hip dislocation in children is a rare disease. We report the case of a child aged 11 years old male who presented a posterior pure dislocation of the left hip after a sports accident. A reduction in emergency was performed with a perfect radiological control. Subsequent treatment consisted of pulling stuck for 45 days. The child was seen with a decline of 1 year. Hip was considered normal. This entity is exceptional in small children. It may be secondary to minimal trauma as coxa valga or excessive femoral neck anteversion or ligamentous laxity may explain a predisposition to this dislocation. His prognosis is very good if urgent care is performed.

Introduction

Traumatic hip dislocation of children is a rare disease. It represents only 5% of hip dislocation all ages [1-2]. Its management is not well known or rather little codified.

In this work we present a case of traumatic dislocation of the hip of child after a sports accident and clarify the epidemiological, therapeutic and long-term development through a review of the literature.

Case report:

We report the case of a male child aged 11 without significant history suffered a fall from his horse after a horse riding competition reception on the left lower limb. Upon arrival at the hospital an hour after the injury, the child was conscious stable hemodynamically. The member was in slight flexion, adduction without external rotation with a total functional impairment. The inguinal folds were asymmetric. The pulses were present and normal neurological examination.

Radiological evaluation revealed the presence of a pure posterior dislocation of the left hip (Figure 1). The child was immediately admitted to a reduction in dislocation under general anesthesia with a period of four hours from the initial trauma. The radiograph (Figure 2) was satisfactory with a centered hip, regular spacing that is not suspect interposition of soft tissue periarticular confirmed by computed tomography (Figure 3).

Subsequent treatment consisted of pulling stuck for 45 days. The patient was reviewed at a mean of twelve months, his hip was considered a normal clinical examination with no pain, walking and normal mobility noted as the beginning of the resumption of sporting activity. X-rays showed no abnormalities of the femoral head and the acetabulum of the joint space.

Discussion

Traumatic hip dislocation usually occurs in children after walking age with no age predilection. John P and all reported a dislocation in a girl of two years and two months. [15] Despite its rarity, it is important to consider before a painful hip with inability to walk in a young child.

The mechanism is usually an axial load against a hip flexion and adduction, but the child is younger than the mechanism is less violent. [15]

Unlike congenital dislocation of the hip, the male predominance is clear in most studies [8,9], it can be explained by the greater exposure of males to trauma. Germeneau et al. [10] have highlighted coxometric anomalies considered predisposing factors, including a femoral valgus, an opening of the acetabular angle, a decrease of the outer cover of the femoral head and a decrease in anteverision acetabular. The main predisposing factor used is the laxity, the capsuloligamentous fragility, usually at low ages [6,8] as the predominant cartilaginous structure of the acetabulum [5].

Increase with age. Most authors are reducing the dislocation under general anesthesia [6,12], others under simple sedation [2,7].

After the reduction, the slightest suspicion of a widening of the joint space is suspect capsuloligamentous interposition or osteochondral fragment and to move towards the application of computed tomography [6]. A radiograph of the pelvis is sufficient if it is normal [1].

An asset is recommended after reduction, to reduce pain, allows the absorption of hemarthrosis and periarticular soft tissue healing. There is no consensus in the literature regarding the method or downtime [2,13].

Complications of traumatic hip dislocation in children are rare, compared to the adult [5]. These complications are also varies with age. In small children, the most frequently encountered complications are the interposition of soft parts, which may require arthroscopy for extrication [9] and coxa magna by reactive hyperemia in soft tissue lesions [5,6]. This coxa magna, often moderate, has a radiological translation no clinical impact and tends to decrease during growth. In older children, complications are more frequent, the most formidable is osteonecrosis of the femoral head [5,6]. According to Mehlman et al. [7], this complication occurs in 12% of children and signs of necrosis become evident radiologically between
two and 12 months, with a statistically significant effect of the delay reduction if more than six hours after trauma. Other complications include the imprisonment of intra-articular bone fragments, the hip instability, heterotopic ossification, post-traumatic premature fusion of the growth cartilage and osteoarthritis [1-3,7,12,14]. In general, traumatic hip dislocation in children is a better prognosis compared to that of adults [2,5].

Conclusion
Traumatic hip dislocation of children differ from adults in their scarcity, scarcity associated fractures, ease of their reduction and better prognosis.

References