



The practice of the judo, rare cause of shoulder dislocation in child: a case report

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ABSTRACT

Traumatic shoulder dislocation in Child is a very rare injury. The treatment and the recurrence rate are different than adult. We report a case of shoulder dislocation in a 9 years old judoka.

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Keywords

Shoulder dislocation,
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Introduction

Dislocation of the shoulder is defined by a loss of contact total and permanent of the humeral head relative to the glenoid cavity of the scapula. This is a very rare traumatic pathology in children. Only 2% of glenohumeral dislocations affecting children under 10 years (1). One more usually observed peeling epiphyseal fractures of the upper end of the humerus. All this explains the absence of standard recommendations in the treatment of these pediatric dislocations. The recurrence rate after the first episode is variously appreciated by the authors, but remains higher than most adults. Processing instabilities remains a matter of controversy.

Observation

It is a 9-year-old during a fight in judo, was held by his opponent in position forced arm extension, retraction and internal rotation (Figure 1). The young judoka complained of pain and total functional impairment of the upper limb. He was taken to the emergency hospital. On inspection, we noticed an attitude of upper limb trauma, loss of anatomical marks of the shoulder with a deformation without external axis of the shoulder, the deltoid pectoral groove deleted. Palpation revealed a gap under the acromion and the humeral head is scanned at the deltoid pectoral groove.



Figure 1: Mapping of the operation of dislocation

No complication of vascular- nervous injured limb was noted. We conducted a radiograph of the shoulder face who diagnosed internal anterior dislocation of the left shoulder and objectified partial avulsion of the greater tuberosity (Figure 2).



Figure 2: X-ray of the left shoulder front objectify internal anterior dislocation with partial avulsion of the greater tuberosity

The child was admitted to the emergency operating theater where he received a reduction under general anesthesia followed by an elbow to the body immobilization for 3 weeks. A radiograph was performed after the groundings showed good reduction of the glenohumeral joint and humeral reduction of the greater tuberosity fragment (Figure 3) immediately. The child was kept in hospital for 24 hours, no immediate complications were noted in particular the neurovascular upper limb examination was normal. The child was seen regularly in consultation J7, J15 and J21 with radiographs, the latter consultation immobilization was removed and a strict rehabilitation protocol consisting of strengthening the deltoid and internal and external rotators has been started. The resumption of school activity was authorized on the 3rd week.

and sports activity in the third month. After a year of back no recurrence of dislocation was observed.



Figure 3: Radiograph after reduction

Discussion:

Dislocation of the shoulder in children is rare. In pediatric trauma, it is more common to describe the separation epiphyseal fractures of the upper end of the humerus. Indeed, the presence of a cartilage growth not yet welded reduces the forces transmitted to the joint. In addition, in children ligamentous structures are much stronger than the bone (2). In the literature, only a few cases showing the glenohumeral dislocations in children and adolescents have been published. Rowe (3) in his series of 488 shoulders found only 6 children under 10 years with a first traumatic dislocation.

The mechanism described in our judoka is different from that usually described in adults, namely abduction external rotation. Indeed, here it combines extension, retraction and force in internal rotation and maintained by a third minutes person. The same mechanism has been reported by Heck (4) in 1981 in a child of 7 years and previously described in wrestling matches and control (4). Other mechanisms have been reported in the literature with particular traction on the elbow arm in abduction and external rotation known under the term "pulled elbow syndrome." That combines more subluxation of the radial head. Dominik Seybold (5) published in 2009 in a child of 2 years.

The diagnosis is suspected clinically and confirmed by standard radiological assessment that objective research and dislocation associated fractures: Hill-Sachs lesion (6) of the greater tuberosity avulsion fracture of the glenoid fracture and separation of the humeral head associated (7). Our patient had a partial avulsion of the greater tuberosity which is reduced spontaneously after reduction of the dislocation. This must be done urgently under general anesthesia. All authors emphasize gentle maneuvers. These techniques as described by Milch (8) using the position of the arm where zero all muscular forces neutralize each other. In our patient the reduction was easily obtained after a slight pull.

Downtime in internal rotation is 3 weeks for most authors, but some have extended for 6 weeks thinking that it decreases the rate of recurrence.

The rate of recurrence after a first dislocation has long been described as high in children, but recent studies have questioned this finding. Rowe (3) in 1963 reported 100% recurrence in children 1 to 10 years. In 1983 Wagner and Lyne (9) described 9 cases of dislocations in children aged between 12-16 years and reported 80% recurrence. Recently in 2002, Lawton et al (10) in his series of four cases aged less than 10 years have found that

the recurrence rate was lower in young children compared with adolescents. A multi center retrospective analysis of traumatic dislocations in children and adolescents (11) led to the same conclusions with a recurrence rate of 0% for children under 14 years. Postacchini et al (12) explain the low rate of recidivism among young children by the elasticity most important ligamentous structures.

Recent findings justify orthopedic treatment for glenohumeral traumatic dislocations in children less than 10 years with reduction and immobilization of 3 weeks. Rockwood (13) described a rehabilitation protocol to strengthen the deltoid and rotator cuff. Parents should always be aware of the risk of recidivism requires the majority of authors surgical treatment.

Conclusion :

The humeral gleno humeral dislocation is a very rare disease in pediatric trauma. It does not pose diagnostic problems or reduction must be made under anesthesia. The rate of recurrence after a first episode remains highly debated before the age of 10, his treatment is orthopedic. Stabilizing surgery is justified after a recurrence and having the same principles as in adults.

Conflict of Interest

The authors declare no conflict of interest.

Contributions of authors

The lead authors are Dr. Younes ouchrif and Dr. issamelouakili

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