

Traumatic Shoulder Dislocation in a Child: A Case Report

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Learning Point of the Article:

Traumatic shoulder dislocation in toddlers is a rare phenomenon with a distinct mechanism from that observed in adults. This report highlights the importance of this entity in children and provides an overview of their management and outcomes.

Abstract

Introduction: The traumatic dislocation of the shoulder in a toddler is rare and is typically observed in children with neuromuscular issues. The treatment approach for this condition is extrapolated from that of shoulder dislocations in adults and teenagers. The primary complication is recurrence.

Case Report: We present the case of a 20-month-old infant with no significant medical history, who experienced a post-traumatic pure luxation of the left shoulder. The dislocation was successfully reduced under general anesthesia, followed by immobilization in a short sling for 3 weeks. Four years post-treatment, there was no recurrence, and the shoulder remained stable with complete mobility.

Conclusion: While uncommon, traumatic shoulder luxation in toddlers should be considered in the presence of functional impairment or abnormal limb posture, and non-surgical intervention is recommended.

Keywords: Shoulder dislocation, children, treatment.

Introduction

Traumatic shoulder dislocation among the pediatric population is uncommon. This may be due to the presence of an immature growth plate reducing forces on the joint [1]. In children, metaphyses and the shaft are more prone to injury than the joint due to the strength of ligaments compared to bone [2]. Only 2% of glenohumeral dislocations occur in children younger than 10 years old [3]. This report details a rare case of a traumatic anterior-inferior shoulder dislocation in a 20-month-old child.

Case Report

A 20-month-old girl was brought to the emergency room for total

functional impairment of the left upper limb associated with agitation and excessive tears. The mother held the child in abduction (Fig. 1). The mechanism of trauma was unknown. Clinical examination revealed a painful, abducted left shoulder. Radiographs confirmed a glenohumeral dislocation (Fig. 2). There were neither cutaneous complications nor neurovascular ones. The girl had no prior similar episodes or ligamentous laxity. Before reduction, clinical examination under general anesthesia suggested an antero-internal dislocation. The reduction was easily achieved by the Kocher maneuver. This method consisted of a reduction on an elbow flexed to 90°, the arm was placed against the thorax, then external rotation was performed. The reduction was confirmed by post-reduction radiographs

Author's Photo Gallery



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Figure 1: Infant with abduction and external rotation posture.

displaying a centered glenohumeral joint. The child moved the left upper limb without pain (Fig. 3 and 4). Immobilization in a short sling was maintained for 3 weeks. Four years post-



Figure 3: X-ray after reposition showing a centered glenohumeral joint.



Figure 2: Initial X-ray showing a left shoulder with an anterior dislocation. Hill-Sachs lesion.

reduction, no recurrence was observed (Fig. 5). A follow-up examination confirmed complete shoulder mobility and absence of ligamentous laxity.

Discussion

Traumatic shoulder dislocation in children is an exceedingly rare occurrence, with only a few reported cases in children younger than 5 years old worldwide [4-6]. Literature suggests that such cases among children are often associated with neuromuscular imbalance, obstetrical brachial plexus paralysis aftermath, or complications arising from neglected septic arthritis of the shoulder. Unlike adults, pediatric patients tend to experience epiphyseal separation at the upper end of the humerus rather than luxation following trauma [7]. The optimal therapeutic approach to traumatic shoulder luxation in children is still controversial: Some authors defend the conservative treatment while others advocate for a surgical approach [8].

The mechanism involved is not typical, as seen in adults. While adult dislocation often results from abduction and external rotation, children dislocation occurs due to a high-energy trauma in the majority of cases [8].

The reported recurrence rates of traumatic shoulder dislocation in children vary among authors. The risk of relapse after the



Figure 4: Normal position of the left upper limb 12 h after reduction.



Figure 5: X-ray 4-year post-trauma showing a normal glenohumeral joint.

initial episode is higher among children than adults, ranging from 20% to 100% of cases [6, 9]. In 1983, Wagner and Lyne [10] discussed a series of nine older children aged 12–16 years with open epiphyses, showing an 80% recurrence rate. Nevertheless, a multicenter retrospective analysis encompassing pediatric populations [2] revealed no dislocation recurrence among individuals aged below 14 years. Regarding treatment, Julfiqar et al. [8] suggest conservative management for the initial episode, involving short-term shoulder immobilization. If sequelae instability occurs, it is treated like adults.

Conclusion

Traumatic shoulder dislocation in toddlers is a rare

phenomenon with a distinct mechanism from that observed in adults. Treatment strategies are extrapolated from adult protocols, and the primary concern is the potential for recurrence. The consensus among authors leans toward conservative treatment, involving short-term sling immobilization, for the initial episode of luxation in children.

Clinical Message

Shoulder dislocation in children is a relatively uncommon condition with limited literature available. The scarcity of research on this topic underscores the significance of individual clinical cases. This case report aims to contribute valuable insights into the management and outcomes of pediatric shoulder dislocations, addressing the gap in existing knowledge.

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given the consent for his/ her images and other clinical information to be reported in the journal. The patient understands that his/ her names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Conflict of interest: Nil **Source of support:** None

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