

**Image in ER**

## Unusual Epiphyseal Fracture

Shazia Naqvi

**Authors**

Pediatric Emergency  
Shifa International  
Hospital

**Correspondence to:**

shaziabatoonaqvi@gmail.com

A 3-year-old boy fell from 4 stairs after a breatholding spell. He sustained injury to the right shoulder. There was no other associated injury. On examination the child was alert and vitally stable. On local examination, there was swelling of right shoulder and he was not moving his right arm. He was taken to 4 different hospitals with variable opinions of doctors. He came to our emergency department and his radiological evaluation was done. His xrays and CT scans are shown in Figure 1. & 2.

The radiology report showed a 4-piece proximal humeral fracture through the physis with metaphysis and shaft displaced anteriorly and superiorly greater than two third in relation to epiphysis. It also showed marked displacement of proximal ossification centers with fractured tuberosities. Humeral head appears to be dislocated from the glenoid cavity. This constellation of findings represents NEER HOROWITZ TYPE IV fracture deformity in the pediatric population. The patient was admitted under orthopedic on call and had surgery for open reduction and k-wiring.

The proximal humeral physis contributes approximately 80% of the growth of the

humerus. Disruption of the physis and the epiphysis, as well as intra-articular fractures, can lead to early degenerative arthritis, and physeal discontinuity can disturb longitudinal growth. Such injuries require anatomic reduction and internal fixation to restore anatomic alignment of the joint surfaces and proper alignment of juxtaposing physeal surfaces.<sup>1</sup> The majority of patients in grade IV (displacement greater than 2/3rds of the humeral shaft) group have persistent deformity (described as “anterior bowing”) and many had notable arm shortening compared to the opposite side.<sup>2</sup> Epiphyseal fractures of humerus, although rare, need early identification and prompt referral to orthopedic on call.

**REFERENCES**

1. Bahrs C, Zipplies S, Ochs BG, Rether J, Oehms J, Eingartner C et al. Proximal Humeral Fractures in Children and Adolescents. *Journal of Pediatric Orthopaedics*. 2009; 29(3):238-242
2. Iannotti JP, Williams GR. Disorders of the shoulder, diagnosis & management. Philadelphia : Lippincott Williams & Wilkins, 2007. (2007) ISBN:0781756782

\* \_\_\_\_\_ \*

**Figure.1**



**Figure.2**

