



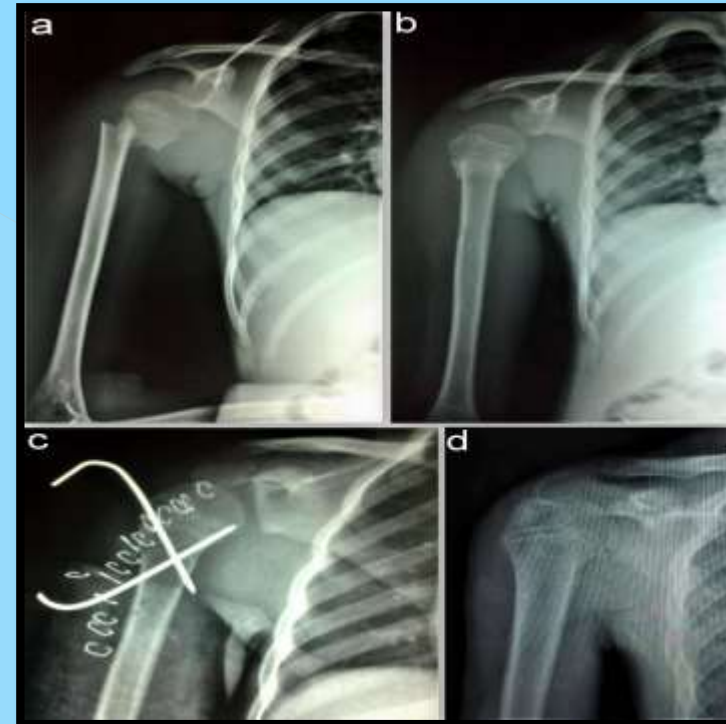
Glenohumeral subluxation or dislocation in pediatric age is rare injury. The proximal humerus fractures, on the other hand, are relatively common with the management ranging from conservative to operative fixation. Concomitant proximal humeral fracture and subluxation or dislocation of ipsilateral glenohumeral joint is rarely described in the literature.

Case Series

We present a series of four pediatric cases (2 male and 2 female) of fracture dislocation of shoulder with relevant details. One case was managed by open and one with closed reduction and K-wire fixation. Two cases were managed conservatively. The subluxation improved spontaneously in 3 cases whereas joystick manoeuvre was used in one case.

Case 1.

Figure 1. The radiograph showing fracture proximal humerus and inferior subluxation of glenohumeral joint (a,b). The post operative radiograph showing fracture fixed with crossed K-wires and subluxation improved (c). Well united fracture at follow up of 5 month (d).



.>A 10-year-old female, fall from a tree, simple injury
 >The radiograph showed extra-articular fracture of proximal humerus. A mild subluxation of glenohumeral joint was also noted (Fig.1,a,b).
 > open reduction and multiple Kirschner wire (K-wire) fixation followed by plaster U slab for three weeks (Fig.1. c,d). The peri-operative period was uneventful and gentle shoulder physiotherapy started after 3 weeks and wires removed after eight weeks.

Case 2.

- >An 11-year-old male patient, fall from tree, left side.
- >Radiograph showing fracture dislocation of left shoulder (Fig.2. a,b).
- >Closed reduction and percutaneous K-wire fixation under anesthesia was done (Fig.2. c) along with plaster support for four weeks.
- >Gradual union of fracture and good outcome was noted at follow up of 9 months (Fig.2.d,e).



Figure 2. The radiograph showing proximal humerus fracture with severe subluxation of head of humerus (a,b). The radiograph showing immediate post operative (c), at 2 week (d) and 5 weeks (e) showing gradual union.

Case 3.

- >A 12-year-old male patient, fall from tree, right shoulder region injury along with head injury without transient altered level of consciousness.
- >The head injury was cleared from neurosurgeon.
- > Radiograph showed right fracture subluxation with severe proximal displacement of distal fragment of humerus (Fig.3 a). There was skin puckering without open wound noted at site of corresponding bony prominence.
- >The closed reduction was attempted as patient refused operative treatment. The plaster U slab was kept for six weeks and fracture united.
- >There was bony overlap and lateral bony overhang noted but clinically no problem noted and remodeled with time (Fig.3 b,c). The patient had good shoulder recovery with painless activities of daily living in the follow up of eleven months.

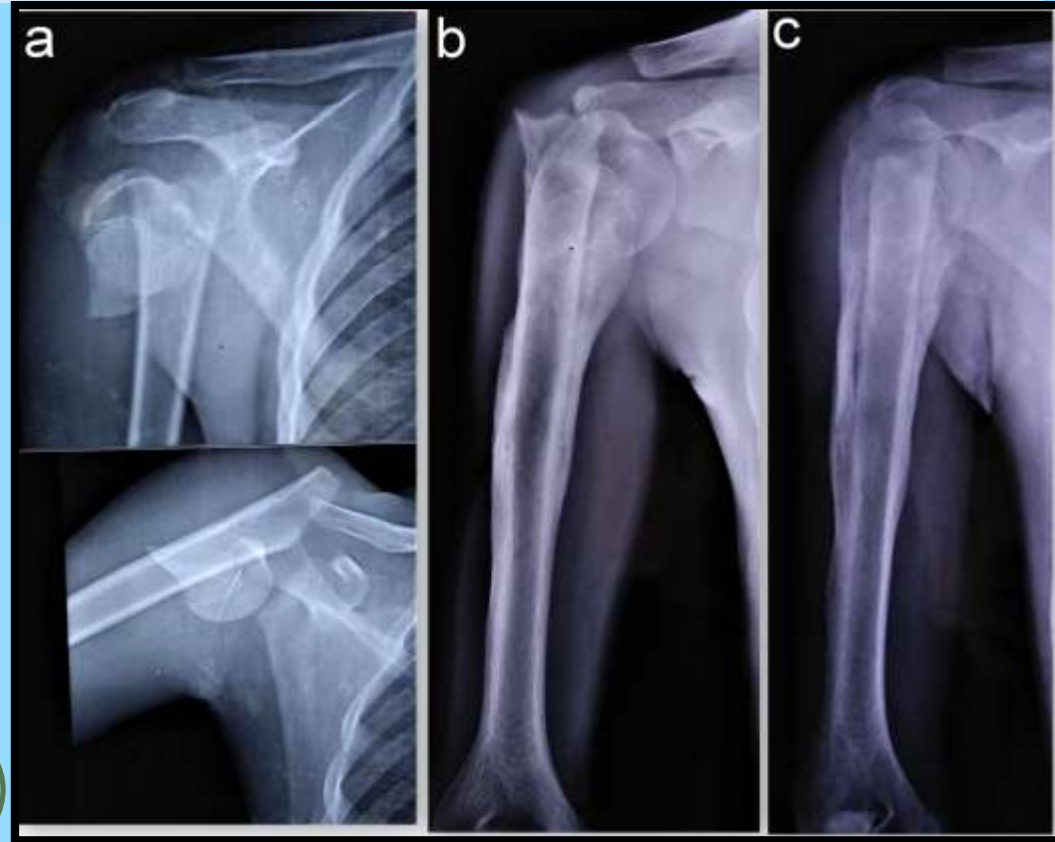


Figure 3. The radiograph showing highly displaced fracture of proximal humerus with proximal migration of distal shaft. There is subluxation noted of glenohumeral joint (a, above and below radiograph). The united fracture with cortical overhang (b) that improved on follow up (c).

Case 4.

>A 14-year-old female presented with left shoulder injury, fall from tree three days back.

>The radiograph noted fracture subluxation of left shoulder with displaced fracture.

>The patient chose conservative management and was managed by closed reduction under image intensifier guidance and plaster U case application for 6 weeks. The course of treatment was uneventful and fracture united in 6 weeks following which gradual physiotherapy was initiated for excellent outcome in the follow up of ten months.



Figure 4. The radiographs showing fracture proximal humerus and inferior subluxation of glenohumeral joint (a). The radiograph at follow up showing union (b).

Conclusion and learning points

1. The injury pattern is not well described and not fully understood.
2. Pseudosubluxation is described due to reflex inhibition of musculature and is spontaneously corrected¹
3. Large effusion, axillary neuropraxia and temporary deltoid atony are other implicated factors leading to transitory subluxation in adults.²
4. Further studies are required to gain comprehensive insights into this peculiar injury pattern.

References -

1. Michael SP, Banerjee A. Pseudo-dislocation of the shoulder in a child. Arch Emerg Med. 1993 10:289-292.
2. Do T, Keller K. Transitory inferior dislocation of the shoulder in a child after shoulder injury. A case report and treatment results. Iowa Orthop J. 2004; 24:119-122.