



Case Report:

Posterolateral Elbow Dislocation with Ipsilateral Fractures of Head and Distal End Radius

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Abstract:

Elbow dislocation associated with ipsilateral fracture head and distal end radius is a rare pattern of Injury, although it is common for elbow dislocation and radius fractures to occur separately. We report a case of 35 year-old male who had a posterolateral elbow dislocation with ipsilateral fractures of head and distal end radius that underwent closed reduction and POP application and outcome is excellent with 9 months of follow-up.

Key Words: Elbow joint dislocation; Radial head; Distal end radius fracture; Closed reduction

Introduction:

Elbow dislocation is commonly associated with fracture of proximal Radius and or ulna. However, posterolateral elbow dislocation associated with ipsilateral fracture head and distal end of radius is very rare.^{1,2} We Present an unusual pattern of fracture-dislocation of Forearm and discuss the possible mechanisms of Injury and outcome with conservative management.

Case Report:

A 35 years old male presented to the outpatient office after falling down from a tractor landing on his outstretched right hand with forearm pronated and elbow slightly flexed. On physical examination, there was a swelling and gross deformity at the right elbow and the forearm with unduly prominent olecranon process. There was tenderness at both Proximal and distal end of radius with no evidence of neurovascular compromise. Plain radiographs of elbow and forearm with wrist AP & Lateral views revealed posterolateral elbow dislocation with ipsilateral fracture head of the radius and extraarticular fracture of distal end of radius (Fig. 1). Closed reduction was immediately performed under sedation. A long arm cast was applied for immobilization (Fig 2) and was converted to short arm cast after 3 weeks, active elbow ranges of movements were started as tolerated by the patient. 6 weeks later cast was removed and wrist forearm movements were advised. Patient was on close follow up at monthly intervals.

At the end of 6 months, the patient had regained painless range of movements of the elbow, wrist and forearm with slight limitation of dorsiflexion of wrist with terminal limitation of pronation and supination of the forearm.

Plain radiographs at 6 months showed union at the head and distal end of the radius (Fig. 3). As the patient was asymptomatic, he was advised to carryout with his activities of daily living.



Figure 1: AP and lateral radiograph of the elbow and forearm showing posterolateral dislocation of the elbow with ipsilateral fracture of head of the radius and distal radius



Figure 2: AP and lateral radiograph of the elbow and forearm showing well reduced dislocation of the elbow along with reduction of fracture of distal and proximal radius.



Figure 3: Radiograph showing united fracture distal and proximal end of the radius.

Discussion:

The elbow joint is one of the most stable hinge joint. Fractures associated with elbow dislocation commonly occur around the elbow and involve the radial head, olecranon, and coronoid process.³ Ulnar diaphyseal fracture with radial head dislocation (Monteggia fracture dislocation) is also a common pattern of injury.⁴ Few cases of elbow dislocation combined with ipsilateral Galeazzi fracture and ipsilateral fracture dislocation of the radial shaft head associated with elbow dislocation have been reported.^{5,6} The possible mechanism of injury in our case of such a rare fracture dislocation is due to fall on an outstretched hand from a height of about 6 feet most likely had a fracture distal end of radius, then the posterolateral valgus load at the elbow leading to elbow dislocation and capitulum hitting the radial head leading to sagittal fracture of the head of radius fracture. Only a few similar cases have been reported. Our case had an excellent outcome with conservative management.

As elbow dislocation was well reduced, and radial head fracture was a Mason's type I marginal fracture which do not compromise the stability of proximal radioulnar joint and forearm rotation^{7,8} along with acceptable reduction of distal end radius fracture with radial height tilt and angulations being maintained in the acceptable position⁹, so we did not plan for operative management.

Conclusion:

Conservative management by closed reduction and pop application would be adequate for such fracture dislocation of the elbow provided fractures and dislocation are reduced in acceptable position.

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