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## Case report

### Ipsilateral posterolateral elbow dislocation and distal radial fracture: An unusual case

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#### Abstract:

Coincidence of ipsilateral posterolateral elbow dislocation and distal radial fracture is very rare. Herein we present an 84-year-old female who had an unusual case of ipsilateral fracture of distal radius and posterolateral elbow dislocation. Closed reduction was immediately performed under sedation. A long arm cast was applied for immobilisation. In the sixth month, the patient regained full flexion-extension of the elbow and wrist, and full pronation-supination of the forearm. As we report good results of our patient, we can offer closed reduction and long arm cast for the treatment of ipsilateral posterolateral elbow dislocation and distal radial fracture.

**Key Words:** Elbow dislocation, Distal radial fracture, Ipsilateral, Treatment.

#### Introduction:

Elbow dislocations are the second most common dislocations in adults. Approximately 20% of dislocations are associated with fractures<sup>[1]</sup>. Treatment of choice acute dislocation is usually closed reduction and splinting if stable after reduction. In cases of fracture-dislocation, closed reduction may be impossible because of fragment instability. Simple dislocation can heal without any problem. Elbow dislocation with proximal ulna and radial fractures are seen very common<sup>[2]</sup>. However coincidence of ipsilateral posterolateral elbow dislocation and distal radial fracture is very rare. Here in we present an unusual case of ipsilateral fracture of distal radius and posterolateral elbow dislocation.

#### Case report:

An 84-year-old female presented to the emergency department with a history of fall from height on her outstretched right hand. She complained of pain in her left wrist and elbow region with restriction and pain. Minor abrasions over the right elbow were observed. Both the right elbow and the wrist were grossly deformed and swelled. There was no vascular and neural compromise. There was no evidence of posterior interosseus nerve or median nerve deficiency. Plain radiographs showed posterolateral elbow dislocation with ipsilateral radial distal metaphyseal fractures (Figure 1 & 2).

Closed reduction was immediately performed under sedation. A long arm cast was applied for immobilisation. After three weeks we shortened the cast to short arm and started elbow movements.

Short forearm cast was removed at 40th day. Active wrist movements were started as soon as tolerated. At the sixth month, the patient regained full flexion-extension of the elbow and wrist and full pronation-supination of the forearm. Plain radiographs showed complete solid union at the radius (Figure 3 & 4). The patient was asymptomatic, and very comfortable after six months.

#### Discussion:

The elbow joint is one of the most inherently stable articulations of the skeleton. At the same time elbow joint is the second most frequently dislocated major joint following the shoulder in adults. Most elbow dislocations do not have an associated fracture and therefore have been termed a simple dislocation<sup>[3]</sup>. Fortunately, early mobilization following a closed reduction has a low risk of redislocation and generally good

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long-term results<sup>[4,5]</sup>. When an elbow dislocation is associated with a fracture, this injury is termed a complex dislocation<sup>[6-8]</sup>. Fractures associated with elbow dislocation commonly occur around the elbow and involve the radial head, olecranon, and coronoid process<sup>[2]</sup>. In fact, these injuries historically have had such a poor outcome that when a posterior elbow dislocation is associated with the radial head and coronoid fracture this injury has been referred to as "the terrible triad"<sup>[9]</sup>.

İpsilateral posterolateral elbow dislocation and distal radial fracture is seen very rarely. Initially, our patient most likely had a posterior elbow dislocation. Then, radius distal metaphysis fractured indirectly while the elbow was in extension, the forearm in supination and the wrist in ulnar deviation. Normaly complex

dislocation associated with fractures must be treated with surgery<sup>[10]</sup>. However in our case, we accepted our patient as simple dislocation, so treated with closed reduction and long arm cast. That's why we had good results, we can offer closed reduction and long arm cast for the treatment of Ipsilateral posterolateral elbow dislocation and distal radial fracture.



Figure 1



Figure 2



Figure 3



Figure 4

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