

## Case Report

# Postero-Lateral Elbow Dislocation With Ipsilateral Radius And Ulna Fracture: A Case Report

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## Abstract

Elbow dislocation with ipsilateral diaphyseal fracture of both radius and ulna is a rare injury. However, elbow dislocation with either radius or ulna diaphyseal fracture is commonly reported. We report an uncommon injury of a 33 years old male who had his elbow dislocation with ipsilateral both bones forearm fracture. Elbow dislocation was reduced and fracture both bones were fixed with low contact dynamic com-

## Introduction

Elbow dislocation with ipsilateral both bones of forearm fracture is an uncommon injury<sup>1</sup>. Fracture dislocation around the elbow with fracture of either radius or ulna is a commonly encountered injury<sup>2</sup>. However, ipsilateral elbow dislocation with both bones forearm fractures is uncommon as they follow different mechanism of injury<sup>1</sup>. The appropriate intervention gives better result even if the severity of trauma is more. We report a case of elbow dislocation with ipsilateral fracture of shaft of radius and ulna with excellent clinical outcome.

## Case Report

A 35 year old male fell from bike and presented to our emergency department with history of pain, swelling and difficulty moving his deformed right forearm. Patient presented with an above elbow slab applied elsewhere. On examination after removal of slab, there was marked swelling over right elbow and forearm with visible deformity, shortening and punc-

ture wound over ulnar aspect. Distal neurovascular status was normal. A differential diagnosis of both bone forearm fracture was made. Plain X-ray showed the posterolateral dislocation of elbow as well as comminuted fracture of shaft of radius and ulna Fig. 1



**Fig 1.** Radiographs showing right posterior dislocation of elbow with ipsilateral fracture shaft of radius and ulna

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Elbow dislocation was missed when initially managed outside and was advised surgical management for fracture of forearm and referred to our hospital with above elbow slab. Elbow joint was reduced by gentle traction at

proximal part of forearm under mild sedation with midazolam and found to be stable and kept in above elbow slab.



**Fig 2.** Radiographs following closed reduction of right elbow with ipsilateral fracture shaft of radius and ulna maintained with above elbow dorsal slab.

### Surgical Management

Open reduction and internal fixation of radius was done the next day. The skin incision was made, and the radius fracture was accessed using Henry's approach. The radial nerve was noted to be intact and in continuity. There was comminution of the radius fracture with a medial butterfly fragment. The radius fracture was surgically stabilised using a 3.5 mm low contact dynamic compression plate (LC-DCP). The ulnar sided open wound was then extended along the subcutaneous border of the ulna. The ulna fracture was stabilised using a 3.5 mm LC-DCP as well Fig. 3 Antero-posterior and valgus-varus stability of elbow was checked and above elbow back slab was given for three weeks. NSAIDS in form of diclofenac 75 mg was prescribed in divided doses. Three weeks later, back slab was removed and gradual passive range of motion exercises were initiated.



**Fig 3.** Immediate post operative lateral view showing reduced elbow joint and forearm fixed with LCP

**Follow-up:** At the end of 3 months, patient attained full range of motion of elbow and radiographs showing a uniting fracture fig 4. Patient was asymptomatic and elbow movements under stress showed stable joint. Further Shoulder and elbow ROM exercises were asked to continue.



**Fig 4.** 3month follow up

### Discussion

Elbow joint is one of the most inherently stable joint.<sup>[1]</sup> Dislocation of elbow is usually associated with fracture of radial head, radial neck, coronoid process or olecranon.<sup>[2]</sup> Ulnar diaphyseal fracture associated with elbow dislocation is a common injury in paediatric age group.<sup>[3]</sup> Fracture-dislocations around the elbow usually involve the proximal radius or ulna. However both bones forearm fracture with ipsilateral elbow dislocation is rare.<sup>[3]</sup> Most reports describe Monteggia or Galeazzi lesion together with elbow dislocation. Bado classified the Monteggia lesion into four different types. The Bado Type IV lesion classifies ipsilateral fractures of the radius and ulnar shaft with radial head anterior dislocation. However, none of the classifications take into account proximal ulnar

shaft fracture and radial shaft fracture, with concomitant elbow dislocation involving the ulno-humeral joint.<sup>[4]</sup>

This rare injury of radius and ulnar shaft fractures with elbow posterior dislocation has been described as a unique Monteggia-equivalent injury by Hung et al.<sup>[5]</sup> and Kose et al.<sup>[1]</sup> Our case describes a similar Monteggia-equivalent injury. Only a few similar cases have been reported in literature.<sup>[4-6]</sup> Elbow dislocation needs early mobilisation generally after 3 weeks. Whereas, open reduction and internal fixation of shaft needs protection till they unite. Gradual supervised range of motion of elbow should be started to get better result in such injuries. We started passive range of motion of elbow after 3 weeks. The usual mode of injury in such fractures is fall on the ground with outstretched hand.<sup>[7]</sup> We assume, our patient most likely had a posterior dislocation first. Then, both bones of the forearm fractured indirectly while the elbow was in extension, the forearm in hyperpronation and the wrist in radial deviation

## Conclusion

To conclude dislocation of elbow with ipsilateral fracture shaft of both ulna and radius is a rare occurrence. This type of injury is unique due to the difficulties encountered in diagnosis and treatment. Majority of such injuries are missed diagnosis primarily. Hence a great awareness of such injuries with a thorough clinical and radiological assessment helps in diagnosing such fracture. Early diagnosis and treatment of such injury is important to prevent stiffness and attain better elbow range of movements and good functional outcome.

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