

## Floating Elbow Fixation Sequence: A Case Report

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### INTRODUCTION:

Floating elbow injuries are a combination of humeral and forearm fractures. Early anatomical reduction and rigid internal fixation can enable early joint rehabilitation with minimal stiffness. We describe a case of an ipsilateral closed fractures of the left humerus, radius, and ulna shafts.

### REPORT:

A 24-year-old male fell from a height of 6 meters at work and sustained pain and deformity to his left arm and forearm. On physical examination, his fractures were closed, with soft arm and forearm compartments, and intact neurovascular findings. Radiographs of the left humerus and forearm demonstrated a left midshaft humerus fracture and a left distal third radius/ulna fracture. (Figure 1 and 2)

The patient underwent open reduction and internal fixation of his humeral, radial and ulnar shaft fractures. The decision was made to reduce and fix the humerus first with a dynamic compression plate. This was because manipulation of the forearm may have been necessary during reduction and plating of the humerus. Subsequently, the radial shaft was anatomically reduced and plated, followed by the ulnar shaft.

Conservative management of humeral shaft fractures in floating elbows is associated with poor outcomes as it did not allow early mobilization of the joints.

The sequence of fracture fixation in floating elbow varies. Certain authors have favoured to first fix the humeral fracture. They suggested that by doing so, neurovascular access of limb and fracture reduction will be simpler. Even after scrupulous search, no definitive study could be discovered which prioritized the fixation order for humeral or forearm fractures of the floating elbow.



**Figure 1:**  
Anteroposterior and lateral radiographs of the left humerus



**Figure 2:**  
Anteroposterior and lateral radiographs of the left radius/ulna

### CONCLUSION:

Ipsilateral humeral and forearm shaft fractures requires stable internal fixation, which ultimately allows for early rehabilitation. Preference of fixation is not very conclusive and requires more study and meta-analysis.

### REFERENCES:

1. Lange RH and Foster RJ: Skeletal management of humeral shaft fractures associated with forearm fractures. Clin Orthop, 195:173-177; 1985.
2. Lee P, Piatek AZ, DeRogatis MJ, Issack PS. Combined Ipsilateral Humeral Shaft and Galeazzi Fractures Creating a Floating Elbow Variant. Case Rep Orthop, 2018.