Shoulder dislocations are the most common joint dislocations, and only 2% of these are seen as posterior shoulder dislocations. The floating elbow was first described in children by Stanitsky and Micheli in 1980 and then, described in adults by Rogers [7,8]. Classical definition is about coexistence of the ipsilateral humeral diaphyseal and the forearm fracture. Also, various complications could be seen early and late in cases with floating elbow; compartment syndrome, neurovascular deficiency, limb loss etc. Consequently, floating elbow is a rare but important lesion, with possible long-term complications. Surgical treatment is universally accepted with various techniques [9-11].

In a study which was published by Winderman in 1940, anterior shoulder dislocation associated with the humerus fracture was defined [1], but posterior shoulder dislocation with forearm fracture in addition to humerus fracture has not been reported yet.

In this study, we present a patient with floating elbow which is complicated with posterior shoulder dislocation.
The patient taken to surgery under general anesthesia and firstly closed reduction was applied to shoulder. For the humerus shaft fracture close reduction was performed and then fracture fixed with a monoaxial external fixator (MAEF). For the left forearm fracture fixation was provided by low contact dynamic compression plate (LC-DCP) after open reduction (Figures 4, 5). The confidence interval of the shoulder joint was checked at the end of the surgery. The shoulder dislocated again when the arm brought into internal rotation. Therefore, the upper extremity was taken to an arm sling with abduction pillow which holds the shoulder in neutral and some external rotation to prevent dislocation after the surgery. Also, conservative treatment and follow-up was planned for left scapular fracture by using arm sling. The patient was followed postoperatively at the Orthopedics and Traumatology Department, and discharged at the end of the 7th day. The shoulder of the patient was intermittently controlled by radiography. The upper extremity of the patient was followed in arm sling for 4 weeks and then rehabilitation program including active and passive range of motion, capsular stretching and muscle strengthening exercises were started. The radial nerve deficiency recovered spontaneously at 5th month. It has been seen that the healing of the forearm fracture has already occurred before the humerus fracture (Figures 6, 7). MAEF was removed at 6th month of the follow-up (Figure 8). Range of motion of wrist and elbow joints were normal, but there was some restriction in the shoulder joint movements at the last follow up.

**Discussion**

The floating elbow was first described in children by Stanitsky and Micheli in 1980, and then in 1984 described in adults by Rogers. Floating elbow cases are very rare, usually high-energy trauma places in the etiology. Various complications could be seen in cases with floating elbow; compartment syndrome, neurovascular deficit, limb loss, radioulnar synostosis etc. Ditsios et al. published 19 patients with floating elbow, 8 of them with radial nerve, 1 patient with ulnar nerve deficiency. Also, there was radial nerve deficiency in our case. It probably took the source because of the traction injury. And the radial nerve deficiency recovered spontaneously at the fifth month of the follow-up [7,8,10,11].

The combination of the humerus body fracture and the anterior shoulder dislocation was described by Winderman in 1940. And posterior dislocation of the shoulder with ipsilateral humeral shaft fracture was described [1,5]. But the combination of a posterior shoulder dislocation with a floating elbow has never been presented before. In this case, it is likely that when the energy applied to the upper extremity of the patient during trauma, because of the rotational and tractional forces of the drilling machine caused floating elbow with posterior shoulder dislocation. Regarding the mechanism of this complex injury, a force transmitted through the axis of the humeral shaft through the shoulder has been reported simultaneously cause the fracture and the dislocation [12].
to be kept brief during the surgical period. Also, applied MAEF as in this case presentation allows elbow joint movements. Because distal Schanz screws passes through just above and below the olecranon fossa. During the fracture healing process patient can provide the joint movements of the elbow after immobilization with arm sling with abduction pillow. Because of these reasons we preferred to perform fixation by MAEF.

**Conclusion**

These events are often seen as the result of high–energy trauma. The presence of soft tissue damage in many cases, the presence of open fractures, and nerve damage can lead to unpredictable functional outcomes. Fortunately, this patient had only floating elbow with posterior shoulder dislocation and radial nerve deficiency. Otherwise, he could lose his upper extremity as the result of such a high–energy trauma. Humeral fracture fixation with external fixator may shorten surgical period in patients who have such a complex injury and may allow early mobilization to prevent stiffness in elbow joint.

**References**


