**INTRODUCTION**

Traumatic perilunar and elbow dislocation is rarely seen together. The clinical picture in which both unilateral proximal and distal dislocation of the forearm are seen is called bipolar forearm dislocation or floating forearm and there are only a few such reported cases in the literature. Because, this injury occurs only after a severe trauma, patient may apply due to other system's injuries. Joint movement limitation, deformity and pain are generally present. If a careful physical examination is not performed, perilunar dislocation may be overlooked. There is a fracture and an open wound at wrist and elbow in most of these cases.

We aimed to present a case of isolated perilunar and elbow dislocation that was not accompanied by neither a fracture nor an open wound.

**CASE REPORT**

A 30-year-old male patient was admitted to our emergency department due to a traffic accident. On physical examination, the patient was conscious, oriented, cooperative and his general status was normal. Blood pressure measurement revealed a pressure of 125/75 mmHg and his pulse rate was 80 beats/minute. Deformity, pain and tenderness was present at his right wrist as well as the elbow. Passive movements of both the right wrist and the elbow were painful and limited. Neurovascular examination was normal. No additional systemic injury was detected except local skin abrasions and superficial glass fragments in the skin. Perilunar dislocation of the wrist and lateral elbow dislocation were found in radiological examination (Figure 1). The patient was treated successfully with closed reduction after sedoanalgesia in the emergency operating room (Figure 2). A long-arm cast and a shoulder-arm sling were applied for 6 weeks. The patient was hospitalized in the Orthopaedics and traumatology clinic. The patient was discharged at the second follow-up day when no neurovascular deficit was present. He was scheduled a routine follow-up and a rehabilitation program. Follow-up showed that the hand and elbow functions were clear and there were no function loss or torn ligaments.

**ABSTRACT**

Traumatic perilunar and elbow dislocation is rarely seen together. Limitation of joint movement, deformity and pain are generally the presenting symptoms. A case of perilunar and elbow dislocation without fracture admitted to the emergency department due to a traffic accident and treated with closed reduction after sedoanalgesia and benefited from closed reduction.

**Key words:** Closed reduction. Elbow dislocation. Perilunar dislocation. Road traffic accident. Floating forearm dislocation. Bipolar forearm dislocation.
DISCUSSION

The term bipolar forearm dislocation or floating forearm dislocation was first used by Jupiter et al. in 1994.2 Firstly, 3 cases of perilunar dislocation accompanying elbow dislocation were seen after a fall and reported by Chen in 1994.3 There are seven published cases in the literature.1,3,4 For perilunar and elbow dislocation to be seen, high energy trauma mechanisms are needed. Perilunar and elbow dislocation cases are generally seen in young age group between 23-35 years of age who fall onto their wrist or elbow and suffer from a severe sudden trauma.3-5 This patient was also at the age of 30 years but the traumatic etiology is somewhat different: a motor vehicle accident instead of a fall.

We suggest that the perilunar and elbow dislocation was due to axial force acting on the elbow while the elbow was in semi-flexion position that caused the elbow dislocation; and axial force acting on the wrist while the hand was in dorsiflexion position, caused the wrist dislocation. There is only one bipolar dislocation case in the literature that is not accompanied by a fracture. Our case is the second one.

If the elbow dislocation is apparent, wrist dislocation may be overlooked. Delayed diagnosis in wrist dislocations seriously affects joint functions and may cause joint function loss. Therefore, the joints both proximal and distal to the affected one should be carefully examined in joint dislocations.1,6

There is no recommended treatment model for bipolar forearm dislocations in the literature. While elbow dislocations were usually treated with closed reduction, open reduction and fixation method was chosen for wrist dislocations.1-5,7 The case is different from the other cases regarding the treatment method. It is the first case which was treated successfully by closed reduction of both elbow and wrist joints after sedoanalgesia in the operating room.

To conclude traumatic perilunar and elbow dislocation without a fracture is rarely seen. A careful physical examination, a thorough knowledge of radiographic studies and radiographs of both the proximal and distal joints are definitely necessary. Early reduction is necessary to prevent possible complications same as the other joint dislocations.

REFERENCES