

Uncommon lesion association: Elbow dislocation with fracture of the lower quarter of the radius and scaphoid.

Rida-Allah BASSIR*, Amine ROUHI, Mustapha MAHFOUD, Ahmed ELBARDOUNI, Mohamed Saleh BERRADA, Moradh ELYAACOUBI,

Department of Orthopedic Surgery and Traumatology, IBNSINA Hospital, University Mohamed V Souissi, Rabat MOROCCO

*Corresponding Author:

Name: Dr. Rida-Allah BASSIR

Email: bredaallah@gmail.com

Abstract: The high energy trauma has become very common on account of the upsurge of traffic accidents. We often see multiple injuries; fractures, dislocations, soft tissue damage in the same patient, interesting the same member or different members. We report a case with a rare association of lesions treated in our department; it comes to elbow dislocation associated with a comminuted fracture of the lower quarter of radius and the scaphoid. We will present our diagnostic and therapeutic strategy to this unusual injury, and the results obtained after 12 months follow-up.

Keywords: Lesion Association, elbow dislocation, wrist fracture, treatment, evolution

INTRODUCTION

The combination of a dislocation of the elbow with fractures of the lower quarter of the radius and scaphoid is rare, mostly due to high energy trauma [1]. We report a case of this unusual lesion while discussing our diagnostic and therapeutic strategy, as well as the results obtained after 12 months of follow-up.

CASE REPORT

A 29 years old man, worker by profession, without significant pathological history, an accident of the highway (the only survivor), with an impact point on any the law, but more marked on the upper limb on the same side. The initial clinical examination after admission to the emergency department was a patient with stable hemodynamic status, without any life-threatening emergency. On loco regional level, we found a deformation of the elbow and right wrist without skin opening, or neurovascular deficit. Radiographs of the right upper limb (Figure 1) showed a posterior elbow dislocation associated with a comminuted fracture of the lower quarter of the radius and scaphoid.

After a complete radiological assessment, the patient was admitted to the emergency operating theater. Our action was to reduce the dislocation of the elbow first, then a reduction in the wrist under fluoroscopic control with stabilization by an external fixer. Postoperative control radiographs was satisfactory (Figure 2). Finally, topped by a contention with a plaster splint elbow bent at right angles, and forearm in

neutral position for 3 weeks. The postoperative course was uneventful.

After 3 weeks, it has made the removal of the plaster splint and the external fixer after a satisfactory radiological control (Figure 3), with establishment of a headline cast for 06 weeks with the start of elbow functional rehabilitation. Radiological control in 02 months and a half objectifying malunion consolidation of the radius, accompanied by bone demineralization in favor of algodystrophy (Figure 4), in addition to a well consolidated scaphoid. After 12 months follow up, there is a total recovery of elbow function with stiffness and decreased strength of the wrist and right hand despite the functional rehabilitation sessions.

DISCUSSION

The combination of a dislocation of the elbow with fractures of the lower quarter of the radius and scaphoid is rare[1]. The mechanism of injury is poorly described by the patient. As our patient, the trauma responsible for violent dislocation is often indirect rule; by Carey[2], there is a fall on the hand, wrist in hyperextension, elbow extension and forearm supination separate the radio ulnar joint top. The violence of trauma and injury mechanism explains the existence of associated injuries (fractures of the lower quarter of the radius and scaphoid)[3]. These complicate treatment and worsen the prognosis as in our case.

Therapeutically we first reduce the dislocation the elbow which was not a problem under general

anesthesia. Wrist had two problems: How to treat comminuted radius, in addition to the scaphoid fracture?

We had two choices; addressing the radius open fire and at the same time address the scaphoid, but in this case it will be the way first and osteosynthesis used? Or achieve a bipolar distraction Closed fireplace; flexion and ulnar deviation at the same time, secure the scaphoid through the external fixer.

We opted for the second choice, realizing a bipolar distraction after controlled reduction under fluoroscopy. The immediate postoperative radiological control was satisfactory with a joint profile of wrist recovered well and good reduction of the fracture of the scaphoid. In literature, before this type of injury; there must always be a reduction of elbow dislocation in the first time, while testing its stability, and immobilized by an external fixer in case of instability[4]. The second step is to reduce and fix the wrist fracture by internal or external fixation [5].



Fig-1: X-ray view showing posterior elbow dislocation associated with a comminuted fracture of the lower quarter of the radius and scaphoid.



Fig-2: Postoperative control radiograph of the right wrist after placement of the external fixer.



Fig-3: Radiation monitoring after 3 weeks.



Fig-4: X-ray control after 12 months follow up.

with ipsilateral forearm fracture. Six particular cases. *Chirurgie de la Main*, 2013; 32(5):299-304.

CONCLUSION

The lesion association observed in our patient is very rare. Proper treatment is essential to avoid the complications of different lesions add and compromise limb function.

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