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

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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 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.
CONCLUSION

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

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REFERENCES