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Simultaneous Bilateral Dislocation of the Elbow: about a Case

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Abstract **Case Report**

Summary: Bilateral elbow dislocations are extremely rare lesions and high-energy trauma is involved [1]. They are responsible for osteo-cartilaginous and capsulo-ligamentous lesions and can lead to serious sequelae in the absence of adequate treatment. The treatment consisted of emergency reduction and management of the instability of the right elbow by ulno-humeral pinning. The evolution was satisfactory within 6 months. The objective of this work is to emphasize the rarity of bilateral elbow dislocation and the place of early rehabilitation for better functional results.
Keywords: Dislocation, bilateral, elbow.

INTRODUCTION

Bilateral elbow dislocation is very rare [1]. It constitutes a therapeutic emergency. Only anatomical reduction and effective bone stabilization are necessary to obtain an acceptable functional result. The objective of this work is to insist on the rarity of bilateral dislocation and the place of early rehabilitation for a better functional result.

Patient and Compliance:

This is a bilateral dislocation in an 18-year-old man with no pathological history who was admitted to the emergency room for impotence of both upper limbs which occurred during an AVP fall on his bicycle shock received on both wrists with both elbows in extension.

The clinical examination found painful deformation of the 2 elbows without vascular-nervous lesions (Figure 1); the standard X-rays of the 2 elbows and 2 wrists, AP and lateral, showed a bilateral dislocation: pure posterolateral of the left elbow and a posterolateral dislocation associated with a fracture of the Mason I radial head on the right side (Figure 2).

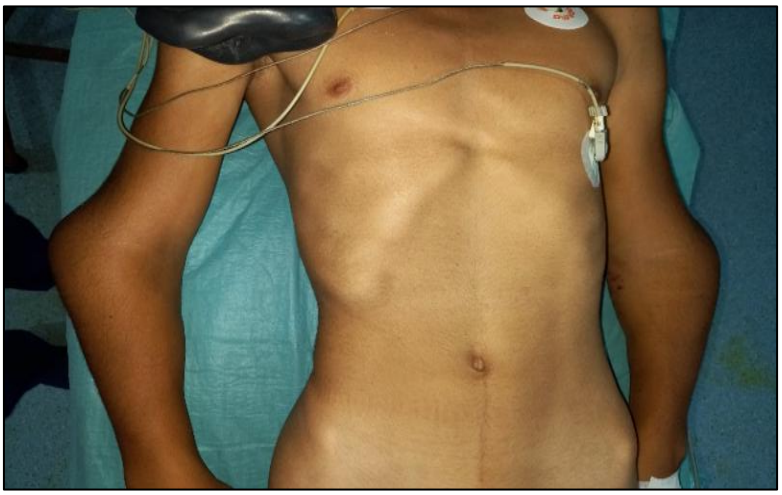

Figure 1: Deformation of the 2 elbows

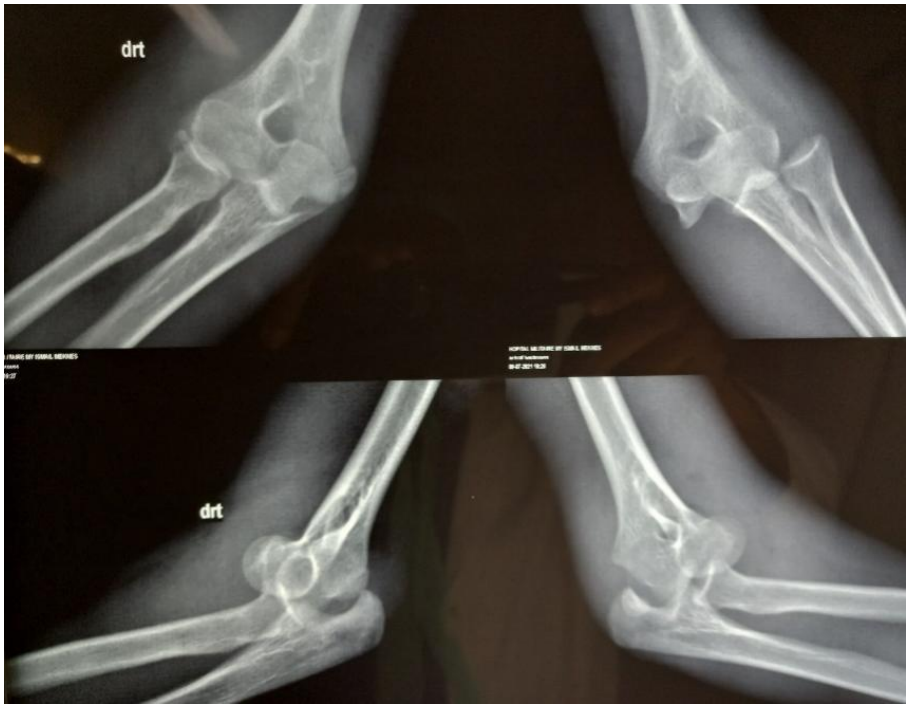

Figure 2: The radiograph of the bilateral dislocation

The patient underwent a closed reduction by external maneuver, a satisfactory scope X-ray control, but the presence of instability of the left elbow after reduction required ulno-humeral pinning maintaining the stability of the elbows in 90° flexion for 4 weeks, the postoperative radiological control was very satisfactory, the active functional rehabilitation of the 2 elbows was prescribed to him after removal of the pin (Figure 3). After 3 months, the patient's control was very satisfactory, with both elbows stable, painless and a range of flexion-extension mobility from 0 to 100° and good prono-supination. The gradual resumption of activity within a normal period was obtained in our patient with the Broberg Morrey score of 85.

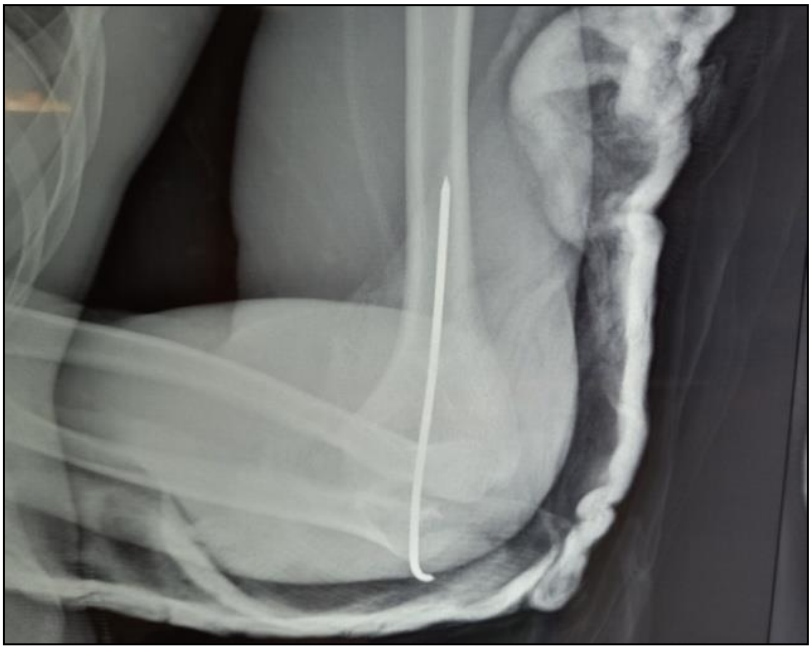

Figure 3: Ulno-humeral pinning

DISCUSSION

Elbow dislocations are common and account for 11-28% of elbow injuries [2]. Bilateral elbow dislocation is an exceptional entity; Only a few cases have been published so far [5]. The clinical presentation is pathognomonic in our patient: fall on both hands with both elbows in extension, Amro and All [1] during their study had found fall on the shock reception chair on

both elbows in flexion. Contrary to the literature review, our patient had no traumatic history or constitution of constitutional hyperlaxity.

Sports accidents followed by road accidents represent respectively the main etiologies [3]. Bilateral dislocation of the elbow is commonly associated with high-energy trauma [1]. The cases described in the literature are attributed to a fall on the bike or a fall on the broken ladder the same for our patient. Nerve complications are the most common and are found in 5 to 20% of cases. The peculiarity of our case lies not only in the rarity of bilateral dislocation, but there was no constitutional hyperlaxity and it was accompanied by a table of instability of the left elbow, a fracture of the radial head of the right elbow (Masson I) and an avulsion of the lateral humeral epicondyle.

Elbow dislocation is a therapeutic emergency and the treatment of these cases of dislocation differs on a case-by-case basis, depending on the severity and presence of associated lesions [1]. In our patient, the dislocation of the "stable" left elbow benefited from immediate immobilization by posterior splint. The duration of the detention was 15 days. Orthopedic treatment gives good functional results [5].

According to Morphy, a downtime exceeding 2 weeks gave significantly less excellent results. In case of pure dislocation with major instability, a surgical gesture from the outset can be considered, namely temporary stabilization by articulated fixator, see a capsular, ligament and muscle repair gesture [5]. Our patient had left elbow instability, which was treated with humeroulnar skewing for 30 days.

The prognosis for bilateral dislocation was good in our patient,as the Broberg Morrey score was 85,although the lesions were present. The recovery time was two months with a good functional rehabilitation of 10 sessions. Because it is not uncommon to take 3 to 4 months to recover good mobility knowing that it can sometimes persist sequelae with incomplete recovery and especially a deficit of extension. Mehlhoff *et al*., [6], proposed the start of gentle active flexion within the limits of pain, then unprotected flexion-extension from the second week.

In the literature, elbow dislocation with serious complications is usually associated with a good prognosis. Results reported in the literature ranged from 48% to 98% good prognosis [3]. But in the study by P. Wauthy *et al*., [5] the prognosis is less good. We recommend orthopedic treatment in cases of pure elbow dislocation and we reserve surgical treatment for dislocations associated with complications.

CONCLUSION

Bilateral dislocation of the elbow is very rare; It occurs most often in high-energy trauma and accompanied by complications. The diagnosis is simple, evoked on clinical examination and confirmed on standard radiography. Management must be early, it consists of reduction followed by stability testing; Immobilization should not be prolonged beyond 2 weeks, in order to allow early mobilization, corollary to a better functional result. Surgical treatment should be reserved for dislocations associated with complications.

Conflicts of Interest: Authors do not declare any conflict of interest.

Authors' Contributions: All authors have read and approved the final version of the manuscript.

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