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Rida-Allah Bassir, Monsef Boufettal, Mustapha Mahfoud, Ahmed Elbardouni, Mohamed Saleh Berrada, Moradh Elyaacoubi

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Case Report: Herein, we report a case of a purely left elbow dislocation in an elderly patient without obvious trauma. Good reduction was achieved by closed method. We present a review of literature highlighting the characteristics and treatment options of this rare condition.

Conclusion: The good understanding of the pathophysiology of this type of dislocation helps to avoid during the reduction maneuver; any fracture or incarceration of ulnar nerve, requiring the surgical reduction and worsening the functional prognosis of the elbow.

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CASE REPORT

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Keywords: Atraumatic, Elbow dislocation, Treatment

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INTRODUCTION

Purely dislocation of the elbow is a rare condition especially in elderly patient without obvious history of trauma [1]. Elbow dislocations are frequently affiliated with a variety of fractures involving the ulna and radius [2]. To our knowledge, in literature there is not any record of adult atraumatic elbow dislocation without fractures. We present the observation with a good outcome after a reduction by closed method, and the review of literature highlighting the characteristics and treatment options.

CASE REPORT

A 63-year-old female arrived in the emergency department without history of acute injury. The patient had one-year history of rapidly progressing, rheumatoid arthritis involving her hands, elbows, and shoulders. RA-latex reaction was positive, rheumatoid factor concentration was 360 IU/mL, and C-reactive protein was constantly high (80 +/- 20 mg/L). The clinical examination revealed a valgus deformity of the left elbow without neurovascular deficit (Figure 1). Identified injuries in radiographs included: a posterolateral dislocation of the left elbow without fracture (Figures 2 and 3). No other injuries were diagnosed. The patient was taken to the operating room, placed in the supine position and general endotracheal anesthesia was administered. A reduction by closed method with soft traction in supination of the forearm and pushing the olecranon medially was made.

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The control in image intensification was satisfactory (Figure 4). With, as expected, a reduction was unstable to valgus stress (Figure 5), but remained stable through an arc of flexion and extension. Then the patient was placed in a posterior splint. At sixth month follow-up, the elbow was stable and painless with full mobility.

Figure 1: A valgus deformity of the left elbow.

Figure 3: Anteroposterior radiograph showing a posterolateral dislocation of the left elbow without fracture.

Figure 4: Radioscopy image showing a good reduction.

Figure 2: Lateral radiograph showing a posterolateral dislocation of the left elbow without fracture.

Figure 5: Radioscopy image on valgus stress showing a medial diastasis.

DISCUSSION

Elbow dislocations are a usually high-energy traumatic event resulting in the loss of congruence of a stable joint. Purely, atraumatic elbow dislocations have never been reported in adult patient. Only one case of bilateral atraumatic dislocation of the shoulder has been reported in literature [1].

Rheumatoid arthritis is a common chronic inflammatory disorder. The shoulder joints are involved in the majority of patients with rheumatoid arthritis (50–70%) [3]. Newell in his series of 1114 elbow injuries do not found a similar case [4]. These dislocations are normally reduced by distal traction on the forearm with the elbow held in mild extension and then straight lateral pressure [5]. To our knowledge, such injuries have not been previously reported in old age [6]. This type of dislocation is only possible by important capsulolabral damage interesting three bundles of the medial collateral ligament. This medial capsulolabral damage release the ulnar nerve of all his fasteners. So that, it takes it to an oblique way, and protects it of a possible rupture or elongation. It exposes it more to risk of incarceration, especially, when we try a reduction. Chhapparwal et al. reported the cause of irreducibility to brachialis muscle and the ulnar nerve incarceration [7]. The neurovascular injuries secondary to this type of dislocation are even more outstanding, only one case of radial nerve palsy was reported by Koulali et al. [8] and a case of injury to the radial artery reported by Cumming et al. [9].

Posterolateral dislocation of the elbow joint can lead to persistent valgus instability that is associated with a worse overall clinical and radiographic result [6]. The reduction of this type of dislocation is reputed to be difficult because of the high risk of fractures and incarceration. In our case, the reduction by external maneuver was not pose a problem. According to Khan et al., reduction requires two persons [10]. The first one maintaining upper limb in extension and supination, and the second one guide the olecranon medially by a soft push, which should achieve a reduction of the dislocation. In the event of irreducibility after the attempt, the surgical approach is necessary to seek for a possible incarceration. The elbow is reputed to be the joint having the most frequent stiffness complication, posing the problem of post reductional immobilization. The cases reported has no problem of stiffness after three weeks of cast immobilization.

CONCLUSION

Through this observation of a purely atraumatic dislocation of the elbow, we draw attention to the rarity of this entity, especially on the necessity of a good clinical and radiological analysis. Moreover, the good understanding of the pathophysiology of this type of dislocation helps to avoid during the reduction maneuver; any fracture

or incarceration of ulnar nerve, requiring the surgical reduction and worsening the functional prognosis of the elbow.

Author Contributions

Rida-Allah Bassir – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published

Monsef Boufettal – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published

Mustapha Mahfoud – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published

Ahmed Elbardouni – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published

Mohamed Saleh Berrada – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published

Moradh Elyaacoubi – Conception and design, Acquisition of data, Analysis and interpretation of data, Drafting the article, Critical revision of the article, Final approval of the version to be published

Guarantor

The corresponding author is the guarantor of submission.

Conflict of Interest

Authors declare no conflict of interest.

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REFERENCES

1. Mihai D, John H. Bilateral atraumatic dislocation of the shoulder. *J Accid Emerg Med* 1999;16(6):460.
2. Ring D, Jesse BJ, Jeffrey Z. Posterior dislocation of the elbow with fractures of the radial head and coronoid. *J Bone Joint Surg Am* 2002;84-A(4):547–1.
3. Wollheim FA. Rheumatoid arthritis: The clinical picture. Oxford Medical Publications 1993:642.

4. Newell ET. Fractures, epiphyseal separations and dislocations; about 1114 cases. *South M J* 1926;19:688–90.
5. Fractures and dislocations of the elbow. In: Bucholz RW, Court-Brown CM, Heckman JD, Tornetta P. editors. *Rockwood and Green's fractures in adults* 7ed. Lippincott Williams and Wilkins 2001, p. 921–52.
6. Eygendaal D, Verdegaal SH, Obermann WR, van Vugt AB, Pöll RG, Rozing PM. Posterolateral Dislocation of the Elbow Joint Relationship to Medial Instability. *J Bone Joint Surg Am* 2000;82(4):555–60.
7. Chhaparwal M, Aroojis A, Divekar M, Kulkarni S, Vaidya SV. Irreducible lateral dislocation of the elbow. *J Postgrad Med* 1997;43(1):19–20.
8. Koulali Idrissi K, Fnini S, Ouarab M, Trafah M. Radial nerve paralysis after lateral dislocation of the elbow. *Chir Main* 2002;21(6):359–61. [Article in French].
9. Cumming D, Chitnavis J, Hayes P. Brachial artery transection following lateral elbow dislocation: Is the presence of a supracondylar process important? *Injury Extra* 2007;38(9):289–1.
10. Khan SK, Chopra R, Chakravarty D. Successful closed manipulation of a pure lateral traumatic dislocation of the elbow joint using a modified Stimson's technique: A case report. *J Med Case Rep* 2008;2:170.

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