

ELBOW BILATERAL LATERAL DISLOCATION

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SUMMARY

The authors present an isolated case of bilateral lateral dislocation of the elbow joint in a 48-year old female patient. The conservative treatment was chosen, through closed reduction under general anesthesia. Both elbows were placed in an axillopalmar splint cast

and held at a 90 degree angle of flexion for three weeks when rehabilitation began. In the eighteen-month follow-up period, good stability as well as the recovery of the range of motion was observed in both elbows

Keywords: Elbow; Dislocation, Immobilization

INTRODUCTION

Elbow acute dislocations in adults occur mostly at the humerus-ulna joint⁽¹⁾. Regarding classification, most of them refer to the position of the ulna towards the humerus⁽²⁾. The most common manifestation of this condition is the posterior dislocation, with other sites such as anterior, medial, lateral and divergent being rare⁽¹⁾. Some injuries may be associated to elbow acute dislocation, especially radius' head and neck, medial or lateral epicondyle, and coronoid process fractures⁽²⁾. Two hypotheses are suggested for explaining the mechanism of injury in cases of elbow dislocation. The hypothesis of hyperextension suggests that injury occurs after a load is applied to the hand with extended elbow, making the olecranon to collide with its fossa, which promotes a lever mechanism of the ulna and radius against their capsular restraints. Concurrently, forces in valgus may lead to radius head fracture. Another hypothesis suggests that displacement occurs so that the load is directed to forearm with the elbow in a flexed position⁽²⁾. Our proposition is to report this rare pathology and to present the treatment approach chosen for this case, emphasizing that no report on isolated bilateral lateral dislocation of the elbow was found in dedicated literature.

CASE REPORT

A 48-year-old, female, housewife patient, weighing 103 kg, had a fall with her elbows extended, when the onset of a picture of strong pain at the right and left elbows level occurred. The patient sought the Orthopaedics and Traumatology Service of the Santa Casa de Misericórdia de Pelotas two hours after trauma. X-ray images of right and left elbows were requested from anteroposterior (AP) and lateral planes.

X-ray images evidenced the right and left elbows' lateral dislocation (Figure 1), being the patient immediately referred to surgical center for bloodless reduction under general anesthesia, aided by

an image intensifier, thus minimizing the risk of additional injuries on soft parts that could compromise future recovery of the patient⁽¹⁾. Then, the bloodless reduction of the left elbow dislocation proceeded, with no interurrences. That reduction was performed by counter-traction of the arm, distal traction on extended forearm, followed by lateral direct pressure. However, when reducing the right elbow, lateral dislocation was undesirably converted into posterior, being immediately converted to the correct position. After reduction, the patient was submitted to immobilization with axillopalmar splint cast for three weeks. By the end of that period, she was taken again to the operating room for performing stress in valgus and varus under anesthesia, being verified a good degree of stability in both elbows. Since then, the patient was released for elbow rehabilitation.

DISCUSSION

Posterior or posterolateral dislocation is found in more than 80% of all dislocations of the elbow⁽²⁾. When lateral, it constitutes a very rare occurrence, usually causing an extensive injury of the entire medial compartment of soft tissues⁽³⁾.

Although elbow dislocation can be clinically diagnosed, many times edema obscures bone marks around the elbow, and humeral supracondylar fractures or associated fractures should then be considered, making X-ray tests essential⁽²⁾.

The objective of elbow dislocation treatment is to restore joint congruence without causing further damages to soft tissues⁽³⁾, and due to this, an appropriate anesthesia is crucial to reduce the strength required for reduction⁽²⁾. Prior to any reduction, a careful neurovascular evaluation must be performed documenting any sensitive or motor deficit⁽²⁾. Elbow dislocations pathology has never been so clearly defined, which justifies the fact that many surgical procedures have been developed as a therapy for this condition⁽²⁾.

Study conducted at Santa Casa de Misericórdia de Pelotas - RS

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Josefsson et al⁽⁴⁾, in 1987, reported outcomes achieved through the analysis of surgical treatment of the elbow dislocation against the non-surgical one, concluding that surgical treatment should not be provided in a simple dislocation, which can be reduced by closed means⁽⁴⁾.

In the present study, the patient totally recovered the flexion-extension motion of the left elbow, with good valgus and varus stability. Right elbow evolved with total flexion and

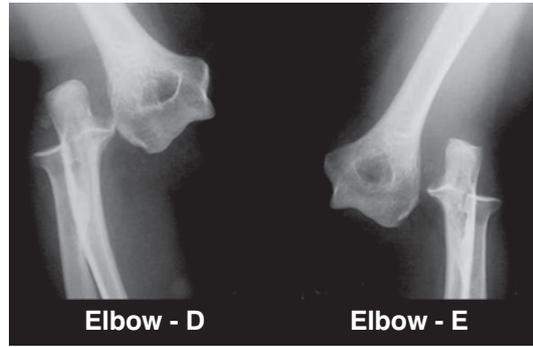


Figure 1 - X-ray at anteroposterior (AP) plane showing lateral dislocation of the right and left elbows.

good stability upon stress in valgus and varus, but an extension limitation in her last ten degrees remained, which can be attributed to the fact that lateral dislocation has been converted into posterior at the moment of reduction, which may have caused an additional damage to soft tissues⁽¹⁾. In the eighteen-month follow-up period, the X-ray control was shown to be normal, and the patient returned to all her daily activities (Figures 2 and 3).



Figure 2 - X-ray studies on right and left elbows after 18 months postoperatively.



Figure 3 - Evolution of the patient after 18 months, presenting with a good recovery of elbows' motion.

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