

# Neglected Elbow Dislocation with Conservation of Elbow Function, Concerning a Case in Abidjan (Ivory Coast)

Seydou Gnombena N'golo Kone\*, Abdoulaye Bana, Eric Gnanbro Dogba

Centre Hospitalier Universitaire de Cocody, Abidjan, Ivory Coast

Email: \*gnombena@gmail.com

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## Abstract

We report a case of elbow neglected dislocation with preservation of function in a 35-year-old patient. The clinical examination, ten years after the trauma, objectified a posterior dislocation of the elbow with a functional stiffness. Therapeutic abstention was decided in front of moderate functional discomfort. The high frequency of these neglected dislocations in our areas is due to the first-line appeal of patients to the bonesetters. The treatment is surgical for non-functional elbows with a risk of residual stiffness. Therapeutic abstention is recommended for functional elbows.

## Keywords

Elbow, Dislocation, Neglected

## 1. Introduction

Dislocation of elbow is said to be neglected if it is not reduced after more than 3 weeks [1]. Neglected dislocations of elbow are still frequent in developing countries because of the initial appeal of patients to the bonesetters [2]-[7]. In neglected elbow dislocation, elbows are fixed in either extension or flexion with only a few degrees of flexion, supination and pronation. This non-functional stiffness is incompatible with the activities of daily life. The purpose of the treatment is to restore a stable and functional articulation. The prognosis of these neglected dislocations is marked by the occurrence of stiffness of the elbow even after surgical treatment [1] [5] [6] [8]. Neglected dislocations of the elbow with conservation of the function are very few described in literature [7].

We report the case of a neglected dislocation of elbow going back ten years with conservation of the function of the elbow.

## 2. Observation

Mr D.J, 35 years old, right-handed, worker by profession, reported to have suffered a trauma to his left elbow 10 years ago during a football match. The patient did not consult in a hospital as a matter of urgency. Rather, he saw a bonesetter who performed a traditional treatment of massage and elbow manipulation. The evolution was marked by the progressive disappearance of the pain and the resumption of the mobility of the elbow. Faced with the observation of an unsightly deformity of the elbow, the patient consulted ten years later in the trauma-orthopedic department of the Polyclinic Groupe Médical du Plateau (Abidjan-Côte d'Ivoire). The clinical examination revealed a deformed elbow with a modification of the anatomical landmarks. It was noted a cubitus varus and a posterolateral projection of the olecranon. The left arm and forearm showed amyotrophy compared to the contralateral limb. There was no neurovascular disorder downstream. The flexion of the elbow was possible up to  $100^\circ$  to bring the hand to the mouth. The extension was at minus  $10^\circ$  and the pronation and supination at  $80^\circ/0^\circ/80^\circ$  (Figure 1 and Figure 2). The radiological assessment of the elbow (standard X-ray and CT scan) shows a posterior dislocation of the elbow with osteoarticular reshaping and joint calcifications (Figure 3). Faced with the seniority of dislocation and the functional nature of stiffness, we decided on a therapeutic abstention and began a functional rehabilitation. This rehabilitation was performed in flexion extension and prono-supination. After 20 sessions of rehabilitation, we could only improve the trophicity of the upper limb.

## 3. Discussion

Our observation concerns a patient who had moderate functional impairment of the elbow despite neglected dislocation dating back ten years. Neglected dislocation of the elbow is a clinical entity that is still seen in underdeveloped countries [3]. Just like our patient, the first reflex of the citizens of these countries is the



**Figure 1.** Clinical appearance of a neglected dislocation of the elbow with deformation.



**Figure 2.** Radiological appearance of a neglected dislocation of the elbow.



**Figure 3.** Flexion-extension of an elbow neglected dislocation.

use of bonesetters in case of trauma. This attitude could explain the delayed diagnosis of these dislocations.

The bonesetters perform massages, untimely manipulations as well as immobilizations in position of extension or flexion [6].

Dislocation of the elbow is said to be neglected if it is not reduced after more than 3 weeks [1]. The dislocated elbow will then fixate in extension or flexion with only a few degrees of mobility and will be non-functional for activities of daily life [1] [9] [10].

Martini *et al.* [11] classifies the stiffness of the elbow into two groups: the functional stiffness where the flexion of the elbow reaches between 80° and 90°, allowing useful gestures (hand-mouth, hand-hair...) and non-functional stiffness where the bending of the elbow does not exceed 70°, not allowing useful gestures despite the efforts being made to adapt the shoulder and the hand. The operative indication will depend on the tolerance or not of the stiffness of the elbow and the duration of the dislocation [3] [6] [9] [11]. Thus Martini [11] proposes surgical abstention in cases of functional stiffness and the other authors propose surgery in non-functional stiffness [2] [6] [12] [13] [14] [15].

The stiffness of our patient's elbow being functional, we decided on a surgical abstention and began rehabilitation which has improved the trophicity of the limb.

Surgical treatment of neglected dislocation of the elbow is a challenge for surgeons [9]. It involves open reduction with or without triceps lengthening and Kirschner pin fixation. This treatment does not, however, protect from possible stiffness of the elbow [2] [3] [6] [12] [13].

As noted by Martini *et al.* [11], this observation underlines the possible functional adaptation of dislocated elbows over time. It is therefore necessary to know how to abstain from a surgical treatment in front of a neglected dislocation of the elbow with a functional stiffness.

#### 4. Conclusion

Neglected dislocations of the elbow are serious injuries that can compromise the function of the elbow. These dislocations are frequent in our context. The main complication of these dislocations is a nonfunctional stiffness. It is rare to encounter a neglected dislocation with conservation of function. We insist on the emergency care of osteoarticular trauma.

#### Consent

The patient's informed consent was obtained.

#### Conflicts of Interest

The authors state no conflict of interest.

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