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Neglected dislocations of the elbow: Anatomical clinical aspects and management at the Orthopedics-Traumatology Department of the Donka University Hospital

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DOI: https://doi.org/10.29121/ijrsmp.v12.i3.2025.02

Abstract
Objective: To identify the anatomical pathological lesions, to describe the therapeutic method and to evaluate the results. Material and Methods: This is a 2-year prospective descriptive study, from January 1, 2019 to December 31, 2020. Patients received, treated and followed up for neglected elbow dislocation with a mean follow-up of 3 months. The assessment according to the modified Mayo-Clinic rating. Results: Eighty percent of our patients had consulted for stiffness. The 19-38 age groups was more affected 60% with a male predominance of 60% and a sex ratio of 1.5. The mean time to consultation was 5.1 ± 4.2 months with extremes of 2 and 16 months. Our patients have made an initial use of traditional treatment. We observed 80% of cases of posterolateral dislocation. The posterior transtricipital approach was the most used 66.67% and arthrolysis plus splint in 6 cases or 67%. The average mobility sector (flexion-extension) was 99° with extremes of 50° and 140°. Two cases of complication were observed: recurrence and ulnar paralysis. Our results were excellent 5 cases, good result 3 cases and 1 bad result. Conclusion: neglected dislocations occur due to ignorance or lack of knowledge of the initial pathology, with blind trust in the treatment of traditional medicine; for these practitioners do not shrink from any injury. The treatment remains almost exclusively surgical by the posterior approach and Z-plasty was more used.

Keywords: Neglected Dislocation, Elbow, Anatomical Clinic, treatment.

Introduction
Neglected elbow dislocation is defined as a total and permanent loss of contact between the joint surfaces of the elbow beyond three weeks of trauma [1]. These lesions are uncommon in industrialized countries. However, they are not uncommon in our context [2]. The main reason for the delay in diagnosis is that patients initially resort to treatment by traditional healers who immobilize the elbow in extension. This leads to the retraction of the triceps muscle and collateral ligaments. The resulting stiffness of the elbow makes the surgical procedure quite difficult. The prognosis may be marked by stiffness even after surgery [3]. If these dislocations require surgical treatment, the surgeon has several options to consider: surgical approach, need for triceps lengthening (plasty) or olescreeniotomy, stabilization of the elbow after reduction, and repair of the collateral ligaments [4]. The aim of this work was to identify the anatomopathological lesions; to describe the therapeutic method and finally to evaluate the results.

Patients and Methods: This was a prospective descriptive study with a duration of two years, from January 1, 2019 to December 31, 2020. Patients with neglected elbow dislocation received and treated in the ward during the study period were included. Patients with recent trauma and congenital dislocations were excluded. All our patients have resorted to traditional treatment. Our variables were epidemiological, anatomopathological, therapeutic and evolving. The indication of the approach was guided by the nature of the osteoarticular lesions. Thus, the posterior transtricipital approach has been used in the majority of our patients. It made it possible, on

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the one hand, to have a good light on the joint and, on the other hand, to lengthen the tricipital tendon by V-Y or Z-plasty. During this approach, the ulnar nerve has always been dissected and put under the lake without being transposed. Depending on the different anatomical lesions encountered, other complementary procedures were associated: removal of fibrosis, resection of osteomas and bone fragments constituting abutments. The reduction was maintained by one or two transolecranohumeral Kirschner pins depending on stability in all patients. Restraint of the operated limb in a plaster splint was systematic in all patients until the braces were removed. (Figure 1).

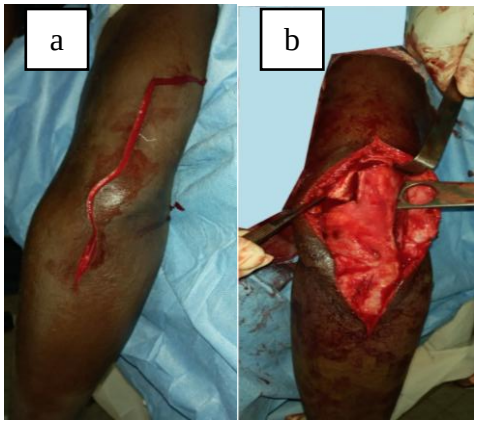

Figure 1: (a): The posterior approach to the elbow; (b): Intra-operative view Triceps plasty (Triceps Z), in all patients, the duration of immobilization was between 21 and 30 days and the pins were removed at the same time as the cast splint. After the removal of the pins, all patients underwent active and passive rehabilitation. Our results were judged according to the modified Mayo Clinic rating [5] based on: pain (45 points), function (25 points), range of motion (20 points), stability (10 points). Thus, the results obtained are classified into 4 scores: excellent: > 90 points, good: 89-75 points, average: 74-60 points and bad: < 60 points.

Limitations and difficulties: During the study period, the Orthopedics-Traumatology Department of the Donka National Hospital was relocated to Camp Camayenne (military camp located opposite the hospital) for reasons of renovation and extension of the hospital. This has reduced the attendance rate. Data collection: Our data was entered and analysed by the EPI info 7.2 software and presented by the 2016 offices pack.

Ethical consideration: Our data were collected anonymously; confidentiality was respected with the free and informed consent of the respondents.

Results: In total, we collected ten patients, including 6 men (60%) and 4 women (40%) with a sex ratio of 1.5. The 19-38 age group was more affected, 60%, with extremes of 19 and 70 (38.8±16.1). The mean time to consultation was 5.1 ± 4.2 months with extremes of 2 and 16 months. Patients from the informal sector were the most exposed with a frequency of 50% cases followed by the formal sectors. The majority of our patients came from rural areas with a frequency of 60%. The initial etiology is represented by a fracture of the lateral condyle (10%), a fracture of the radial head (10%), an osteoma of the right brachialis (10%). The nature of the initial treatment is shown in Table I.

Table I: Distribution of patients by nature of initial treatment

Nature of traditional treatment	Workforce	Percentage
massage + attèlle par guérisseur	5	50,00%
Cataplasme + incantations	2	20,00%
Massage	1	10,00%
Attèle par guérisseur	1	10,00%
Incantations + massage + attèle par guérisseur	1	10,00%
TOTAL	10	100,00%

The mean preoperative flexion was 27.5° with extremes of 0° and -45°. The deficit in elbow extension was -17 on averages with extremes of -45° and 0°. Patients had an average mobility (flexion-extension) area of 17.5° with

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extremes of 0° and 45°. In seven patients, i.e. in 70% of cases, the preoperative prognosupination was normal, Table II.

Table II: Distribution of patients by preoperative mobility sector.

Patient	Flexion	Extens.	Mobile R&D	Pronation	Supination	Mobil.p/s
1	10	-10	0	80	30	50
2	45	-30	15	80	10	70
3	40	-20	20	80	15	65
4	45	0	45	70	0	70
5	20	-10	10	60	0	60
6	0	0	40	75	0	75
7	40	-40	0	80	0	80
8	0	0	0	80	0	80
9	45	-45	0	80	30	50
10	30	-15	15	80	-45	45

The mean postoperative flexion became 117° with extremes of 50° and 140°. The extension of the elbow was -4 on average with extremes of -20° and 0°.

The patients had an average mobility area (flexion-extension) of 99° with extremes of 50° and 140°.

Table III: Result of Postoperative Mobility per patient.

Patients	Flexion	Extension	Mobility F/E	Pronation	Supination	Mobility P/S
1	140	0	140	80	50	30
2	130	0	130	80	30	50
3	50	0	50	80	40	40
4	140	0	140	80	60	20
5	120	0	120	70	30	40
6	130	0	130	80	45	35
7	110	-20	90	80	70	10
8	120	0	120	80	60	20
9	110	-20	90	80	40	40
10	140	0	140	80	60	20

The posterior approach was widely used: 6 cases of Transtricipital, 2 cases of olecraniotomy and 2 cases of paratricipital. Seven patients presented with a single isolated neglected dislocation and 3 cases with lesions associated with lateral condyle fracture type, radial head and intramuscular calcification of the anterior brachialis << osteoma >>. Of the neglected dislocations, 8 were posterolateral dislocations and 2 cases were pure posterior dislocations, Table IV.

Table IV: Distribution according to the nature of the surgical management.

Support	Workforce	Percentage
Approach		
Trans tricipital	6	60,00

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Trans olecranon	2	20,00
Para-tricipital	2	20,00
Corrective action		
Resection and repositioning	7	70,00
Repositioning	3	30,00
Means of stabilisation		
Broaching, bracing + plastered splint	6	60,00
Broaching, bracing + cast sling	3	30,00
Broaching, face + plastered sling	1	10,00

Two complications were observed: ulnar paralysis 1 (10%) and recurrence 1 (10%). Our patients were evaluated according to Mayo Clinic's rating and the results obtained judged: Excellent in 50%, Good result 40% and Poor result 10%. (Figure 2).

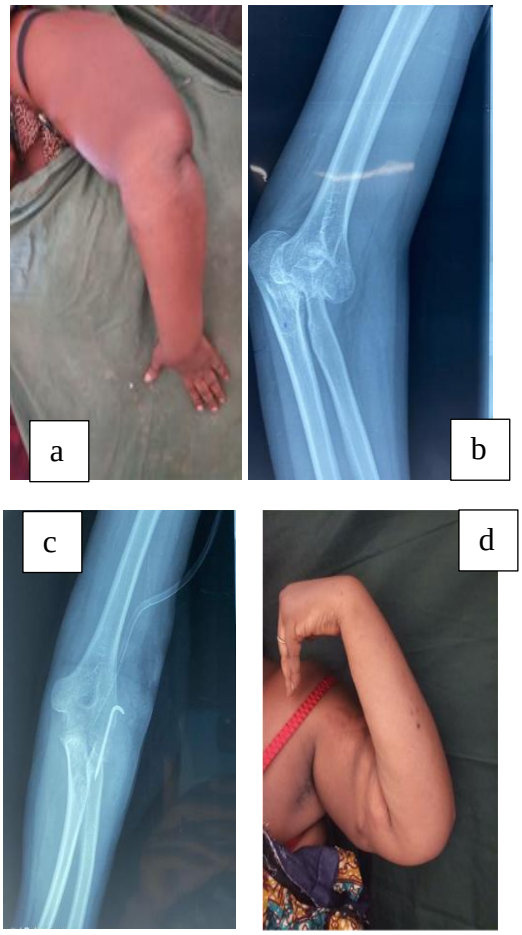

Figure 2: (a): Female 35 years old, Preoperative clinical image; (b): Radiological image showing an old posterolateral dislocation; (c): Frontal elbow control X-ray showing reduction of dislocation reduced and maintained by a pin; (d): Clinical outcome at six months postoperatively, normal elbow flexion.

Discussion:

The difficulties and limitations of this study were the lack of information on the risk factors related to traditional treatment, but also the sample size, which impacted the result. The most common type of dislocation in our respondents was posterolateral dislocation with a frequency of 80%. This proportion was close to those of Coulibaly N.F. et al. who had found 90% of the cases in their series [2]. Among our patients, 30% had associated lesions compared to 70% who did not have associated lesions. Our result is close to that of Keita Gaoussou [6] in 2012, who reported that old elbow dislocations were associated with bone lesions of the same elbow in 60% of

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cases. Lateral condyle fracture, radial head fracture and anterior brachial osteoma were the associated lesions found in our patients with a frequency of 10% each. Our results confirm the data in the literature that state that epitrochlea, fracture of the radial head and coronoid process are the most common associated lesions.

The posterior Transtricipital and Trans olecranon approach was the most used approach with frequencies of 66.67% and 22.22% respectively. The same finding was made by Mahaisavariya et al. in 2005 [7] who reported that the posterior approach with VY muscle plasty was used in most patients with a postoperative immobilization of 2 to 3 weeks. Easy access to the focus without damage to noble structures (nerves, vessels) would justify the choice of this route. In 77.78% of cases, we performed joint and regional fibrosis resection followed by repositioning, only 22.22% of cases benefited from repositioning alone. The evolution of these patients would justify these results. Broaching with plaster retention was performed in 67% of patients, on the other hand 22% benefited from broaching, guying + plaster retention, followed by those who benefited from screwing, broaching + retention (10%), a duration of 21 days for condyloradial broaching. This result would be justified by the presence or absence of associated lesions and the approach used.

We found that 5 patients had an excellent result and 3 patients a good result, i.e. 55.56% and 33.33% respectively, and a case of poor result 11.11%. One patient had a recurrence (10%) during rehabilitation maneuvers that was resumed in the operating room and ulnar nerve palsy (10%) which resolved 3 months later. Our result is similar to those of Coulibaly N.F et al. in 2012 [2] who reported that 66.67% (14/21) of patients had an excellent result, 19.04% (4/21) good, 9.52% (2/21) average and 9.52% 2 poor. Our complication rate was lower than those of El alami Z. F. et al. [8] and Ait Essi F. et al. [9] who found 24% and 25%, respectively. All patients received rehabilitation after 21 days, related to the removal of the reduction fixation pin.

Conclusion:

Neglected elbow dislocations are not to be underestimated, given the complications they can cause on a functional level and especially when they are treated late after a long stay in traditional medicine. Posterior dislocations were the most frequent and young adult males paid a heavy price. Surgical treatment remains and remains the best way to manage these dislocations. Physiotherapy could be the ideal complementary treatment to significantly improve the prognosis of these lesions.

Links of Interest: The authors declare that have no links of interest

Reference:

1. Lahrach K, Ammoumri O, Mezzani A, Benabid M, Marzouki A, Boutayeb F. A case of neglected fracture dislocation of the elbow with preservation of elbow function. Pan Afr Med J 2015; 20:199.
2. Coulibaly NF, Tiemdjo H, Sane AD, Sarr YF, Ndiaye A, Seye S. Posterior approach for surgical treatment of neglected elbow dislocation. Orthop Traumatol Surg Res 2012; 98(5):552–8.
3. Kamni T. Neglected dislocation of the elbow in children: about 42 cases. Mohamed V University - Rabat, 2015.
4. Tekpa B, Doui-Doumgba A, Ngouyombo U, Nghario L, Issa-Mapouka PA, Gaudeuille A. Neglected Elbow Dislocations Treated by Open Reduction and Elongation of the Triceps Brachial: 27 Cases Report 2017.
5. Duong B. Neglected Dislocation of the Elbow. European University Publishing; 2019.
6. Keita G. Old dislocations of the elbow; Epidemio6-clinical aspects and evaluation of surgical treatment in the orthopedic and traumatological surgery department of the Kati University Hospital. University of Bamako, 2012:112p.
7. Mahaisavariya B, Laupattarakasem W. Neglected dislocation of the elbow. Clin Orthop Relat Res 2005; (431):21–5.
8. El Alami ZE, Teklali Y, Dendane MA, Amrani A, El Madhi T, Gourinda H, et al. Neglected elbow dislocations in children (about 33 cases). The Journal of Orthopedics 2022; (16):693-695.
9. Ait Essi F, Rafai M, Largab A, Trafeh M. Neglected elbow fracture–dislocation: surgical reduction with enlargement of the large sigmoid cavity (about one case). Hand Surgery 2005; 24 (3-4):177–80.