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Rare Case of a Bilateral Shoulder Dislocation in a 28 Years-Old Patient: About a Case and Review of the Literature

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Abstract **Original Research Article**

Pure anterior bilateral shoulder dislocations are rare clinical entities. About thirty cases are described in the literature. We report a case of a patient of 28 years old, with no known pathological history, who was received in the emergency room following a public road accident. We discuss the unusual mechanism of this trauma about this dislocation and its treatment.

Keywords: Shoulder-Dislocation-Pain-Traumatology-Accident.

INTRODUCTION

Although anterior joint glenohumeral dislocations are the most common dislocations encountered in emergencies, bilateral forms are very rare. These bilateral dislocations of the glenohumeral joint are most often posterior, secondary to convulsive crisis and electrocution accident. Earlier forms are rare. Less than one thirty cases have been published.

We report a case of bilateral anterior glenohumeral dislocation of and discuss the mechanism and treatment.

MATERIEL AND METHODS

A 28-year-old man was admitted to the emergency room surgery at Ibn Sina Hospital in Rabat for blunt trauma of both shoulders on June 17, 2023. A car hit the back of his motorcycle. He remembered that he fell on both hands, between his motorcycle and the car that had hit him. He had no history of trauma or dislocation of the shoulders, or any other known pathological history.

On clinical examination, signs of anterior dislocation were present on both sides (epaulette sign, external ax kick, vacuity of the sub acromial space). There was no stump sensitivity disorder of both shoulders. The radial pulse was present in both limbs, neurological examination was normal. The standard radiography of shoulders confirmed the diagnosis of bilateral dislocation of the shoulders in its anterior sub coracoid variety.

Under general anesthesia, both dislocations were reduced by external operation, according to the Kocher technique. After reduction, immobilization with a Mayo Clinic scarf was set up, shoulders adducted and rotated internal. On the follow-up radiographies, the dislocations were well reduced.

Three weeks after the accident, both shoulders still reduced. The immobilization has been removed and rehabilitation sessions began starting with the pendulum movements.

There sensitivity and contractility of the stump of both shoulders were normal. There were no signs of hyperlaxity: no sulcus sign or elbow recurvatum.

At the last 4-week follow-up, shoulder mobility was complete. There was no notion of instability or recidivism. The patient had returned to work after a 5-week break.

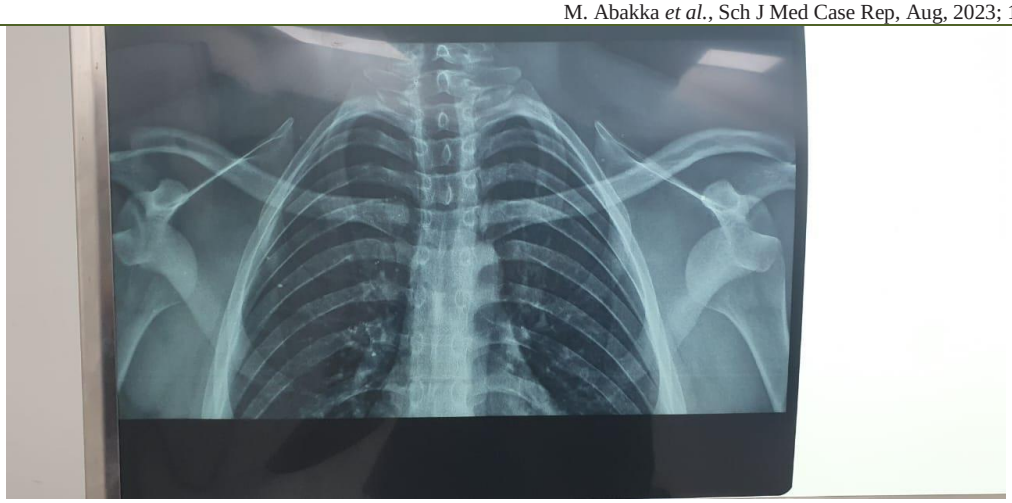

Figure 1: Bilateral dislocation of both shoulders

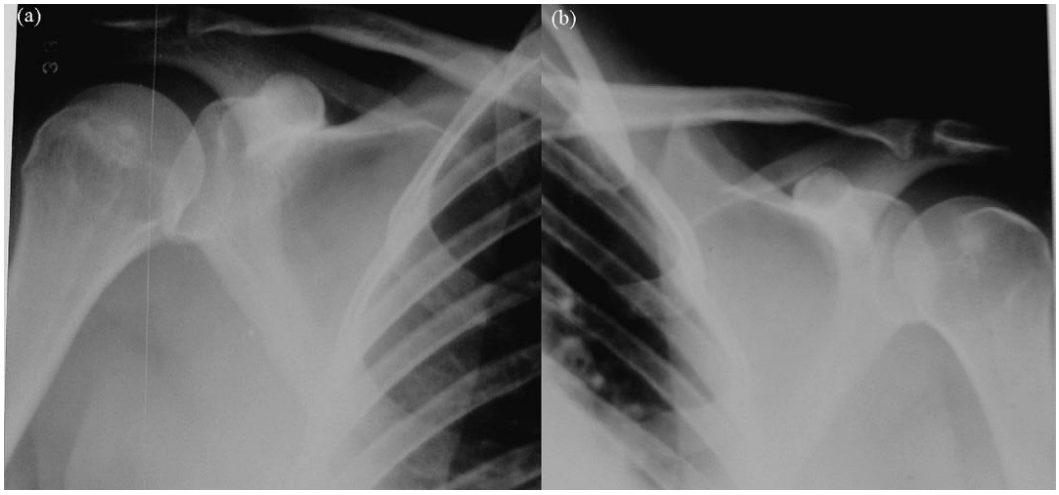

Figure 2: X-Rays after the reduction of both dislocations

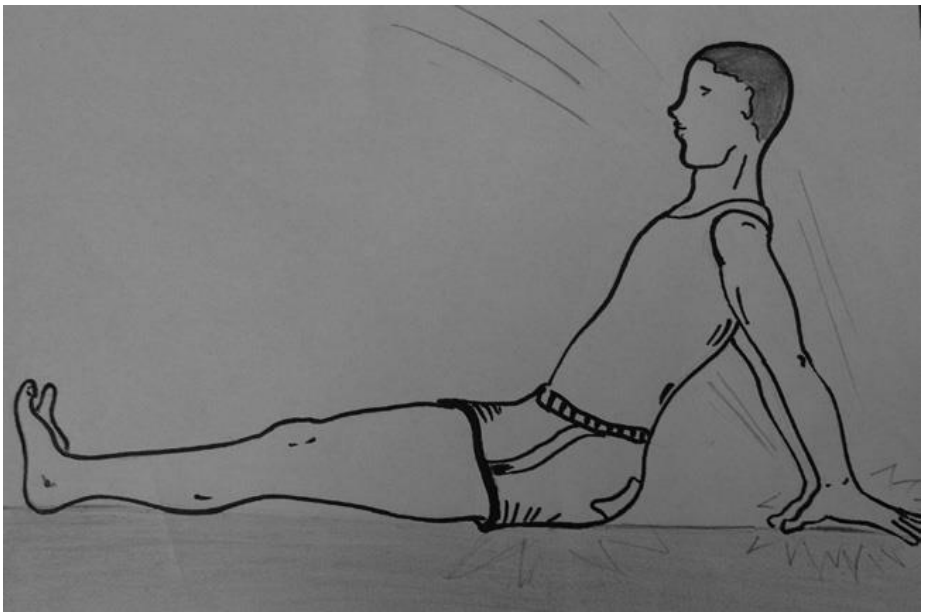

Figure 3: Profile image illustrating the mechanism of anterior dislocation of the two shoulders secondary to the traffic accident. Reception of the patient on both hands, upper limbs in extension, abduction and external rotation, thus achieving the necessary conditions for an anterior dislocation to the level of each shoulder

DISCUSSION

Bilateral shoulder dislocations constitute a rare clinical entity. Indeed, the necessary force to produce must act symmetrically and synchronously at the level of both glenohumeral joints. This happens the most often in the event of a convulsive crisis of epileptic origin, electric or in case of neuromuscular diseases. The first case was described in 1902. In 1984, the analysis of 90 cases of bilateral dislocations, published in the literature, has allowed Brown to find three different etiologies:

- Violent muscle contractions (49%);
- Trauma (23%);
- Atraumatic (36%).

These dislocations may be posterior (the most frequent), inferior or anterior. Bilateral varieties are rare. A review of the literature made it possible to find about thirty cases.

Most are of traumatic origin or secondary to seizures convulsions of electrical or epileptic origin. Our case, having no history of ligament hyperlaxity and belonging to Brown's group 2 is interesting on two points.

The mechanism of the dislocations in our patient has been reported in the literature one time. He remembered being received on the hands, between his motorcycle and the vehicle that hit him. As he has no no other associated lesions, it is likely that the shock provoked by the car, probably chased the motorcycle under him.

He then fell landing on both hands, with extended elbow, shoulders abducted, externally rotated and retropulsion. This implies that he would have left, in a way reflex, the handlebars of the motorcycle (by surprise effect, not having saw the car coming). The fall would have accentuated the abduction and the external rotation of the shoulders, thus leaving the anterior capsuligamentary and muscular elements as alone front stabilizing elements of the shoulders. This mechanism injury has been described one time in the literature and occurred in 2005 in Togo, but other unusual traumatic mechanisms have been reported.

Singh and Kumar reported a case where both shoulders would have dislocated by different mechanisms: shoulder dislocation left was secondary to a fall from a motorcycle with a landing on the shoulder while on the right side, the dislocation has occurred when paramedics helped the patient into the car holding it by the right upper limb.

This patient had a history of instability in the right shoulder and this episode was the third. Two other cases of bilateral anterior dislocation of the shoulders have been reported in patients with no history instability, having lifted bars, during a weight training session. The shoulder dislocations were caused by swing the bar back. The authors had recommended the use of fixed bars for the prevention of these dislocations.

The reduction of the dislocations was easy, under general anesthesia by Kocher's method. The Spaso's technique, described by Miljesic and Kelly in 1998, would be more effective. This simple technique involves the application of a vertical traction on the traumatized limb, held by the wrist, the patient in the supine position, then to exercise gradually an external rotational movement.

Strength used to obtain the reduction by this technique would be less than that used in the Kocher method. The orthopedic treatment that we instituted provided a good result.

This reinforces our orthopedic surgery support, surgery being considered only in case of recidivism although the risk of recurrence is higher in patients under 40 years old.

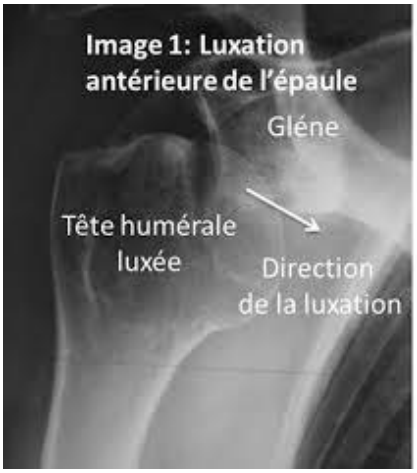

Figure 4: Anterior shoulder dislocation

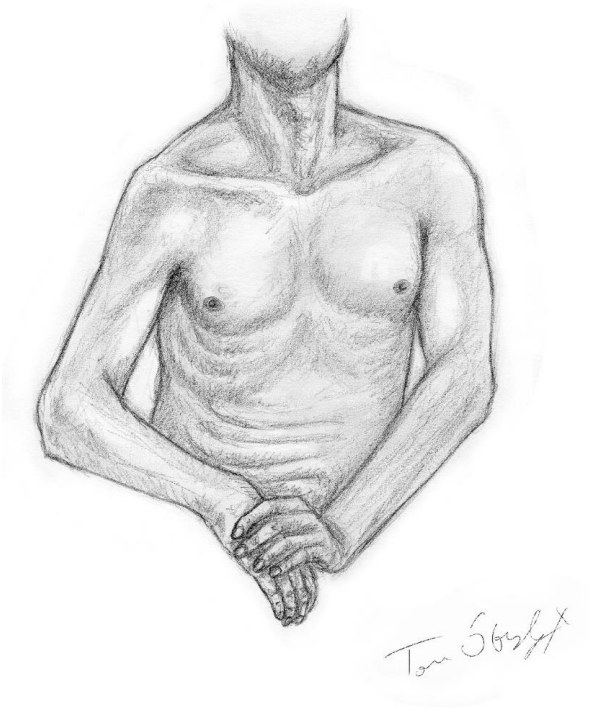

Figure 5: Traumatized upper limb

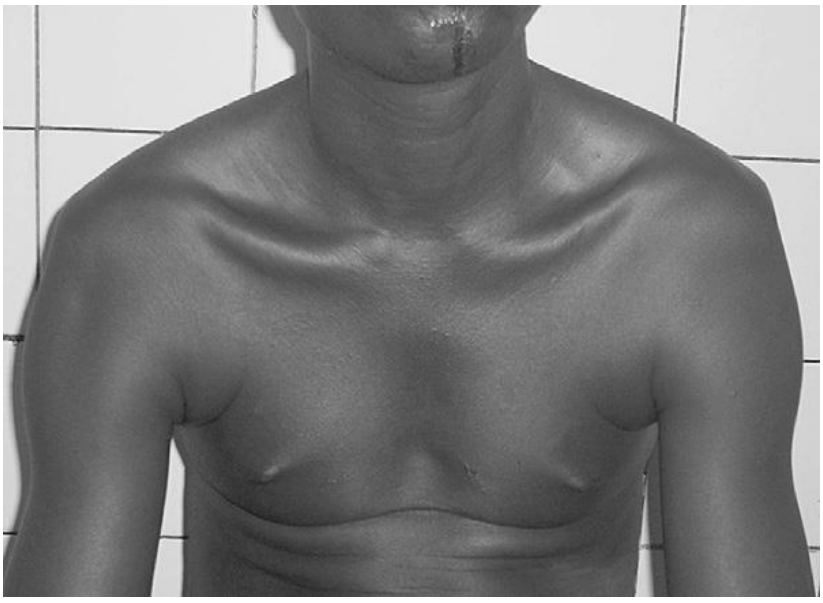

Figure 6: Clinical aspect of bilateral shoulder dislocation (Togo)

CONCLUSION

Bilateral anterior posttraumatic shoulder dislocations are rare. We wanted by this clinical case to show the unusual nature of the causal mechanism and to describe the type of management of this type of dislocation.

REFERENCES

- Cresswell, T. R., & Smith, R. B. (1998). Bilateral anterior shoulder dislocations in bench pressing: an unusual cause. *British journal of sports medicine*, *32*(1), 71-72.
- Brown, R. J. (1984). Bilateral dislocation of the shoulders. *Injury*, *15*(4), 267-273.
- Mynter, H. (1902). XIV. Subacromial dislocation from muscular spasm. *Annals of surgery*, *36*(1), 117-119.
- Ryan, J., & Whitten, M. (1997). Bilateral locked posterior shoulder dislocation in a footballer. *British journal of sports medicine*, *31*(1), 74-75.

- Sharma, L., Pankaj, A., Kumar, V., Malhotra, R., & Bhan, S. (2005). Bilateral anterior dislocation of the shoulders with proximal humeral fractures: a case report. *Journal of Orthopaedic Surgery*, *13*(3), 303-306.
- Maffulli, N., & Mikhail, H. M. T. (1990). Bilateral anterior glenohumeral dislocation in a weightlifter. *Injury*, *21*(4), 254-256.
- Miljesic, S., & Kelly, A. M. (1998). Reduction of anterior dislocation of the shoulder: the Spaso technique. *Emergency Medicine*, *10*(2), 173-175.
- Yuen, M. C., & Tung, W. K. (2001). The use of the Spaso technique in a patient with bilateral dislocations of shoulder. *The American journal of emergency medicine*, *19*(1), 64-66.
- Saragaglia, D., Picard, F., Le Bredonchel Th, M. C., Sardo, M., & Tourne, Y. (2001). Les instabilités antérieures aiguës de l'épaule. *RCO*, *87*, 215-20.
- Devalia Kailash, L., & Peter, V. K. (2005). Letter To Editor-Bilateral post traumatic anterior shoulder dislocation. *Journal of postgraduate medicine*, *51*(1), 72-73.
- Petty, K., Price, J., Kharasch, M., & Novack, J. (2014). Bilateral luxatio erecta: a case report. *The Journal of Emergency Medicine*, *46*(2), 176-179.
- Abalo, A., Dossim, A., Songne, B., & Ayouba, G. (2008). Bilateral anterior dislocation of the shoulders A case report, Service d'orthopédie traumatologie, CHU Tokoin, B.P. 57, Lomé, Togo.
- Miroux, F., Moysan, P., & Koch, P. (2009). Anatomie radiologique de l'épaule. Encyclopédie Médico-chirurgicale, 30-360-A-10.
- Singh, S., & Kumar, S. (2005). Bilateral anterior shoulder dislocation: a case report. *European journal of emergency medicine*, *12*(1), 33-35.