

BILATERAL LUXATIO ERECTA HUMERI

M. MESA, P. CARPINTERO, J. CARPINTERO

The authors report one case of bilateral inferior dislocation of the shoulder, a rare form of injury, accounting for only 0.5% of all shoulder dislocations. Bilateral cases are even less frequent, with only six cases reported in the literature.

The injury was complicated by paresia of the left axillary nerve and sensory alterations in both median nerves, without any associated osteoarticular or vascular injuries.

The patients made a complete functional recovery within three years.

Keywords : Inferior dislocation ; shoulder ; erecta.

Mots-clés : épaule ; luxation inférieure.

INTRODUCTION

Luxatio erecta humeri accounts for only an estimated 0.5% of all shoulder dislocations (1, 5), making it one of the rarest forms of this injury.

The first known report of this type of dislocation was published by Middeldorpf in 1859 (1), and since then only around 100 cases have been reported (1, 2, 3, 4, 5), in patients ranging from three months to 75 years of age. However, only six bilateral cases have been reported (1); we present one such case.

CASE REPORT

L.D., a 32-year-old male, was brought to the emergency room of our hospital half an hour after a traffic accident. In the course of the accident, his car overturned several times; the patient, whose seatbelt had apparently opened, braced both arms against the roof of the car in an attempt to prevent head injury. When admitted,

the patient was conscious and cooperative, and complained of intense pain and complete loss of function in both arms. He had not previously suffered any dislocation or other trauma to the shoulders.

Physical examination revealed that both upper extremities were abducted at the shoulder, flexed at the elbow, and pronated at the forearm. Both hands rested on his head. Attempts to bring his arms down towards his trunk were met with mechanical resistance and complaints of significant pain. The radial pulse was easily palpable in both wrists. Neurological examination revealed sensory impairment in the middle finger of the left hand and the first finger of the right hand, together with anesthesia of the posterolateral aspect of the left shoulder (deltoid muscle).

Roentgenological evaluation (fig. 1) confirmed the diagnosis of bilateral luxatio erecta humeri, with no associated bone injuries.

Closed reduction of both dislocations was performed under sedation and anesthesia, using traction and countertraction (fig. 2). The patient was subsequently immobilized for three weeks by means of a Velpeau bandage.

On follow-up examination, sensory impairment persisted in both hands, though unaccompanied by motor difficulties. A lack of voluntary contraction in the deltoid muscle of the left shoulder was noted on electromyographic examination, together with sensory impairment of both median nerves and neurapraxia of the left axillary nerve.

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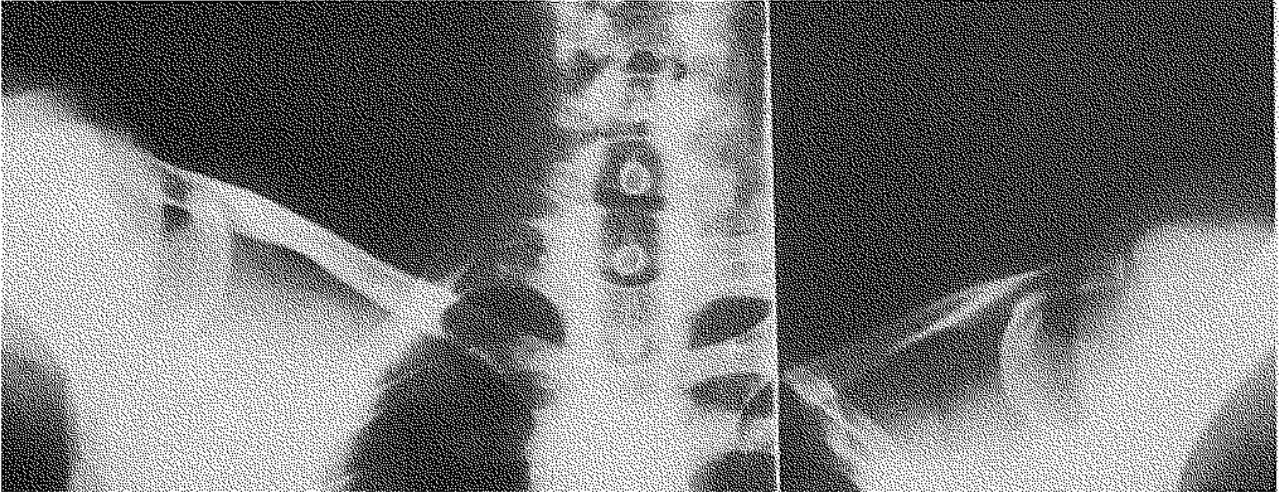


Fig. 1. — Xray taken on admission, showing bilateral luxatio erecta humeri.

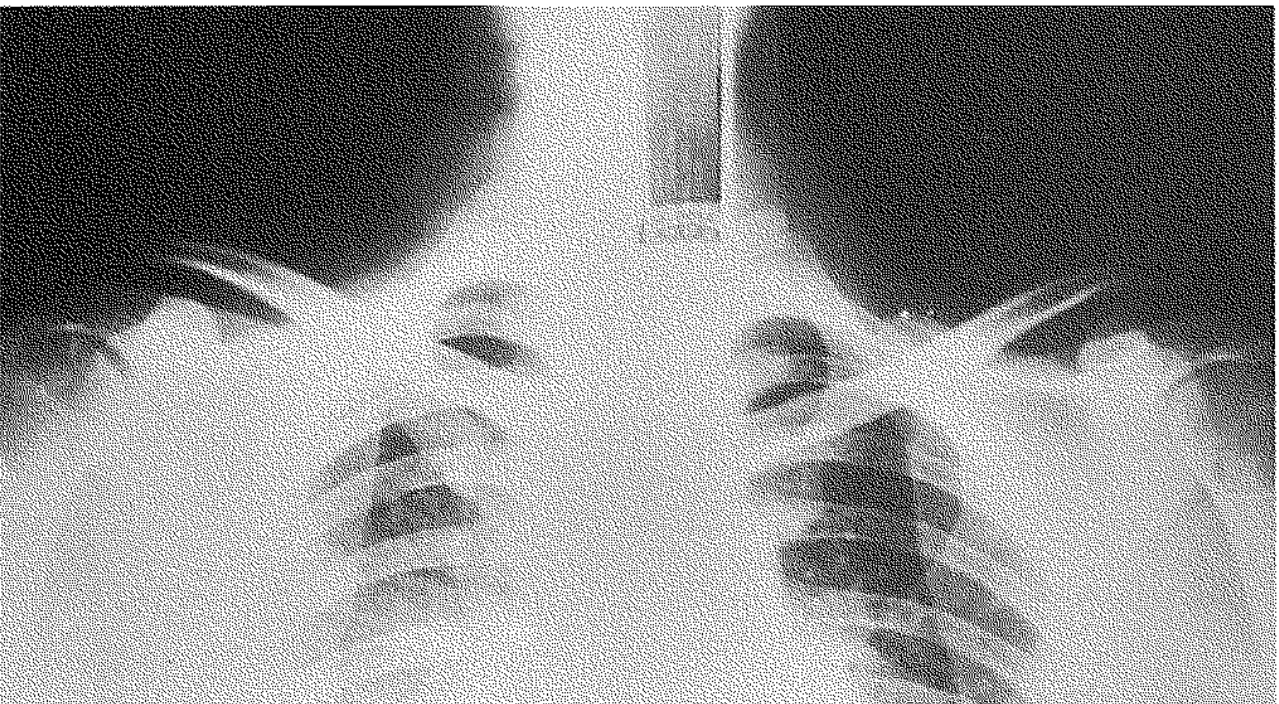


Fig. 2. — Xray after reduction of both dislocations.

The patient was referred to the physiotherapy department, where he received electrical muscle stimulation and neurotrophic drugs. Four months later, he had made a complete recovery. Today, three years later, he has fully recovered and shows no sign of articular or neurological impairment.

DISCUSSION

Although luxatio erecta humeri has been recognized for over a hundred years, it remains a rare injury, particularly in its bilateral forms, of which very few reports have been published to date (1, 2, 3, 4). Unusually, the mechanism of injury in this case was direct rather than indirect, and involved axial loading on both arms as the car overturned (1, 2, 3, 4).

The clinical appearance of the patient was characteristic: the patient's arm was abducted at the shoulder, flexed at the elbow and pronated at the forearm. The shoulder was fixed in this position, and any attempts to move it resulted in intense pain (1, 2, 3). No associated bone injuries were observed, probably because of the direct nature of the causative mechanism; the humeral head did not come to rest on any bone structure in the course of dislocation, as it might have done in the case of an indirect mechanism. A review of the literature shows that bone injuries are indeed more common in dislocations caused by an indirect mechanism (1, 3).

Reduction, using the conventional traction-countertraction method, was readily achieved in both cases on the first attempt, indicating the efficacy of the technique (1).

As is the case with all shoulder dislocations, the proximity of the brachial plexus and the axillary vessels may give rise to associated neurovascular injuries, such as a trapped axillary artery. However, the latter is relatively rare; Mallon (4) reports an incidence of only 3.3% in a review of 80 cases of luxatio erecta. No vascular complications were noted in the present case. Neurological injuries are more common, and tend to involve lesions of the brachial plexus and isolated radial or ulnar nerve injuries; the prognosis is usually excellent, since as a rule the mechanism

of injury is a neurapraxia (4). Some neurological impairment was noted in our patient; however, from admission onwards sensory impairment in both median nerves (C-7, C-8) resolved after a short time, although mixed impairment of the left axillary nerve (C-6) persisted for a further 4 months, probably owing to pressure from the humeral head, since the impairment was observed prior to reduction.

Prognosis of such neurological injuries was confirmed to be excellent. An immobilization period of three weeks was found to be essential; three years after the accident the patient had completely recovered from articular and neurological injuries, with none of the delayed complications reported elsewhere (1), such as recurrent dislocation or adhesive capsulitis. The patient has now fully resumed normal physical activity.

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SAMENVATTING

*M. MESA, P. CARPINTERO, T. CARPINTERO.
Bilaterale onderste schouderluxatie.*

De auteurs rapporteren een geval van bilaterale onderste schouderluxatie. Het gaat om een zeldzame vorm (0,5%) van schouderluxatie.

De bilaterale gevallen zijn nog zeldzamer met 6 in de literatuur beschreven gevallen. De luxatie was gecompliceerd met een parese van de linker nervus axillaris en een sensitieve uitval in beide nervi mediani, zonder geassocieerde osteoarticulaire of vasculaire letsels. De functionele recuperatie was volledig na 3 jaar.

RÉSUMÉ

M. MESA, P. CARPINTERO, J. CARPINTERO.
Luxation inférieure bilatérale de l'épaule.

Les auteurs rapportent un cas de luxation inférieure bilatérale de l'épaule. La luxation erecta de l'épaule est une curiosité, qui ne représente que 0,5% des luxations

de l'épaule. Les cas bilatéraux sont exceptionnels puisque seulement six cas sont rapportés dans la littérature. Le patient présentait une paralysie du nerf circonflexe gauche et une atteinte sensitive des deux nerfs médians, sans complications ostéo-articulaires ou vasculaires. L'évolution fut tout-à-fait favorable, avec une récupération fonctionnelle complète.