



## Proximal humeral fracture-dislocation and anterior glenoid fracture - approaching a clinical case

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### INTRODUCTION

Scapular fractures are rare, accounting for less than 1% of all fractures and are generally associated with high-energy trauma. In 90% of cases they are associated with other injuries such as fractures of the vertebral spine, ribs or other shoulder fracture.

### OBJECTIVES

There are few cases in the literature of proximal humeral fracture dislocation associated with anterior glenoid fracture. The clinical case described is of interest not only for its complexity and rarity but also for the treatment chosen.

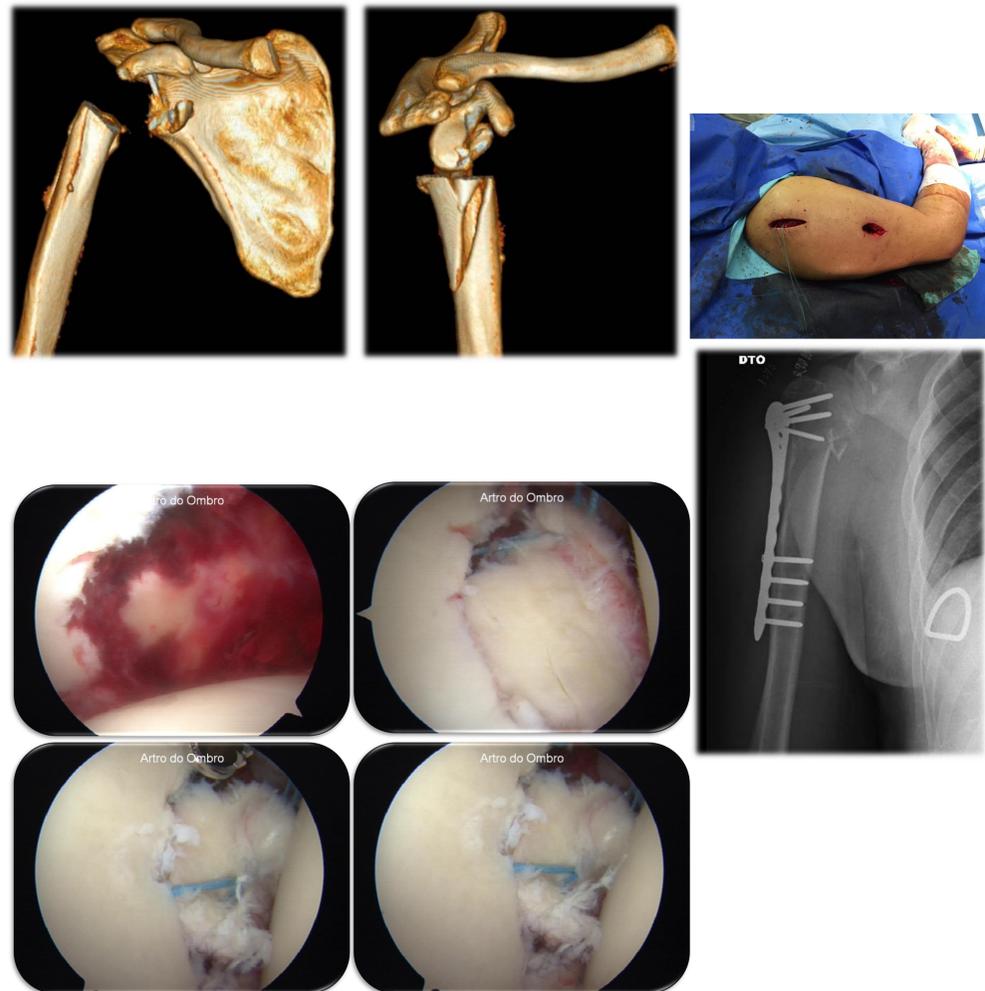
### METHODS

We present a case of a 49-year-old man who had a sport accident (cycling) resulting in a proximal humeral fracture-dislocation. Humeral head reduction maneuvers were performed in another institution and the patient was later transferred to our service.

Lesions are documented with conventional radiology, CT scan and 3D reconstruction with humeral subtraction. Fractures were classified as Neer 4 with diaphyseal extension of the proximal end of the humerus and Ideberg Ia of the glenoid.

It was decided to perform osteosynthesis of the proximal humerus fracture by the MIPO transdeltoid approach and intraoperative images of the approach and reduction obtained are documented. The glenoid fracture was treated by glenohumeral arthroscopic approach, and anchor sutures were performed incorporating the bone fragment as described by Sugaya and Porcellini.

The patient had a simple brachial suspension, which he maintained until 6 weeks postoperatively, performing only pendular shoulder movements.



### RESULTS

Proximal humeral fracture healing was documented at 6 weeks postoperatively.

At 3 months of follow-up, by means of a CT, there were signs of consolidation of the glenoid fracture.

At 6 months postoperatively, there was a complete passive mobility, but only 90° of active abduction and anterior elevation. The patient had a VAS score of 0.

Slight atrophy of the anterior deltoid was visible at 6 months of follow-up. The remaining mobilities and muscular strengths were normal. Videos and photographs of the previously described clinical examination are available.

At 2 years postoperatively, the patient has returned to his job with no limitation, asymptomatic and has full active mobility.

### CONCLUSIONS

Fractures of the proximal humerus are rare in the young population and are associated with a context of high energy accidents, and therefore have a worse prognosis. The risks of this type of fracture in this context are vascular or nerve damage, avascular necrosis of the humeral head and early post-traumatic arthrosis.

On the other hand, given the rarity of glenoid fractures, there is not much evidence in the literature to guide us in treating these lesions. Surgical treatment resulted in bone healing of both the proximal humeral fracture and the glenoid fracture.

Clinically, the patient has complete passive and active mobility, with no pain or limitation, and with a great personal and functional result.

