Available online at www.elixirpublishers.com (Elixir International Journal)

Orthopedics

Elixir Orthopedics 69 (2014) 22969-22970

ISSN: 2229-712X

Fracture dislocation of the humeral head associated with a fracture of the humeral shaft treated by nail Targon

A. Benabdeslam, M.A. Berrady, I.hmouri, M. Khermaz, M. Mahfoud, M.S. Berrada and M. Elyaacoubi
Service of Trauma and Orthopaedic Surgery, CHU Rabat Morocco.

ARTICLE INFO

Article history:
Received: 10 February 2013;
Received in revised form:
20 March 2014;
Accepted: 3 April 2014;

Keywords
Fracture,
Humeral head,
Humeral shaft,
Antegrade nailing,
Self-stabilizing screws.

ABSTRACT
The cerebro-spinal tuberosity fractures (CT) are complex fractures. The existence of a dislocation of the head or fracture even worse prognosis. Several therapeutic alternatives have been proposed in this context. We report a case of fracture dislocation of the humeral head associated with a fracture of the humeral shaft in a matter of 79 years, treated by intramedullary antegrade nailing with self-stabilizing screws type TARGON Consolidation is achieved at 8 weeks, the fracture reduction is acceptable.

Introduction

Five percent of all fractures are located at the proximal end of the humerus (1,2). Their morbidity in the elderly is already well known (3,4). The therapeutic management of these fractures often differs between the teams and already many publications on this topic have been published over the past 30 years. We report a case of a complex fracture dislocation of the humeral head associated with a fracture of the humeral shaft treated by TARGON nail.

Observation

It is a patient of 79 years, right-handed, suffered a fall from standing height reception on the left upper limb causing pain and total functional impairment.

On examination, the attitude of the trauma of the upper limb was typical with a deformed shoulder, arm in abduction and shortening. The pulses were present and no sensorimotor deficit.

Plain radiographs showed a fracture dislocation of the humeral head with a fracture of the humeral shaft (Fig1,Fig2). A CT scan was performed and showed a lower anterior dislocation of the humeral head fracture with complex fracture of the humeral shaft (Fig3).

Fig 1, Fig 2: standard radiography showing a fracture-dislocation of the humeral head with humeral shaft fracture

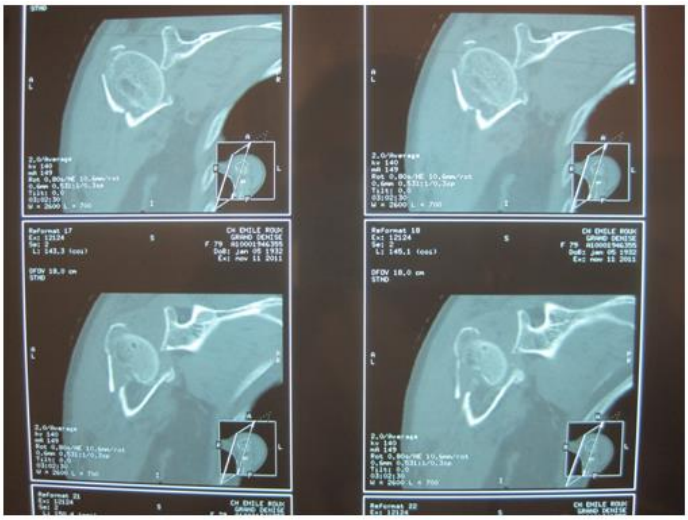

Fig 3: CT scan of the shoulder showing a lower anterior dislocation with complex fracture of the humeral head and fracture of the humeral shaft

The treatment was surgical; patient was installed in a semi-sitting position under general anaesthesia. A first reduction , external cephalic under fluoroscopic control was performed, followed by a first in a superolateral way, by cutting the rotator cuff 1cm in order to introduce the nail Targon with 3 screws to secure the cephalic tubercles, 2 screws for diaphyseal and distal locking for (Fig 4).

The patient was hospitalized with a capital output elbow to the body for six weeks. Physiotherapy was started when the installation appeared solid from the third week, consisting of a passive mobilization decoaptation of the rotator cuff, the active work is not undertaken until the sixth week. The back is 12 months; consolidation is achieved at 8 weeks, the fracture reduction is acceptable. Active mobility in forward flexion was 100° and external rotation 30°.

Discussion

Fractures of the proximal humerus represent 4-5% of all fractures seen in emergency (5,6). Undisplaced fractures sub-

Tele:
E-mail addresses: amine-82@hotmail.fr

tuberosity are the most common and treatment is most often orthopaedic (5,7,8). However, the management of displaced 3 or 4 fragments fractures remains controversial (5,6,9,10). Complex fractures are difficult to treat and osteosyntesis of the shoulder is fraught with difficulties: low bone volume, comminution of the upper end of the humerus, weakening the bone osteosynthesis risk of avascular necrosis (5,11,12). Intramedullary nailing provides a solid synthesis, the price of a limited impact on the rotator cuff first. TARGON nail offers the possibility of placing four cephalic screws to secure the tuberosities come. It is however not always easy to synthesize effectively under intraoperative fluoroscopic control. The comminuted fracture character makes this gesture even more random and sometimes it is not uncommon early secondary displacement of the fracture site (13,14).

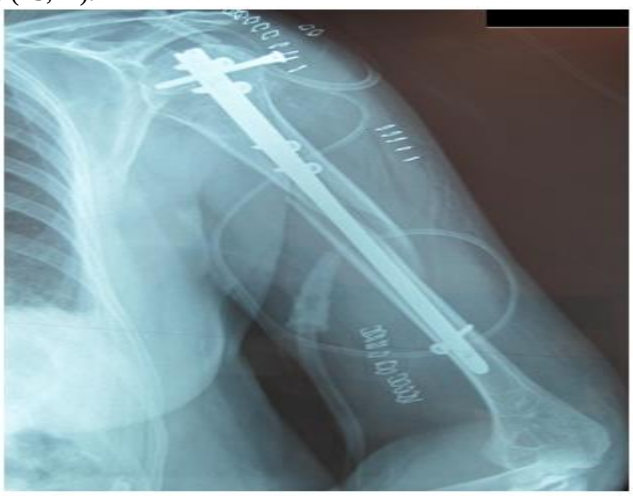

Fig 4: Postoperative radiograph control; TARGON nail with 3 cephalic screws, 2 diaphyseal screws and one for distal locking

The four proximal locking stable associated with good filling of the drum by the medullary nail, provides stabilization of the fracture and a satisfactory holding tuberosity. This stable arrangement allows early rehabilitation. Thus, even if we can hope to obtain an anatomical consolidation in 90% of cases in patients with cortical good, it is quite different for patients with osteoporotic bone (15,16).

Conclusion

So there is no one and good surgical technique for the treatment of proximal humerus fractures. Nailing allows bone synthesis using a simple surgical technique and the price of a limited first. It must however be placed in a good indication. The comminuted and osteoporotic fracture character makes it more delicate gesture. This type of fixation may represent an alternative to arthroplasty and allow early rehabilitation, guarantee a good functional recovery.

Reference

[1] L.U. Bigliani, C.A. Rockwood, F.A. Matsen. Fractures of the proximal humerus. The shoulder, W.B. Saunders, Philadelphia (1990)

[2] T. Lind, K. Kroner, J. Jensen. The epidemiology of fractures of the proximal Humerus. Arch Orthop Trauma Surg, 108 (1989), pp. 285–287

[3] J. Horak, B.E. Nilsson Epidemiology of fracture of the upper end of the humerus Clin Orthop Relat Res, 112 (1975), pp. 250–253

[4] S.H. Rose, L.J. Melton, B.F. Morrey, D.M. Ilstrup, B.L. Riggs Epidemiologic features of humeral fractures Clin Orthop Relat Res, 168 (1982), pp. 24–30

[5] Chaix O, Lebalch T, Mazas F: Les fractures de l'extrémité supérieure de l'humérus chez l'adulte : classification et indications thérapeutiques. Ann Chir, 1984, 38, 220-227.

[6] Bonnevialle P, Challe JJ, Bellumore Y: Fractures sous-tubérositaires. Rev Chir Orthop, 1998, 84, supplément 1, 143-148.

[7] Clifford PC : Fractures of the neck of the humerus : a review of the late results. Injury, 1980, 12, 91-95.

[8] Svend-Hansen H: Displaced proximal humeral fractures. A review of 49 patients. Acta Orthop Scand, 1974, 45, 359-364.

[9] Cofield RH : Comminuted fractures of the proximal humerus. Clin Orthop, 1988, 230, 49-57.

[10] Neer CS 2nd : Displaced proximal humeral fractures. Part II. Treatment of three part and four-part displacement. J Bone Joint Surg (Am), 1970, 52, 1090-1103.

[11] Olivier H, Largier A, Lajoie D, Duparc J: Les fractures de l'extrémité supérieure de l'humérus. Cahier d'enseignement de la SOFCOT n° 13, Exp Scient Fr, Paris, 1981, 117-128.

[12] Kristiansen B, Christensen SW: Plate fixation of the proximal humeral fractures. Acta Orthop Scand, 1986, 57, 320-323.

[13] Sturzenegger M, Fornaro E, Jakob RP: Results of surgical treatment of multifragmented fractures of the humeral head. Arch Orthop Trauma Surg, 1982, 100, 249-259.

[14] Doursounian L, Grimberg J, Cazeau C : Une nouvelle méthode d'ostéosynthèse des fractures de l'extrémité supérieure de l'humérus : l'implant bilboquet. Rev Chir Orthop, 1996, 82, 743-752.

[15] Jakob RP, Miniaci A, Anson PS: Four part valgus impacted fractures of the proximal humerus. J Bone Joint Surg (Br), 1991, 73, 295-298.

[16] Szyszkowitz R, Seggl W, Schleifer P: Proximal humeral fractures. Management techniques and expected results. Clin Orthop, 1993, 292, 13-25.