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

Orthopedics

Elixir Orthopedics 74 (2014) 26947-26949

ISSN: 2229-712X

Dislocation of the shoulder of associated multiple fractures of the same member

I.Elouakili, Y.Ouchrif, R.ouakrim, MO.Lamrani, M.Kharmaz, F. Ismael, A.Lahlou, A. El Bardouni, M. Mahfoud, Berrada and M. El Yaacoubi

Department of Orthopedic surgery, CHU Ibn Sina, Rabat Morocco.

ARTICLE INFO

Article history:

Received: 12 July 2014;

Received in revised form:

21 August 2014;

Accepted: 4 September 2014;

Keywords

Shoulder dislocation,

Fracture,

Humerus,

Distal humerus, Radius.

ABSTRACT

The authors report two cases of rare lesional associations on the samelimb segment. Two patients victims of violent trauma showed a dislocation of the shoulder associated with fracture on the same member (the diaphysis and the humeral, diaphysis and distal radius). They were treated in emergency First Direct fractures but without touching the shoulder to reduce the dislocation. The decline was 9 months to one and 6 months for the other. The functional result is satisfactory.

Introduction

The high energy trauma are common in practice skeet bording. We see often multiple injuries (fractures, dislocations , soft tissue damage) in the same patient on the same member or individual members. We report two cases of rare associated lesions treated in the trauma unit Rabat.

Observation 1

He is a young man of 25 years , amateur sports without pathological history particular, an accident of sport. He had a unique impact on the right upperlimb . On admission he showed no vital emergency. The examination revealed a significant shortening and deformation of the left arm and an openingfacing the outer skin condyle of about 2 cm, slightly bruised .

Peripheral pulses werepresent. Limited hand neurological examination showed no deficitespecially in the territory of the radial nerve. Radiography of the leftupperlimb (Figure 1) showed three lesions on the left humerus : adislocated shoulder, a fracture of the humeral shaft fracture and an overlying and inter condylar comminuted humeral . Radiographsalsoshowedrib fracture compared to the humeralhead. Afterpreparing the patient isadmitted to the block and operated under general anesthesia. The patient isplacedsupine Right sidememberleft on the trunk, support for upperlimb being prepared. A debridementisperformed first then the focus of the frac - diaphyseal ture isachieved . The reduction of the dislocation iscarried out first in mobilizing the proximal fragment by forceps . The fracture of the diaphysis has been summarized by a screwed plate . The memberisthenfocused on the support forearmfor , to addresshumeral by trans - olecranon .

After peeling of the skin , a section of the outerhalf of the triceps tendon opposite the wound is uncovered. After exposure of the lower end of the humerus and a reduction by an osteo synthesis plate Lecestre are formed (FIGS. 2) . After repair of the osteotomy, the tendon issutured section. The closure is then made on a drain, and a rearbraceismade . Post operative are simple. The patient began an active rehabilitation to 10 dayspostoperatively. The current declineis more than 6 months. The patient recovered mobility Shoulder satisfactory outside painful limitation of abduction and 70°. It alsokeeps a limitation of movement of the elbow area between 20° and 100° of flexion. He always follows his rehabilitation program.

Observation 2

He is a young man of 23 years following a sports accident with an impact on the left upperlimb ,was presented to emergency departments with deformations of the arm, forearm and wrist without threatening injuries prognosis. Bruisess tretched a cross the member. There was no neurovascular complications or skin opening. Plain radio graphs showed an anteromedial shoulder dislocation , fracture of the humeral shaft, a simple fracture of the medial condyle of the humerusis a comminuted fracture of the entirelowerthird of the radius.

Features articular fractures radial epiphysiswere particularly complex. The patient was admitted to the unit and operatedundergeneralanesthesia in the supineposition .After the first home diaphysis of the humerus, the reduction of dislocation the shoulderisachieved by manipulating the proximal fragment by forceps. The synthesis of the shaftisthen made by a threadedplate ,then by the first internalmedial condyle isfixed by one screw. On the radius, an anteriorapproachhadhelped to minimize the diaphysealfireplace, console plate taking the diaphysis and metaphysis was then implemented. The epiphysis was not open to anyinternalsynthesis, a fixer bridging the whole was then performed .

The patient did not presentpostoperative complications and beganrehabilitationfrom pain relief .Fixatorwasremoved at 4 weeks. The currentdeclineis 5 months , the patient has recoveredalmost normal function of the elbow and right shoulder. Limiting the mobility of the wristpersists without algodystrophy .

Discussion

Both patients had a dislocation of the shoulder associated with a fracture of the shaft and the lower end of the humerus . This association israre. The mechanism of injury is poorly

Tele:

E-mail addresses: issam.elouakili@gmail.com

described by patients. Much work has described the mechanism of anterior dislocation of the shoulder(1 , 2 , 3, 4) . The movements of abduction and external rotation of the emerging zone of weakness of the capsule bottom and the glenohumeral ligament lower (5, 6 , 7) which are not reinforced by the subscapularis muscle in this position (the latter passes as above) . Thesemovementsassociatedwith a force along the axis of the humerus push the head of the humerus to break the capsular ligament level. Moving the head out of the glenoidis all the greater the energy of the trauma is high (6).

Figure 1: Medial dislocation of the shoulder

Figure 2: Fracture of the humerusmidshaft

Figure 3: Fracture of the medial condyle

For the patient the first observation the unique impact on hiselbowsuggestshehadhis arm in abduction and a certain degree of external rotation during trauma. The high energy trauma had caused the shoulder dislocation and fracture of the humerus without being totally consumed, the head of the humerusthen came up against the costal grid. The humeral shaft would then transferred under the effect of the compression .Broken opposite side of the humeral head is in favor of thisexplanation. Therapeuticallywe first performed a first of diaphyseal home whichallowed us to manipulate the proximal fragment by forceps and palpate the humeral head reduction. Direct pressure on the headhelpedprinted by forceps movementsallowed the reduction.

Figure 4: Fracture of the distal third of the radius

Figure 5: The humerusbone plate

Figure 6: Screw the medial condyle

The combination of shaft fractures and humeral limited the choice of synthesis means ,other means of diaphyseal fixation as

racking fasciculé Hackethal or nailingwere not feasible (8, 9, 10). Thus the shaftwas fixed by a screw and epiphyseal plate by a pre- molded plate Lecestre .Someauthors (11, 12)suggestother types of plates (lambda) that would provide a more secure mounting. Weal way spreferour method has the advantage of relative ease of removal of the material. For the patient the second observation a simple screw was enough . It was in addition a fracture of the lowerthird of the radius. Wediscussed the onlyexternal fixation but itseems to us insufficient to maintain a good reduction of a home as long as the radius. Weopted for the combination of a plate screwed diaphysometaphyseal - epiphyseal fixative for distraction thatwas not withoutrisk of infection. The bone plate allowed a contention diaphyseal home and a better transmission of distraction forces to the epiphysis. Strict monitoring was essential to the association to remove the fixative as soon as possible. Despite impressive lesions of our patients, the functional results are correct.

Figure 7: The bone plate on the lower third of the radius associated with an externalfixator.

Conclusion

The lesions observed in these patients association is rare. Proper treatment is essential to prevent complications of the different lesions are added and compromise limbfunction .

References :

1 - BANKART AS. The pathology and treatment of recurrent dislocation of the shoulder. Joint. Br. J. Surg.,1938, 26, 23-29.

2- BAKER CB, URIBE JW, WHITIIMAN C. Arthroscopic evaluation o acute initial anterior shoulder dislocations. Am. J. Sport Med., 1990, 18, 1, 25-28.

3- OVESEN J, NIELSEN S. Anterior and posterior shoulder instability. A cadaverstudy. Acta Orthop. Scand., 1986, 57, 324-324.

4 - ROWEC CR. Acute and recurrentanterior dislocation of the shoulder. Orthop. Clin. North Am., 1980, 11, 253-269.

5- TURKEL SJ, PANIO IM, MARSHALL JL, GIRGIS RG. Stabilizingmecha nismspreventinganterior dislocation of the gleno-humeral joint. J. Bone Joint. Surg. (Am.), 1981, 63, 1208-1217.

6 - O. GAGEY, N. GAGEY, PH. BOISRENOULT, E. HUE, F. MAZAS Etude expérimentale des luxations antéro-internes ou erecta de l'articulation scapulo-humérale. Rev. Chir. Ortho., 1993 ;79, 13-21.

7- G. WALCH, D. MOLE Instabilités et luxations de l'épaule. EMC 14037 A10, 1991. 8 - O. GAULLIER, L. REBAÏ, JL. DUNAUD, M. MOUGHABGHAB, S.BENAISSA Traitement des fractures récentes de la diaphyse humérale par enclouage centromédullaire verrouillé selon Seidel. Révision des 23 premiers cas à 2,5 ans avec étude de la coiffe des rotateurs. Rev. Chir. Orthop. 1999 ; 85, 349-361.

9- JY. DE LA CAFFINIERE, R. BENZIMRA, F. LACAZE, A. CHAINE Embrochage centromédullaire des fractures de la diaphyse humérale.Une ostéosynthèse à risque minimum à propos de 82 cas. Rev. Chir. Orthop.. 1999 ; 85, 125-135.

10- P. BONNEVIALE M. MANSAT Chirurgie de la diaphyse humérale: voies d'abord et techniques opératoires. EMC 44300,4-1989.

11- J. BENOIT, J.Y. DUPONT, P. LECESTRE, PH. BEAUFILS, A. LORTAT-JACOB Technique opératoire du coude. EMC, 44325, 4.9.06.

12- C.FORNASIERI, C. STAUB, Y. TOURNE, C. RUMELHART, D. SARAGAGLIA Etude biomécanique comparative de trois types d'ostéosynthèse pour les fractures sus et inter condyliennes de la palette humérale de l'adulte. Rev. Chir. Orthop. 1997 ; 83, 237-242.