

A Short Comment on “Multiple Fracture in Upper Limb: Case Report”

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Abstract

Multifocal fractures of the upper limb are infrequent. We present a case of a chronic heavy alcohol use patient with ipsilateral proximal humeral fracture, proximal and distal forearm fractures and their surgical management.

Keywords: Multiple fracture; Humeral fracture; Multifocal fracture

Discussion

Osteoporotic fractures are becoming more frequent and will be even more so in the future, therefore our efforts should be directed to face with guarantees to this type fractures. Alcohol abuse is clearly related to osteoporosis appearing therefore in biologically younger, potentially active labored patients, which implies that an inadequate outcome has a much greater impact on society than on elderly patients.

Associations of fractures between forearm bones are frequent when there is a 10% radio-head fracture [1], especially in Mason II and III with a prevalence of 50% and 75%, respectively [2]. Few cases combine proximal lesions and distal, and less associated with humerus [3,4].

The present case reports a proximal metaphyseal-diaphyseal fracture of right humerus (AO12-C3), olecranon fracture and radial head Mason III, monteggia equivalent (AO21-C2.2) and fracture of the distal articular radius (AO23- C2) associated with a metaphyseal comminuted fracture of ulna (AO23-A1.3).

Nail fixation of the humerus and angular stability plate in the proximal olecranon, distal radius and ulna allow an early mobilization. When a distal radius fracture is associated with a comminuted osteoporotic ulna bone, the appropriate treatment in the distal ulna is a plate better than k-wires [5].

The elbow has a complex biomechanical, in terms of its stability and its movement, greatly influenced by the distal radio ulnar joint.

Radial head replacement, which will provide radio-ulna proximal and humeral- capillary stability by improving the dynamics of all forearm synthesis [6,7].

Radial head comminuted fracture can be treated correctly with excision in cases where there is no compromise of elbow stability, however it may be a major structural support in the case as presented. When deciding how and when to act, we must take into account the patient's condition, position, soft tissues, bone quality and the relationship between fractures.

The forearm should be seen as a complex rotating frame thanks to its proximal and distal radio-ulnar joint, and also between two joint the elbow and wrist demanding from the point of view of stability and movement.

Conclusion

There is few literature on how to handle multiple injuries at the same extremity. Current materials (biocompatible, angular stability) guarantee an excellent result in extreme osteoporosis fractures. The initial synthesis of the humerus allows mobilizing the arm and performing the ischemia, then we recommend to synthesize the radius and distal ulna, which allows an adequate control of forearm length and pronosupination, such control being essential for the radial head replacement. In this type of patients with poor bone quality the threshold should be lowered for the replacement of the radio head.

That is why after to fix the proximal ulna with a plate and having an anatomical reduction of the distal forearm we accurately place the prosthesis in the radial head. We prefer the radial head prosthesis better than the excision, not by stability of the elbow but by stability of the osteosynthesis, because of the 4 articular epiphyses of the frame that makes up the forearm are fractured, neutralizing the stress that would excision for the rest.

Disclosure

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