

**Conclusions** Our aims were the anatomical reduction, the stable synthesis and the premature recovery of the functionality. The external fixation is a valid technique of synthesis for the attainment of these aims. The recovery worked considerably well and it was easier compared with that of the traditional surgery.

## C16—SHOULDER AND ELBOW 4

### Clinical and radiographic results of acute acromioclavicular type III dislocations: low incidence of scapular dyskinesia and sick scapula syndrome at long term follow-up

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**Introduction** The ideal treatment for acute type III acromioclavicular (AC) dislocations is controversial. In fact, the literature reports little evidence on which treatment (surgical versus conservative) results in better clinical outcome. Recently, evidences for long term better outcome of surgical treatment have been published in literature, and development of scapular dyskinesia and SICK scapular syndrome following conservative treatment was described.

**Materials and methods** We evaluated 34 patients surgically treated for acute type III AC dislocations with different techniques. Functional outcome, radiographic evaluation of clavicular reduction and scapular kinematics were all evaluated.

**Results** Excellent Constant shoulder score (mean 95.7 points, SD  $\pm$  5.3) and Simple Shoulder Test (mean 11.2 points, SD  $\pm$  0.8) results were observed. In 4 patients recurrence of separation was observed. Scapular dyskinesia was observed in only 4 (11.7 %) patients, of which only 1 (2.9 % of the sample) was affected by SICK scapula syndrome. Scapular dyskinesia was classified as type I in 3 cases (75 %) and type III in 1 case (25 %).

**Discussion** Excellent Constant shoulder score (mean 95.7 points, SD  $\pm$  5.3) and Simple Shoulder Test (mean 11.2 points, SD  $\pm$  0.8) results were observed. In 4 patients recurrence of separation was detected. The incidence of scapular dyskinesia and SICK scapula syndrome in the present study was significantly lower with respect to conservative treatment. On the other hand, the distribution of dyskinesia types was comparable, suggesting a possible common cause. However, pathogenesis of scapular dyskinesia following type III AC dislocation is still not clear: periscapular muscle dynamic stabilisation seems to be the means by which the scapula correctly accomplishes its functions, while the results hereby presented do not allow surely establishing a correlation between clavicle reduction and scapular dysfunctional syndromes.

**Conclusions** Excellent clinical results for surgical treatment of type III acute AC joint dislocations at long term follow up are confirmed. Surgical treatment is also associated with a lower incidence of scapular dyskinesia and SICK scapula syndrome if compared to conservative treatment.

### The complex instability of the elbow: treatment strategy

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**Introduction** Elbow dislocation can produce ligaments and capsule lesions so to determined instability joint. These lesions associated an

elbow fractures (radial head, coronoid fractures or both) create a severe instability joint, the so called “the complex instability of the elbow” This report is showing the outcomes of the treatment proposed by Pugh et al. [1].

**Materials and methods** This retrospective study examines twenty patients treated in our Institution, Shoulder and Elbow Unit of the CTO Florence Hospital, between 2005 and 2011. The people were affected by fractures-dislocation of the radial head in ten cases, fractures-dislocation of the coronoid in six cases and dislocation with both fractures (the so called “terrible triad”) in 4 cases. We recorded data using MEPS (mayo elbow performance score). We implanted radial head prosthesis in three patients because were affected by severe radial head fractures. In nine people a dynamic external fixator was used because at the end of the procedure (treatment of the bone and the ligaments injuries) the elbow had showed persistent instability.

**Results** At average follow-up 28.2 months (6–72) we have recorded data of seventeen patients and the results were excellent 41 % (7 patients), good 47 % (8 patients), sufficient 3 % (one patient) and poor 3 % (one patient). The average flexion movement was 118.8°, while the average extension motion was 14.2°. The people treated with dynamic external fixator have had average ROM 108.7°, while people treated without device had average ROM 98.1 %. None of the elbows had symptoms or sign of instability at final evaluation.

**Discussion** The treatment of the elbow complex instability is very difficult and the main target is to restoring a elbow stable, painless and functional. A dynamic external fixator can be used to stabilize the joint during an optimal movement.

**Conclusions** In the complex instability of the elbow the principles osteosynthesis are fundamental to obtain a good functional outcome and a stable elbow. In cases where this principles aren't sufficient the main priority is to repair the ligament lesions and finally to apply the dynamic external fixator so to favour early elbow motion during healing ligaments.

### Reference

1. Pugh DM, Wild LM, Schemitsch EH, King GJ, McKee MD (2004) Standard surgical protocol to treat elbow dislocations with radial head and coronoid fractures. *J Bone Joint Surg Am* 86:1122–1130.

### Radial head arthroplasty: mid-term results

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**Introduction** The radial head is a secondary stabilizer of the elbow. Prosthetic implant to restore the stability of the elbow is indicated in case of fractures that cannot be synthesized or sequelae of synthesis and resections in complex lesions. The purposes of this study were to review the medium term results obtained with the use of radial head prosthesis.

**Materials and methods** 20 patients undergone radial head arthroplasty were reviewed at a 25 months follow-up (minimum 12). 17 patients were treated early: 7 patients had Mason 3 type fracture, 10 patients had a Mason 4 type fracture. In 12 cases they showed bone or ligament associated injuries that were treated as follows: fractures of the coronoid with reconstruction by anchors or synthesis, lesions of the medial or lateral collateral ligaments with suture anchors or through direct suture, fractures of the olecranon with plates and screws, residual instability with positioning of articulated external elbow fixator. 3 patients were treated for bad outcome of previous