

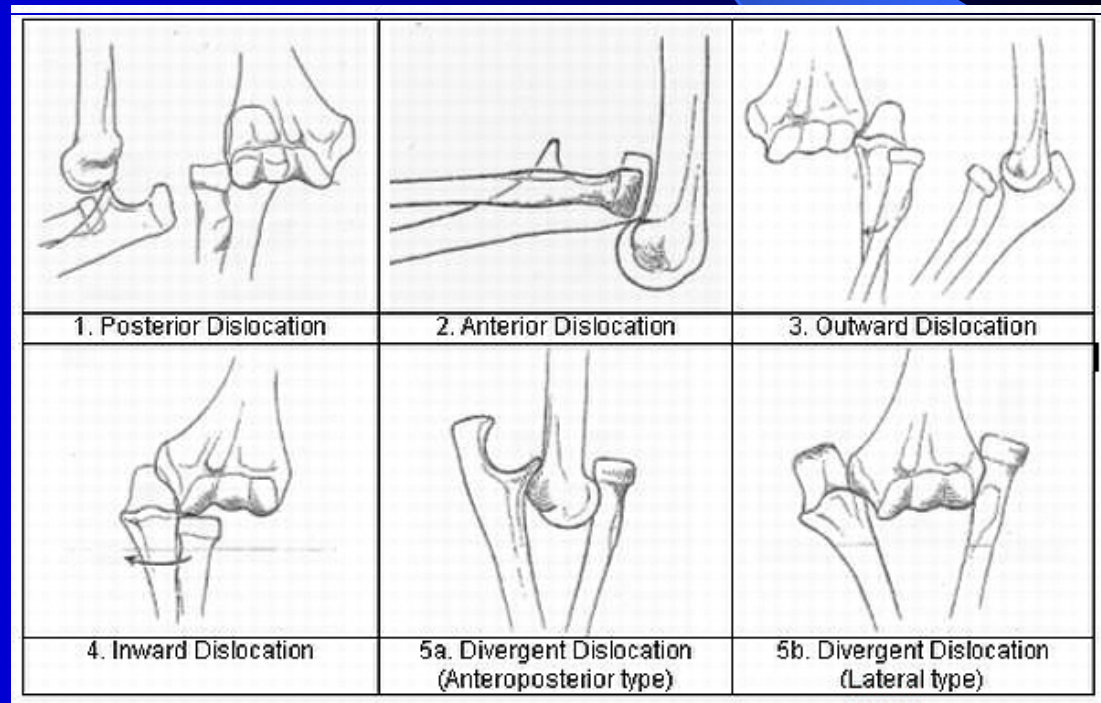
# A COMPARATIVE STUDY BETWEEN EARLY AND LATE MOBILIZATION OF SIMPLE ELBOW DISLOCATIONS

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● Simple Dislocations → No accompanying fractures

Elbow dislocations have been classified into 6 different categories with most usual the posterior type



## Patients & Methods

- Two Patients Groups (n1=10 , n2=9) with median age 35y.
- Reduction was performed by a 2 doctors collaboration after anaesthetic regional infiltration into the post-traumatic haematoma.

### 1<sup>st</sup> Study Group

(7 men – 3 women)

Post reduction immobilization in a sling, at 90 degrees of flexion, for 2 weeks followed by active mobilization afterwards

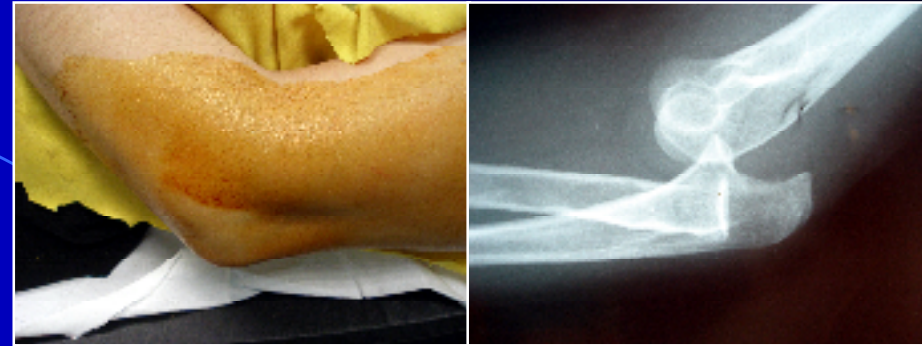
### 2<sup>nd</sup> Study Group

(5 men – 4 women)

- a) Immobilization in a sling for 3 days at 90 degrees of flexion
- b) Active mobilization on a flexion-extension axis (by the use of a functional brace) for 3 weeks.
- c) Release of supination-pronation movements by the 3<sup>rd</sup> week.

## Methods & Results

- Final follow-up mean time: 8 months
- No neurovascular lesion was recorded, pre or post reduction
- No iatrogenic fracture was recorded
- The Mayo Elbow Performance Score was used for evaluation
- Myositis ossificans was observed in one patient of the late mobilization group
- No case of recurrent dislocation was recorded in any group



*A simple posterior elbow dislocation*



*Elbow ROM 3 weeks post reduction*



*Full Elbow ROM 5 weeks post reduction*

# Mayo Elbow Performance Score

	Late Mobilization group	Early Mobilization group
Final Range of Motion (ROM)	15/20	20/20
Joint stability	10/10	10/10
Pain	45/45	45/45
Funcionality	15/25	20/25
Total Score	85/100	95/100

# Literature references

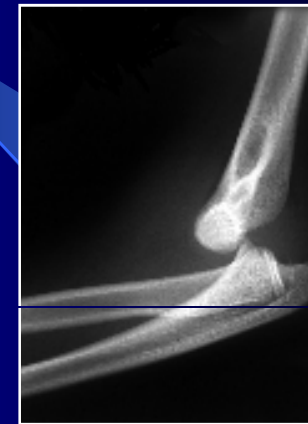
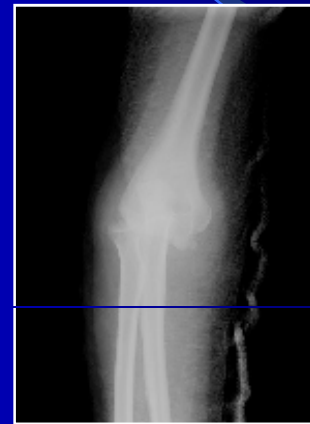
- Immediate reduction followed by no more of 1 to 5 days of immobilization  
Protzman RR. Dislocation of the elbow joint. J Bone Joint Surg. 1978; 60A: 539–541
- The surgical repair of the collateral ligaments has not proven to offer better results than those of non-surgical treatment  
Josefsson P et al. Surgical versus non-surgical treatment of ligamentous injuries following dislocation of the elbow joint. A prospective randomized study. J Bone Joint Surg [Am]. 1987; 69:605-608
- Long periods of immobilization have not proven to be effective  
Riel KA, Bennett P. Simple elbow dislocation. Comparison of long-term results after immobilization and functional treatment. Unfallchirurg. 1993; 96:529-533
- The disadvantages of immobilization have been widely recognized (e.g. pain, persistent stiffness, late degenerative changes etc )  
Salter RB. The physiologic basis of continuous passive motion for articular cartilage healing and regeneration. Hand Clin. 1994; 10:211—219
- Early and late mobilization provide similar joint stability. Nevertheless a non immobilization protocol has achieved 95% success  
Ross G et al. Treatment of simple elbow dislocation using an immediate motion protocol. Am J Sports Med. 1999; 27:308—311



## Conclusion

- The joint stability and sensitivity do not seem to relate with the post reduction period of immobilization
- The final Range of Motion and the functionality of the elbow joint are statistically improved in the early mobilization group in comparison with the late mobilization group
- Early mobilization of the elbow joint after simple dislocations is the best way of treatment for the best functional results
- Patients shall be persuaded to follow early active elbow mobilization, initially at the flexion-extension axis and later at all axis

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**21st Congress of the European Society for Surgery of the Shoulder and the Elbow**

