

# Does the position of shoulder immobilization after reduced anterior glenohumeral dislocation affect coaptation of a Bankart lesion? An arthrographic comparison.

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## Abstract

### BACKGROUND:

The position of immobilization after anterior shoulder dislocation has been a controversial topic over the past decade. We compared the effect of post-reduction immobilization, whether external rotation or internal rotation, on coaptation of the torn labrum.

### MATERIALS AND METHODS:

Twenty patients aged <40 years with primary anterior shoulder dislocation without associated fractures were randomized to post-reduction external rotation immobilization (nine patients) or internal rotation (11 patients). After 3 weeks, magnetic resonance arthrography was performed. Displacement, separation, and opening angle parameters were assessed and analyzed.

### RESULTS:

Separation ( $1.16 \pm 1.11$  vs  $2.43 \pm 1.17$  mm), displacement ( $1.73 \pm 1.64$  vs  $2.28 \pm 1.36$  mm), and opening angle ( $15.00 \pm 15.84$  vs  $27.86 \pm 14.74$  °) in the externally rotated group were decreased in comparison to the internally rotated group. A statistically significant difference between groups was seen only for separation ( $p = 0.028$ );  $p$  values of displacement and opening angle were 0.354 and 0.099, respectively.

### CONCLUSION:

External rotation immobilization after reduction of primary anterior shoulder dislocation could result in a decrease in anterior capsule detachment and labral reduction.

### KEYWORDS:

Bankart lesion; Dislocation; External rotation; Shoulder