Postoperative Mobilization after Superior Rotator Cuff Repair: Sling Versus No Sling. A Long-Term Randomized Prospective Study

Xue Ling Chong[1], Philippe Collin[2], Alexandre Ladermann[3]
[1]National Healthcare Group (NHG), [2]Centre De L'Epaule, [3]La Tour Hospital

INTRODUCTION:
Patients who underwent arthroscopic rotator cuff repair are often required to wear a sling after surgery despite the known negative effects of immobilization with the intention to protect the cuff repair. Short-term results have proved to have good clinical outcome even without sling. The aim of this study is to compare long-term clinical and radiological outcomes after arthroscopic rotator cuff repair with and without postoperative sling immobilization.
METHODS:
We randomized 404 patients scheduled for arthroscopic repair of small to medium superior cuff tear into sling and no sling groups. Passive immobilization was performed in both groups during the first 4 weeks after surgery. This was followed by active mobilization. Patients were evaluated both clinically and radiologically with ultrasound at 3, 6 months, and at last follow up, which is 3.0± 1.6 years for no sling and 4.2± 1.7 years for the sling group. Univariable and multivariable analyses were performed to determine if postoperative scores were associated with sex, age at surgery, immobilization, arm dominance, a biceps procedure, resection of the distal part of the clavicle, or preoperative scores.
RESULTS:
The sling and no sling groups has similar preoperative patient characteristics, function, and adjuvant procedures performed. At the last follow up, the no sling group showed mean greater external rotation (65.8°± 25.6 versus 58.6°± 24.2, p =0.011). The forward flexion angle was similar between the sling and no sling group, which did not reach statistical significance. Short-term follow up, of up to 6 months, did not show any significant difference in ASES, Constant, and SANE scores. For long-term follow up, the sling group had significantly higher ASES and Constant scores (88.3± 16.0 versus 85.4± 16.1, p= 0.021) and (81.2± 16.7 versus 78.1± 15.9, p=0.018) respectively. However, there was no significant difference between SANE scores of 2 groups.
DISCUSSION AND CONCLUSION:
Mobilization early without sling is associated with greater ER at long-term follow up. Functional outcome is not significantly different at 6 months. However, at last follow up of at least 3 years, functional outcome is significantly better in the sling group. Therefore, mobilization early without sling is still a good rehabilitation regimen, especially in patients that would benefit from improved ER.