

Resolution of Sleep Disturbance and Improved Functional Outcomes following Arthroscopic Rotator Cuff Repair-Prospective Cohort Study

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INTRODUCTION:

Most patients experience sleep disturbances prior to rotator cuff repair, with these symptoms largely improving postoperatively. However, the relationship between the resolution, or persistence, of sleep disturbance and patient-reported functional outcomes following rotator cuff repair remains unknown.

METHODS:

Two-hundred-ninety-three patients undergoing primary arthroscopic rotator cuff repair were prospectively enrolled in a registry database. Patient demographics and validated patient-reported outcome measures were obtained pre- and postoperatively, including the visual analog pain scale (VAS), American Shoulder and Elbow Surgeons (ASES), Single Assessment Numeric Evaluation (SANE), Simple Shoulder Test (SST), and Veterans RAND 12-Item Health Survey (VR-12) physical and mental components.

RESULTS: Two-hundred-sixty-three (89.8%) patients reported a sleep disturbance preoperatively as defined by response to SST Question 2 "Does your shoulder allow you to sleep comfortably?". Of these patients, 221 (84.4%) reported a resolution of sleep disturbance by 2 years postoperatively. When adjusted for age, workers' compensation status, and Cofield tear size, patients with a preoperative sleep disturbance reported significantly worse baseline PROs, apart from the VR-12 mental component, prior to surgery. However, postoperatively, these patients had greater improvements in PROs with no significant remaining differences seen at follow up between patients with and without preoperative sleep disturbance. Among patients who reported a preoperative sleep disturbance, patients whose symptoms resolved postoperatively had superior PRO scores as well as significantly greater improvements from preoperative baselines compared to patients with persistent sleep disturbances after surgery.

DISCUSSION AND CONCLUSION:

Patients with preoperative sleep disturbances report worse baseline functional scores prior to rotator cuff repair than patients without sleep disturbance. These disturbances largely resolve following surgery, with postoperative outcomes comparable to those of patients who reported no preoperative sleep concerns. Patients whose sleep disturbances resolved postoperatively also reported superior patient-reported outcome scores compared to patients whose sleep disturbances persisted postoperatively.