

the possibility of abrasive degradation of the suture, and abrasion-resistant materials may decrease the risk of suture fretting.

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### **Arthroscopic Repair of Medium to Large Full-Thickness Rotator Cuff Tears: A Prospective Study of 30 Patients (SS-49)**

This study prospectively evaluated the clinical outcome of 30 patients that underwent arthroscopic repair of large full-thickness rotator cuff tears. **Methods:** Thirty patients underwent arthroscopic repair of a full-thickness rotator cuff tear. Mean tear size was 2.4 cm (range: 2 to 5 cm) in the sagittal plane. Patients' mean age was 52 years (range: 34 to 71 years) and mean follow-up was 20 months (range: 16 to 30 months). Preoperative and postoperative range of motion, strength, pain, and satisfaction were evaluated. Function was assessed with a modified ASES Score. All 30 tears involved the supraspinatus tendon and 8 also involved the infraspinatus. Mean tendon retraction was 8 mm (range: 0 to 25 mm). Statistical analysis was carried out using Student *t* test and signed rank test. **Results:** Significant improvements were demonstrated for forward elevation (preoperative: 157° to postoperative: 168°,  $P < .05$ ), forward elevation strength (3.7 to 4.8 out of 5,  $P < .05$ ), ASES scores (44.9 to 93.5 points,  $P < .01$ ), pain relief (8.7 to 1.6 points,  $P < .001$ ), and satisfaction (2.8 to 9.1 points,  $P < .001$ ). One patient developed postoperative adhesive capsulitis that resolved after several months of physical therapy. There was no incidence of recurrent rupture of the rotator cuff. Twenty-eight of 30 (93%) patients were satisfied with their outcome. There was no correlation between tear size or amount of retraction and clinical outcome. **Conclusions:** This study documented significant improvements in range of motion, strength, pain relief, function, and satisfaction after arthroscopic repair of medium to large full-thickness rotator cuff tears.

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### **Outcomes After Arthroscopic Rotator Cuff Repairs (SS-50)**

Arthroscopic rotator cuff repair (RCR) was introduced for smaller tears but, has recently been applied to all sizes of tendon defects. This study reviews one surgeon's experience with arthroscopic RCR. **Methods:** A retrospective review was conducted of 107 consecutive patients who underwent arthroscopic rotator cuff repair. Preoperative and postoperative evaluation consisted of

history, patient questionnaires, physical examination and validated shoulder scores. Operative reports were reviewed for concomitant procedures, releases performed, tear size, and type and method of fixation. **Results:** 107 consecutive patients underwent arthroscopic RCR. Average follow-up was 24 months, (range 1 to 5 years). Average patient age was 62 years (range 30 to 86 years). There were 30 partial tears, 19 of which were completed, 57 tears  $<3$  cm, 46 tears  $>3$  cm. 32 of these 46 were massive ( $>5$  cm) tears. All tears were repaired with suture anchors at the lateral aspect of the rotator cuff footprint, with the number of sutures passed ranging from an average of 1.5 for small ( $<3$  cm) tears, to 2.8 for massive tears. In addition 47 tears were fixed medially with transfixing implants, and 11 of the massive tears utilized margin convergence medially. 41 patients received capsular releases. 38 had anterior and 25 had posterior interval releases. 59 patients had either a biceps tenotomy or tenodesis and 16 had a resection of the distal clavicle. There were no infections, nerve injuries, or hardware complications. Pain relief was dramatic for all tear sizes, with an overall improvement in visual analog pain from 5.6 to 1.7 ( $P < .01$ ). Constant Score improved from 52.8 to 75 ( $P < .01$ ) and ASES scores improved from 44.5 to 80.2 ( $P < .01$ ). Overall strength (lbs) in elevation improved from 6.8 to 10.7 ( $P < .001$ ), and external rotation strength improved from 10.9 to 13.6 ( $P < .04$ ). Strength of elevation at follow-up was 13 lb for small ( $<3$  cm) tears and 7.9 lb for massive tears ( $P < .001$ ). **Conclusions:** Arthroscopic rotator cuff repair yields excellent results for all tear sizes, although strength is less well restored for larger tears. Capsular and interval releases are very helpful for mobilizing retracted tendons. Our current technique utilizes two rows of anchors to maximize healing area to the footprint, and is under investigation.

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### **Pain Scores in the Management of Postoperative Rotator Cuff Surgery (SS-51)**

Recent public opinion has focused on the lay perception that postoperative pain control is often inadequate. JCAHO has attempted to address this by mandating pain scores as part of the postoperative pain assessment. No studies exist to validate these scores in orthopedics. **Methods:** 99 patients over a 12-month period undergoing routine arthroscopic rotator cuff repair were followed and multivariate analysis assessed in regard to pain scores, objective physiologic correlates, complications, patient satisfaction, and MMPI scores. **Results:** All pro-