

## Clinical Outcome In All-Arthroscopic Versus Mini-Open Rotator Cuff Repair In Small To Medium-Sized Tears: A Randomized Controlled Trial In 100 Patients

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### Summary:

Randomized Controlled Trial of 100 patients undergoing all-arthroscopic or mini-open rotator cuff repair surgery. Shortterm result evaluated at 6, 12, 26 and 52 weeks show only small significant differences in favour of the arthroscopic repair at 6 weeks.

### Abstract:

**Purpose:** The purpose of this study was to compare clinical outcome of All-Arthroscopic (AA) versus Mini-Open (MO) rotator cuff repair in patients with a full-thickness small to medium-sized tear in the first postoperative year.

**Methods:** 100 patients were randomized to either AA or MO rotator cuff repair at the time of surgery on an intention-to-treat basis. Patients were evaluated preoperatively, and at 6, 12, 26, 52 weeks postoperatively using the DASH as a primary outcome score, and the Constant, VAS-pain/-impairment, and measuring active forward flexion/external rotation as secondary outcome scores. Ultrasound evaluation was used to assess structural integrity of the repair 1 year postoperatively.

**Results:** 47 patients were analyzed in the AA-group and 48 in the MO-group. Mean age was 57.2 (SD 8.0) years in the AA-group and 57.8 (SD 7.9) years in the MO-group. Primary and secondary outcome scores showed significant improvement in both groups postoperatively. The difference in mean primary and secondary postoperative outcome scores was not statistically significant between the treatment groups (DASH between group mean difference -3.4, 95%CI: -10.2 to 3.4,  $p = 0.317$ ). However, at the 6 weeks follow-up moment, DASH-score, VAS-pain and -impairment, and active forward flexion were significantly more improved in the AA-group compared to the MO-group. A re-tear was seen in 8 patients (17%) in the AA-group and in 6 patients (13%) in the MO-group. Adhesive capsulitis developed in 5 patients in the AA-group and in 6 patients (11%) in the MO-group.

**Conclusion:** There are no significant differences between All-Arthroscopic or Mini-Open repair technique in the first year when comparing functional outcome, pain, range of motion and complications. Patients do attain the benefits of treatment somewhat sooner with the arthroscopic procedure after 6 weeks.

Level of evidence. Level I, randomized controlled trial.