

Integrity of Arthroscopic Complete Repair but Less Optimal Footprint Coverage of Rotator Cuff Tears

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Purpose

First, to evaluate the healing status with postoperative MRI of arthroscopically repaired large to massive tears which had less optimal coverage of original greater tuberosity footprint. Second, to report the clinical result of this consecutive patient at mean 1 year follow-up.

Materials and Methods

Twenty large to massive rotator cuff tear patients who had complete arthroscopic repair with less than 50% coverage of original footprint surface were included in this study. Preoperative and postoperative clinical evaluation was performed by reviewing UCLA score, Constant score, Pain and Functional visual analogue score. The healing status of surgically repaired rotator cuff tendon were evaluated by means of preoperative and postoperative MRI focused on tendon integrity, muscle fatty degeneration and muscle atrophy by two musculoskeletal radiologist.

Results

The mean follow up period was 12(6~22)month. The mean value of UCLA score had improved significantly from 15(9~25) preoperatively to 25(13~34) postoperatively ($p=0.001$). The mean value of Constant score had improved significantly from 39(11~77) preoperatively to 73(44~98) postoperatively ($p<0.001$). Also pain VAS decreased from 57(10~80) to 13(0~60) ($p=0.001$) and functional VAS improved from 43(10~85) to 78(50~95) ($p=0.001$). The overall retear rate was 50%(10 cases). But, the mean size of reruptured tendon were significantly decreased from 33(23~42)mm to 21(5~38)mm at coronal plane and from 30(14~41)mm to 18,5(5~44)mm at sagittal plane in ten of the twenty patients($p=0.004$). There were no significant change of fatty degeneration and muscle atrophy of rotator cuff muscles from the preoperative state($p>0.05$).

Conclusion

The overall retear rate was 50% in large to massive rotator cuff tear patients who had complete arthroscopic repair and who had less than 50% coverage of original entire GT

footprint surface. However the clinical result of consecutive patients had improved significantly at mean 1 year follow-up, which had something in common with previous studies.

Key Words: Rotator cuff tear, Arthroscopic repair, greater tuberosity footprint, MRI, retear rate