Result of a Long-Term Follow-Up of Arthroscopic Partial Repair for Massive Irreparable Rotator Cuff Tears Using a Biceps Long Head Auto Graft

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Purpose: This paper presents the long term follow-up results of arthroscopic partial repair for massive irreparable rotator cuff tears using a biceps long head auto graft.

Materials and Methods: Forty-one patients with massive irreparable rotator cuff tear, who underwent arthroscopic repair, were reviewed retrospectively. Patients who underwent arthroscopic partial repair using a biceps long head auto graft were assigned to group 1, and patients in group 2 underwent arthroscopic partial repair alone. Patients with a less than 50% partial tear of the long head biceps tendon were included in this study. The clinical scores were measured using a visual analogue pain scale (VAS) for pain, range of motion (ROM), The University of California, Los Angeles shoulder score (UCLA), American Shoulder and Elbow Surgeons Shoulder Score (ASES), and Korean Shoulder Scoring System (KSS) scores preoperatively and at the final follow-up. The acromiohumeral interval (AHI) was measured using plain radiographs taken preoperatively and at the final follow-up, and re-tear was evaluated using postoperative ultrasound or magnetic resonance imaging at the last follow-up.

Results: The mean age of the patients was 62.1±12.7 years, and the mean follow-up period was 90.3±16.8 months. No significant differences in the VAS and ROM (forward flexion, external rotation, internal rotation) were found between the two groups (p=0.179, p=0.129, p=0.098, p=0.155, respectively). The UCLA (p=0.041), ASES (p=0.023), and KSS (p=0.019) scores showed functional improvements in group 1 compared to group 2. At the last follow-up, the measured AHI values were 9.46±0.41 mm and 6.86±0.64 mm in group 1 and 2, respectively (p=0.032). Re-tear was observed in six out of 21 cases (28.6%) in group 1 and nine out of 20 cases (45.0%) in group 2; the re-tear rate was significantly lower in group 1 than in group 2 (p=0.011).

Conclusion: Arthroscopic partial repair for a massive irreparable rotator cuff tear using a biceps long head auto graft has significant clinical usefulness in functional recovery and decreases the re-tear rates after surgery than arthroscopic partial repair alone, showing favorable results after a long-term follow-up.

Key words: long head of biceps, auto graft