

Arthroscopic Glenoid Resurfacing as a Surgical Treatment for Glenohumeral Arthritis in the Young Patient: Midterm Results

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Purpose

This study investigate the hypothesis that arthroscopic biologic glenoid resurfacing without humeral head replacement will provide results similar to humeral hemiarthroplasty in patients aged under 60 years.

Methods

Twenty-three consecutive patients aged 15-58 years (mean, 32 years) with severe glenohumeral arthritis were prospectively treated with arthroscopic resurfacing of the glenoid with a biologic patch (Restore; DePuy Orthopaedics, Warsaw, IN). Three patients left the study, leaving twenty patients to complete the study. Data collected preoperatively and postoperatively included active and passive range of motion and American Shoulder and Elbow Surgeons (ASES); Constant – Murley; Rowe; University of California, Los Angeles (UCLA); Shot Form 12 (SF-12); and visual analog scale (VAS) pain scores. All patients had preoperative and postoperative imaging, either computed tomography scan (n=2) or magnetic resonance imaging (n=18), and were re-examined 3 to 6 years after surgery.

Results

At last follow-up, 15 patients (75%) remained satisfied. Five patients had proceeded to have surface replacement arthroplasty, but four of five said that they would undergo the arthroscopic procedure again. Active and passive range of motion improved in flexion (80 degrees – 150 degrees), abduction (60 degrees to 120 degrees), external rotation with the arm at the side (10 degrees to 30 degrees), external rotation in abduction (30 degrees to 70 degrees), and internal rotation (10 degrees to 50 degrees). Each rating scale used showed statistically significant ($P < .05$) improvement from preoperatively to postoperatively: VAS, from 8 to 2; ASES, from 22 (out of 100) to 78; UCLA, from 15 (out of 35) to 29; Rowe, from 55 (out of 100) to 81; and Constant-Morley, from 26 to 79. Six of eight parameters on the SF-12 also showed statistically significant improvements.

Conclusions

Glenoid resurfacing with the Restore patch provided statistically significant improvements for your patient with severe glenohumeral arthritis as measured by the VAS, ASES, UCLA, Rowe, Constant-Murley, and SF-12 scores at 3 to 6 years of follow-up.

Level of Evidence

Level IV prospective case series investigating the effect of arthroscopic

