

Rehabilitation Following Graft Jacket Augmented Massive Rotator Cuff Repair. A Clinical Case Report

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Background: Managing patients with symptomatic massive rotator cuff tears is a challenge to both surgeon and rehab therapist. Besides treating with conservative measures surgical options range from decompression to tendon repair. Currently orthopedic surgeons believe that achieving the most anatomical repair possible provides the best outcome. However, high failure rates and less than optimal outcomes have been reported for such repairs. This has motivated the orthopedic community to explore better surgical techniques. One such technique uses graft materials to augment the rotator cuff repair, theoretically providing a scaffold for tissue regeneration and added structural support to the footprint. Current rehab trends for patients with massive rotator cuff repairs, promote the concept of protecting repair integrity, while applying a scientifically proven safe progression of ROM, strength and function. Many rehab protocols available for graft-augmented repairs are similar in approach to rehabilitating massive repairs.

Purpose: The purpose of this clinical case presentation is to describe the surgical technique of the Arthroscopic Graft Jacket Augmented - Rotator Cuff Repair (GJA-RCR), review current GJA-RCR rehab protocols, and present a rehab case report for a patient with GJA-RCR.

Case Description: A 64-year-old right-handed male, smoker reported falling onto left shoulder. For eight months, he experienced progressive pain and stiffness. Orthopedic consult identified a massive rotator cuff tear and adhesive capsulitis. He underwent a manipulation for adhesive capsulitis and GFA-RCR by a fellowshipped trained orthopedic surgeon, as described by Clark et al (Clark, Operative Techniques in Sports Medicine, 2012). After review of the operative report and therapist/surgeon consultation, three factors were identified to guide the postoperative rehab program: 1) Surgeon was confident in quality of repair, 2) patient was a smoker, and 3) potential for postoperative stiffening was high. A search of available rehab protocols was completed. A rehab protocol developed by Southern California Orthopedic Institute was chosen as the foundation for developing a treatment plan. Due to the risk of postoperative stiffness, a more advanced passive ROM progression was implemented. Pt began physical therapy two weeks postop for 1-2 x per week. Modalities were applied to augment pain and swelling reduction. All PROM procedures performed by a physical therapist.

Outcomes: Pre-surgical pain, ROM, and DASH scores were not available. At two weeks postop patient reported pain = 4/10, DASH = 83, and PROM as follows: pfe = 90, per(scap plane) = 30, pabd = 20, and patient was found to be compliant with postop precautions and constraints. Patient is currently six weeks postop. He reports pain = 1/10, DASH = 11, PROM as follows: pfe = 140, per(scap)@45abd = 65, pabd = 110, and patient admits to being non-compliant with use of immobilizer for past two weeks. Rehab is continuing and further rehab outcomes will be reported.

Discussion: Currently, postoperative rehab for GJA-RCR patient follows a similar approach to the rehabilitation of massive rotator cuff repairs. Does the augmentation of these repairs with graft material provide better initial strength to the repair allowing a more aggressive approach or does the “scaffold” require more protection thus slowing down the rehab progression? This case report presents a moderately more aggressive PROM progression compared to current published protocols and to date, outcomes have been acceptable.