

WHEN ALL ELSE FAILS: MANAGEMENT OF AN IRREPARABLE ROTATOR CUFF WITH CAPSULAR RECONSTRUCTION AND PHYSICAL THERAPY TARGETING ACCOMMODATIVE MUSCULATURE

Savannah Faulk, SPT and Douglas Steele, PT, PA-C, CPT, DHS, DPT, MHS

BACKGROUND & PURPOSE

Irreparable rotator cuff (RTC) tears can lead to a challenging rehabilitation outcome if not treated properly.¹ Shoulder dysfunctions are among the most common musculoskeletal injury in the general population.¹ It was found that the re-tear rate of a RTC repair is 81% suggesting the rationale behind RTC surgery to be inconsistent.² Dr. Teruhisa Mihata established a procedure called superior capsular reconstruction which was presented for patients with irreparable rotator cuff tears.² This superior capsular reconstruction technique was introduced due to the previous surgeries of rotator cuff tears that were failing which was causing considerable debate regarding the treatment of an irreparable massive rotator cuff tear.³ Mihata developed the superior capsular reconstruction technique to restore the superior stability of the humeral head in response to the 100% re-tear rate after 3 different patch grafts.⁴

The purpose of this case report is to describe the rehabilitative outcomes on a superior capsular reconstruction surgery following the re-injury of a surgically repaired rotator cuff (RTC) and glenoid labrum that was deemed irreparable.

CASE DESCRIPTION

- A 53 year old female with a history of a superior labral tear from anterior to posterior (SLAP) and rotator cuff (RTC) repair of the right shoulder that had re-torn due to an unknown cause.
- Pain Description
 - Achy
 - Dull
 - Intermittent
- Functional challenges
 - Pain with sleeping
 - Household chores and grooming activities
 - Limited in work duties
- Upper Extremity Functional Index Score: 12/80 or 15% functional ability
- Visual Analog Scale Score: 2/10 at rest; 6/10 at worst

INTERVENTION



Table-1: Superior Capsular Reconstruction Post-Operative Rehabilitation Protocol

Post-Op Phase 1: Protection to PROM (Day 1-week 10)	Post-Op Phase 2: Protective to AAROM (Weeks 11-15)	Post-Op Phase 3: Early Strengthening (Weeks 16-20)
Shoulder brace worn.	Full PROM by week 11- Gentle Scapular/GH Joint mobilization	Full AROM to ensure good scapular/humeral control
Cryotherapy and modality to decrease pain	Begin AAROM and progress to AROM	Emphasis on scapular kinematics
A/PROM of elbow, wrist, hand progress to PROM of shoulder	At 14 weeks-being submax RTC isometrics IR/ER, ABD, FL/Ext through pain-free ROM	Initiate strengthening program for the shoulder
Pendulum exercises	UBE with no resistance	Emphasized eccentric phase of contraction of RTC

RESULTS

UEFI score improved from 15% to 80%

AROM improved to the patient's prior level of function with shoulder FL, ABD, IR/ER equally to the uninvolved side.

VAS score declined from 2/10 to 0/10 pain at rest, 6/10 to 3/10 during activity.

Patient's strength in all planes of the right shoulder joint demonstrated equal strength when compared to the uninvolved side.

CLINICAL RELEVANCE

Post-op rotator cuff repairs are very common in the physical therapy world today. Due to the high re-occurrence rate of the rotator cuff being re-torn and the tears leading to be irreparable, the superior capsular reconstruction technique appears to be beneficial for these types of patients. The successful rehabilitation outcomes, specifically pain, joint active and passive ROM, strength, and return to the previous level of function, that occurred in this study further demonstrate the impact of both the applied surgical technique and post-operative physical therapy.

REFERENCES

