

SUPERIOR CAPSULAR RECONSTRUCTION (SCR)

John Costouros, MD, FACS
Assistant Professor
Stanford University
Dept. of Orthopaedic Surgery



Disclosures

- **Consultant:**
 - Arthrex, Zimmer, Depuy-Synthes, Depuy-Mitek, Shoulder Options, Inc.
 - United Healthcare (UHC)
- **Royalties:**
 - Arthrex, Shoulder Options, Inc.
- **BOD:**
 - Leroy C. Abbott Orthopedic Society
 - Northern California Orthopaedic Society

Outline

- History of SCR
- Biomechanics and rationale
- Clinical indications
- Surgical technique
- My personal experience



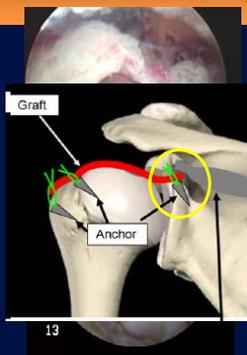
Fatty Infiltration: The Key Element

- Likely not repairable
- Pain relief more predictable than functional improvement
- Can we do better arthroscopically and not burn any bridges for reconstruction later?



Massive 'Irreparable' Rotator Cuff Tears

- Debridement
- Biceps tenotomy
- Partial repair
- Tendon transfer
- Reverse TSA
- ECM bridge*
 - Graft/Tendon Failure
- **Superior capsular reconstruction (SCR)**



* NOT FDA-Approved

Arthroscopic Superior Capsular Reconstruction

- Pioneered by Dr. Teruhisa Mihata
- Fascia lata autograft from superior glenoid to greater tuberosity
- Goals:
 - Improved pain and function
 - Provide superior stability of GHJ and enhance AP force couple of residual rotator cuff



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Biomechanical Role of Superior Capsule

Superior translation



Ishihara, Mihata, Lee et al., JSES 23:642, 2014.

Clinical Results of Arthroscopic Superior Capsule Reconstruction for Irreparable Rotator Cuff Tears

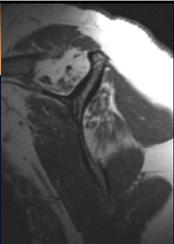
Teruhisa Mihata, M.D., Ph.D., Thay Q. Lee, Ph.D., Chisato Watanabe, M.D., Ph.D., Kunimoto Fukunishi, M.D., Mutsumi Ohue, M.D., Tomoyuki Tsujimura, M.D., and Mitsuo Kinoshita, M.D., Ph.D.

- 24 shoulders (mean f/u 34 mos)
- Irreparable tears (11 large, 13 massive)
- Fascia lata autograft with side-side repair to residual cuff



Clinical Indications

- Irreparable SS or SS/IS tear
- Minimal arthritis
- Intact subscapularis*
- Intact teres minor*
- Good bone stock for anchor fixation
- Minimal proximal migration of humerus



*Costouros et al., JSES 16:727, 2007.

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Surgical Technique

- Beach-chair position
- Attempt repair (releases
- Biceps tenotomy/tenodesis
- Ant/Post/Lateral/Nevaisse
- Anchor placement
- Calculation of graft size
- Graft implantation
- End-to-end repair to residual posterior cuff to graft



Rehabilitation: Go Slow!

- Phase 1: Protection (week 0-6)
 - Sling 6 weeks. No Shoulder Motion
 - Elbow/Wrist/Hand ROM only
- Phase 2: Intermediate (week 6-10)
 - Unrestricted Passive ROM, AAROM
 - Periscapular strengthening
- Phase 3: Dynamic (week 10-16)
 - AROM
 - RTC strengthening
- Phase 4: Return to Sport (>week 20)



Early Clinical Observations

- 12 patients (5 male, 7 female)
- Mean age 46
- Active patients, not interested in rTSA or latissimus transfer
- 4 SS, 8 SS/IS
- Intact SSC/TM in all cases, min arthritis
- Maximum follow up 6 months
- Graft choice
 - Arthroflex (9), Connexa (1), Fascia Lata (2)
- Predictable early pain relief
- Better early functional improvement with SS tears

SCR versus Latissimus Transfer



Conclusions

- SCR is a promising new treatment for patients with irreparable SS/IS rotator cuff tears
- Proper patient selection is critical: SSC/TM integrity, minimal arthritis or static instability
- Choice of graft remains unclear (auto vs allo)
- Although early results are encouraging, longterm studies are needed to properly assess clinical effectiveness.

THANK YOU!!



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