Subscapularis Repair Made Easy

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Disclosures

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1. Royalties and stock options
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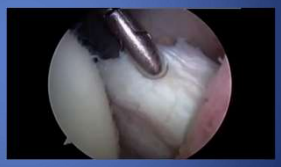
   - None

SUBSCAPULARIS REPAIR

- Often challenging procedure
- Arthroscopic repair
  - Intra-articular and extra-articular visualization required
  - Management of biceps pathology and coracoid impingement unique aspects
  - Technical hurdles
    - Footprint preparation
    - Anchor placement



GOALS OF SUBSCAPULARIS REPAIR

- Same as for any rotator cuff tear
  - Accurate assessment
  - Mobilization as necessary
  - Secure fixation

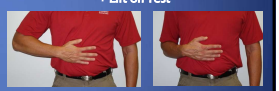
STEPS TO RECOGNIZE AND REPAIR SUBSCAPULARIS TEARS

1. Pre-operative assessment
   - Physical exam
   - MRI
2. Arthroscopic technique steps
   - Portal placement
   - Value of shoulder rotation and manipulation
3. Importance of rotator interval "window"
4. Pearls for managing biceps pathology
5. Why identifying the "comma" matters
6. Intra- vs. Extra-articular approach

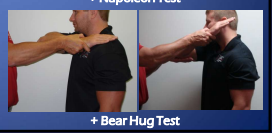
1. PREOPERATIVE ASSESSMENT

- Subscapularis tears
  - Anterior shoulder pain
  - Internal rotation weakness
- Specific tests to evaluate integrity

+ Lift-off Test



+ Napoleon Test

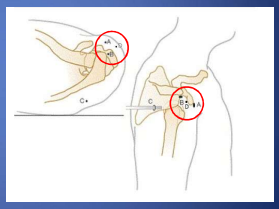


+ Bear Hug Test

2. ARTHROSCOPIC TECHNIQUE STEPS

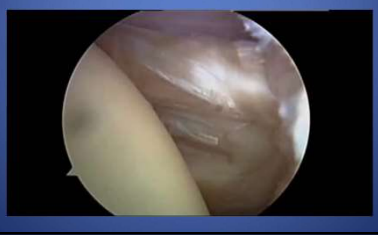
PORTAL PLACEMENT

- Dual or triple anterior portals
  - Visualization
  - Mobilization
  - Suture management



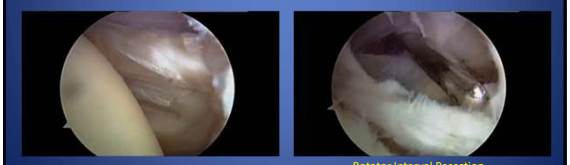
2. ARTHROSCOPIC TECHNIQUE STEPS

- Shoulder rotation and manipulation helpful
  - Internal rotation
  - Posterior translation
  - 70° scope may be helpful



3. IMPORTANCE OF CREATING ROTATOR INTERVAL "WINDOW"

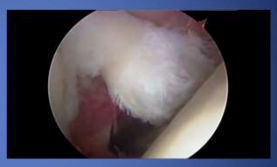
- Extra-articular subscapularis access vital
  - Assessment
  - Repair



Rotator Interval Resection

4. PEARLS FOR MANAGING BICEPS PATHOLOGY

- Biceps often frayed and/or subluxated
- Early release of biceps important

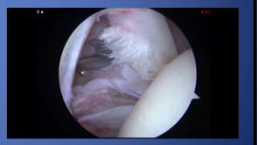


"To fix the subscapularis, you must first see the subscapularis"

Steve Burkhart, MD

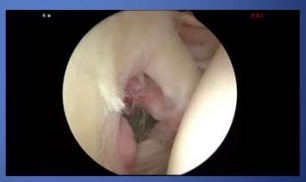
PARTIAL SUBSCAPULARIS TEARS

- Very Common
- Arthroscopic evaluation key to diagnosing partial tears
  - Reliably shows upper border detachment
  - Identifies biceps fraying and/or instability
  - Arthroscopic debridement defines tear



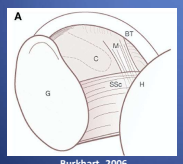
UPPER BORDER PARTIAL SUBSCAPULARIS TEARS

- Can be managed using techniques described
  - RI "window"
  - Dual portals
  - Biceps release
  - Simply repaired

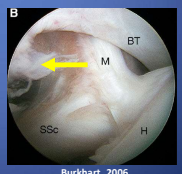


5. WHY IDENTIFYING THE "COMMA" MATTERS

- Comma tissue (medial biceps sling)
  - Coracohumeral ligament
  - Superior glenohumeral ligament



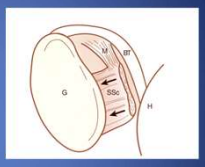
Burkhart, 2006

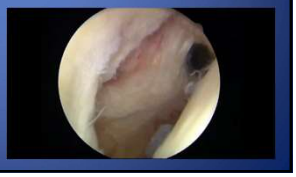


Burkhart, 2006

WHY IDENTIFYING THE "COMMA" MATTERS

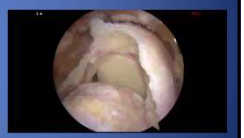
- Comma tissue usually travels medially with subscapularis
  - "Comma sign"
- Helps to localize subscapularis when retracted





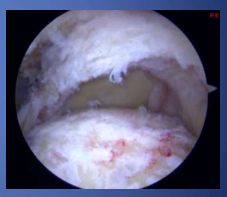
ANTEROSUPERIOR TEARS

- Combined tears challenging
  - Often large or massive
  - Retracted
  - Anatomy distorted
- Identifying comma tissue important

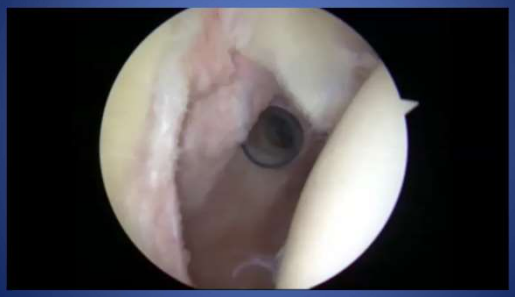


6. SUBSCAPULARIS REPAIR APPROACHES

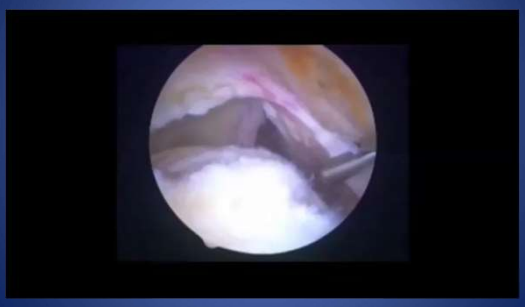
- Intra-articular approach
- Extra-articular approach
- Combined
  - Not mutually exclusive



INTRA-ARTICULAR APPROACH



EXTRA-ARTICULAR APPROACH



SUMMARY

- Identify partial subscapularis tears
- Repair of larger tears can be challenging
  - Biceps pathology
  - Mobilization
- Arthroscopic techniques effective
  - Identifying comma tissue helpful
  - Consider extra-articular approach for large tears
- Beware axillary nerve in retracted tears

THANK YOU