

Management of Acute Rotator Cuff Tears

Barton R. Branam, MD
University of Cincinnati
Department of Orthopaedics
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Rotator Cuff Tears-Diagnosis

- History
- Physical Exam
- X-rays
 - Often normal
- MRI
 - Best test



Define the Injury-Timing

- Acute-
 - Significant trauma
 - No prior pain
- Subacute-
 - Gradual pain
 - Relatively minor injury
- Chronic
 - No injury
 - Years of pain,

Define the problem

- Isolated shoulder problem
 - Acute injury, significant pain
 - +/- ↓ROM
 - Radiographs often (-)
 - MRI shows RCT
- Polytrauma Patient
 - Stabilize the patient
 - Often have urgent GS, NS, OS needs
 - 2° survey shows significant shoulder pain
 - Radiographs negative
 - Dx on MRI
 - Often Delayed

RCT Treatment Algorithm

- Based on risks of chronic changes
- Considers natural history of tears, potential for repair healing, reparability, post op outcome factors

-Group I Initial nonoperative treatment - Twist and drive - Partial thickness tears (except maybe larger bursal sided tears) - Maybe small (<1 cm) full thickness tears
-Group II -> consider early surgical repair - All acute tears full thickness (except maybe small (<1 cm) tears) - All chronic full thickness tears in a young (<60) age group (except maybe small (<1 cm) tears)
-Group III Initial nonoperative treatment - All chronic full thickness tears in an older (>60 or 70) age group - Irreparable tears (based on tear size, retraction, muscle quality, and migration)

Treatment algorithm for rotator cuff disease

Tashjian RZ, Clin Sports Med, 2012

Isolated Shoulder Problem

- Considerations
 - Age
 - Comorbidities
 - Demand
 - Associated pathology

Isolated Shoulder Problems

- Non-operative
 - Older patients
 - Arthritis
 - High Riding Head
 - Fatty infiltration/atrophy
 - Irreparable tears
 - Partial thickness tears
 - Significant comorbidities



Isolated Shoulder Problem

- Operative
 - Younger, healthy patient
 - Minimal degenerative changes
 - No atrophy/fatty infiltration
 - Full thickness tears
 - Failed non operative treatment partial tears
 - Reparable tear



Polytrauma Patient

- Much more complicated
 - Often present later
 - Often stiff
 - Associated injuries
 - WB restrictions on other extremities
 - Limited remaining therapy visits

Polytrauma Patient

- Timing of surgery
 - Associated injuries
 - Often subacute upon presentation
 - WB status
 - Crutches
 - Sling
 - NWB UE
- Rehab
 - Simultaneous rehab of all injuries?
 - Effort/Resources

Nonoperative Management

- Cryotherapy
- Medications
 - NSAIDs
 - MDP
- Cortisone shot
- Physical Therapy
 - ROM
 - Strengthening



Operative Management

- Timing
 - As soon as reasonably possible
- Address all associated pathology
 - Labrum
 - Biceps
 - Acromion
 - AC joint



Operative Management



The first photograph shows a close-up of a surgical incision on a patient's shoulder, with a gloved hand holding the skin. The second photograph shows a patient's arm and shoulder area, possibly during a different stage of the surgery or a post-operative view.

Operative Management



The first photograph shows a patient in an operating room with their arm extended, likely during a surgical procedure. The second photograph shows a patient in an operating room with their arm in a different position, possibly during a different stage of the surgery.

Scope-Complete Inventory

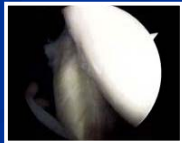
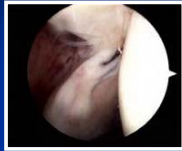
- Define the problem
 - Cartilage
 - May change outcome/expectations
 - Labrum
 - Biceps
 - Cuff
 - Subscap
 - Supra/Infraspinatus
 - Acromion
 - AC



The top arthroscopic image shows a view of the shoulder joint with a surgical instrument. The bottom arthroscopic image shows a different view of the shoulder joint, possibly focusing on the labrum or biceps tendon.

Definitive Treatment

- Address associated pathology
 - Chondroplasty
 - Labral debridement
 - Biceps
 - Tenodesis, tenotomy
 - SAD
 - DCE
 - Cuff
- Open
- Arthroscopic
- Combination



Arthroscopic Rotator Cuff Repair

- First performed in mid 90's
- Techniques and equipment continue to evolve such that it is an excellent option



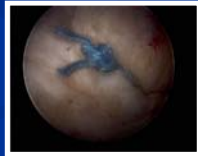
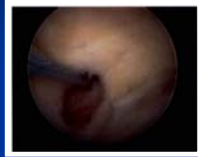
Arthroscopic Repair-Advantages

- Less dissection = less stiffness
- Preserves deltoid muscle
- Lower infection rate
- Better visualization
- Ability to evaluate/address other pathologies
 - "Shopping Spree"
- Less pain in early post-op period
- **DECREASE RISK OF MAKING PATIENT WORSE**



Arthroscopic Repair-Advantages

- Small tears easily repaired
- Biggest advantage is with larger tears
 - Improved visualization
 - Easier to mobilize torn tissue
 - Determining if it can be fixed
 - Avoid big muscle dissection



Open Repair

- | | |
|--|---|
| <ul style="list-style-type: none"> ■ Mini open <ul style="list-style-type: none"> ■ Anterolateral edge of acromion ■ Localize with scope <ul style="list-style-type: none"> ■ May change incision ■ Split deltoid ■ Difficult to see far medially ■ Tag cuff prior to opening <ul style="list-style-type: none"> ■ Side/side with scope | <ul style="list-style-type: none"> ■ Deltopectoral <ul style="list-style-type: none"> ■ Large retracted subscap tears ■ Can get to some supraspinatus tears ■ Biceps tenodesis <ul style="list-style-type: none"> ■ Groove ■ Subpec |
|--|---|

Post-Op Rehab

- Start passive range of motion within first week
- Sling x 1 month
- Start active range of motion when sling comes off
- Start strengthening at 8-12 weeks
- Remove all restrictions 4-6 months



