Management of Acute Rotator Cuff Tears

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Rotator Cuff Tears-Diagnosis

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

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Define the Injury-Timing

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

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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

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RCT Treatment Algorithm

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

Treatment algorithm for rotator cuff disease

Tashjian RZ, Clin Sports Med, 2012

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Isolated Shoulder Problem

- Considerations
  - Age
  - Comorbidities
  - Demand
  - Associated pathology

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Isolated Shoulder Problems

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

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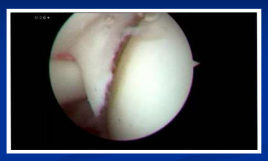
Isolated Shoulder Problem

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



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Polytrauma Patient

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

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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

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Nonoperative Management

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

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Operative Management

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

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Operative Management


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Operative Management


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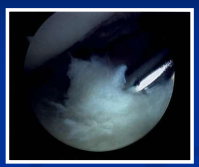
Scope-Complete Inventory

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

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Definitive Treatment

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

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Arthroscopic Rotator Cuff Repair

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

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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

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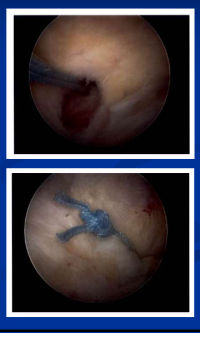
Arthroscopic Repair-Advantages

- 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



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Open Repair

- Mini open
  - Anterolateral edge of acromion
  - Localize with scope
    - May change incision
  - Split deltoid
  - Difficult to see far medially
  - Tag cuff prior to opening
    - Side/side with scope
- Deltopectoral
  - Large retracted subscap tears
  - Can get to some supraspinatus tears
- Biceps tenodesis
  - Groove
  - Subpec

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Acute Traumatic RC Tears

- Massive traumatic RC tears and clinical pseudoparesis forward elevation
  - 9 patients also had pseudoparesis ER
- Excluded sig fatty infiltration, prior shoulder problems/surgery
- 21 patients (30-83y)
  - 2 tendons-7
  - 13 tendons-13
  - All-1
- Mean time to surgery—33 days Spross et al, *Arthroscopy* 2019

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Spross et al

- Results
  - All patients reversal of pseudoparesis→mean elevation 165°, mean ER 49°
  - Overall retear rate 20%
  - Fatty infiltration increased at least 1 grade in retear patients and in 56% of patients without retear.
  - Age not predictor for retear
- Conclusions
  - Can expect complete restoration of function even in patients with retear
  - Retear rate low, fatty infiltration minimal

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Post-Op Rehab

- Must have reliable therapist
- 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

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Thank You

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