Treatment of Rotator cuff Tear

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Clinical presentation

- Pain
- Weakness
- Reduced ROM
- Rotator cuff arthropathy
Inman’s concept of “Force couples”

Diagnosis

- Physical exam
- X-ray
- Sonography
- Arthrography
- MRI
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Do all cuff tears need treatment?

- The presence of a rotator cuff tear is not necessarily an indication for surgery.

- MRI and cadaver studies have shown asymptomatic patients to have cuff tears.
Evaluation of a patient with RC tear

- general health status & comorbidities
- current & desired functional level
- chronicity of the tear
- size of tear
- history of a traumatic event
- previous treatments
Aim of Nonoperative treatment

- help a patient with symptomatic rotator cuff disease become asymptomatic
Success of nonoperative treatment?

- successful in 33% to 92% of cases
- pain as primary reason for functional weakness
- lidocaine injection to subacromial space
  → Patient able to elevate their arm to shoulder height

Patients with longstanding pain (> 6 months) did not respond well to nonoperative therapy
Who is suitable for nonoperative treatment?

- chronic rotator cuff tear
- Tear limited to one tendon
- Non-traumatic
- Age > 60 y
- less active, low demanding patients
Nonoperative treatment

- NSAID
- Heat application
- Modification of activities
- Exercises
  - Elimination of subtle stiffness (stretching of post. cap)
  - Strengthening of RC and parascapular muscles
Elimination of subtle stiffness
Strengthening of RC & parascapular muscles
Subacromial injection

- After 4–6 wk
- Can be repeated after 2–3 month
- Not more than 2 injection in a year
How long nonoperative treatment continue?

- 4 to 6 months
  - No answer → MRI, consider surgical options

When weakness is prominent or progressive, this process is accelerated

If tear size seems inconsistent with physical findings, other causes of weakness, especially a nerve injury, should be considered

How long nonoperative treatment continue?

- 4 to 6 months
  - No answer → MRI, consider surgical options

- In a younger and active patient, an acute full-thickness tear is an indication for early surgery without any trial of nonoperative treatment

- In these patients repair within the first 3 weeks resulted in the best surgical outcome
Indications for surgical treatment

- Pain (principal indication)
- Lack of mobility
- Diminished strength
Indications for surgical treatment

- Results depend on:
  - tear size
  - retraction
  - tissue quality
  - preoperative mobility
  - patient's overall health

- Patients should understand their role in the postoperative rehabilitation and the length of time required for recovery
Treatment methods

- Open repair
- Muscle transfer
  - Subscapularis
  - Latissimus dorsi
- Arthroscopic
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- Arthroscopic
Why Arthroscopic treatment?

- assessment of both articular and bursal surfaces of RC
- increases the surgeon’s “window of visualization
- minimal disruption to the overlying deltoid
Arthroscopic treatment

- Position
- Portals
- appropriate set up and equipments
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Arthroscopic treatment

- Diagnostic arthroscopy (GH & Subacromial)
- Assess tendon mobility & understand tear
- Rigid fixation to bone
- Acromioplasty
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Massive, contracted, immobile tears

Crescent-shaped

U-shaped

L-shaped

Reverse L-shaped
Arthroscopic treatment

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crescent-shaped rotator cuff tear
Arthroscopic treatment

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U–shaped rotator cuff tear
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L & reverse L –shaped rotator cuff tear
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Single row or Double row?
Arthroscopic treatment

- Diagnostic arthroscopy (GH & Subacromial)
- Assess tendon mobility & understand tear
- Rigid fixation to bone
- **Acromioplasty**
Arthroscopic repair of RC tears

- results comparable to open repair
- The advantages:
  - better visualization of RC
  - Decreased deltoid morbidity
  - shorter hospital stay
Summary

Success in arthroscopic RC treatment depends on:

- Good visualization
- Good equipments
- Knowing the pattern of tear
- The skill and experience of the surgeon

The result of bad arthroscopic RC tear is inferior to open repair

Thank you for attention