1 Rotator cuff tear - suspected

Quick info:
Rotator cuff tears:
- can be painless or painful
- most patients have a longstanding history of painful shoulder condition, such as impingement syndrome or subacromial bursitis
- are related to repetitive use of the rotator cuff and therefore incidence increases with age; they are relatively rare before age 35 years
- occasionally tendon tear can be caused by acute trauma, sprain or sudden jerking injury to the shoulder
- may be partial or full thickness

Risk factors include:
- subacromial spurs or impingement syndrome
- osteoarthritic thickening of the acromioclavicular joint
- systemic inflammatory conditions of the shoulders, such as rheumatoid arthritis or gout
- prolonged, excessive or unaccustomed use of the shoulder in the impingement position

References:

2 Clinical features

Quick info:
Patient may have a history of:
- bicipital tendonitis
- tenderness of the acromioclavicular joint
- impingement syndrome
- gout or rheumatoid arthritis

Typical symptoms and signs of rotator cuff injury include:
- pain and tenderness to upper arm, subacromial space and lateral deltoid
- night pain
- pain with upward reaching movements
- reduced shoulder strength, especially abduction and external rotation in the presence of a tear
- possible muscular atrophy
- usually a full range of passive movement but limited active movement due to pain and rotator cuff weakness
- low painful arc of motion, with maximum pain at 60-120°, is typical for impingement
- inability to maintain painful arm at 90° angle when arm is passively abducted and then released indicates possible tendon rupture

Partial tears:
- it is difficult to identify partial tears with a background of chronic tendonitis
- main symptom is a painful arc on active abduction
- sometimes clicking or catching on joint movement

Complete tears (or traumatic tears) are indicated by:
- an inability to abduct the arm 20-100°
- ability to abduct arm from 100° and beyond
- normal passive range of movement
- pain initially which subsides after a few weeks
- patient 'shrugging' the shoulder upon active abduction
- positive 'drop' or 'lag' sign when the arm is passively abducted and then released, with drift of the arm back to its initial position

NB: Suspected severe rotator cuff tears require immediate referral to orthopedics for early surgical assessment.

References:
New Zealand Guidelines Group (NZGG). The diagnosis and management of soft tissue shoulder injuries and related disorders.
3 Consider differential diagnoses

Quick info:
- cervical strain
- dislocations or subluxation of shoulder
- proximal myopathies
- C5 and C6 injury

References:

4 Investigations

Quick info:
Investigations include:
- X-rays:
  - perform shoulder series X-rays, including:
    - anteroposterior
    - axillary (or axial)
    - Stryker view
  - if patient unable to do axillary view due to pain or stiffness – request for scapula-Y view
  - examine X-rays for:
    - any calcification of chronic tendonitis
    - a high riding humeral head due to the loss of interposing structures between acromion and humeral head, suggesting rotator cuff tear or chronic cuff degeneration
    - osteoarthritis of acromioclavicular joint
  - consider blood tests only if an underlying inflammatory condition is suspected

References:

6 Specialised investigations

Quick info:
Further investigations include:
- ultrasound:
  - non-invasive
  - can identify full thickness tears, but is less sensitive for partial thickness tears

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Rotator cuff tear - suspected
http://healthguides.mapofmedicine.com/choices/map/shoulder_pain8.html

- magnetic resonance imaging (MRI) can reveal:
  - full thickness rotator cuff tears (it is not considered consistently accurate for partial tears)
  - soft tissue inflammation
  - other bony pathology
- if an MRI is not readily available, use contrast arthrography to detect rotator cuff tears (visualised when contrast medium leaks into the subacromial space)

References:

8 Other diagnosis identified
Quick info:
Treat according to findings.

9 Considerations for surgical interventions
Quick info:
Consider surgical intervention in patients:
- with severe rotator cuff tears
- with tears causing functional disability
- with continued pain
- who are physiologically young and active and whose daily lives are affected by their rotator cuff tear
- with underlying impingement syndrome:
  - consider a decompression procedure concurrently with rotator cuff repair

10 Surgical intervention
Quick info:
This can include a combination of the following:
- diagnostic arthroscopy
- acromioplasty
- synovectomy
- open rotator cuff repair
- subacromial decompression
Reference:

11 Non-surgical management
Quick info:
Non-surgical management includes:
- simple analgesia or non-steroidal anti-inflammatory drugs (NSAIDs), unless contra-indicated:
  - NSAIDs provide short-term symptomatic relief, but are associated with adverse effects
- contra-indications include:

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• patients with severe renal disease
• pregnancy
• patients with aspirin allergy
• prescribe with caution in patients with:
  • hypertension
  • gastrointestinal complaints
  • mild liver or kidney disease – use lowest effective dose and monitor renal function
  • asthma
• monitor adverse effects
• advise to modify activity by minimising overhead activity or overuse
• gentle exercises to restore range of motion:
  • stretching exercises to maintain shoulder elevation, internal and external rotation
  • shoulder strengthening exercises once range of motion is restored
• if no response consider:
  • corticosteroid and local anaesthetic injection into subacromial space
  • may provide symptomatic relief in the short-term for those with tendonitis or partial tears
  • however, there is uncertain benefit in the presence of full thickness tears
  • three injections in total, separated by 6 weeks
• in patients with diabetes, monitor blood sugar levels following intra-articular injection

References:

12 Rehabilitation program

Quick info:
Rehabilitation generally involves:
• 3 weeks of immobilisation followed by:
  • 3 weeks of limited active assisted flexion to 90°; and
  • 6-12 week program of supervised exercise to restore range of movement

References:

13 Follow-up

Quick info:
• re-evaluate the need for surgical intervention if there is no improvement in symptoms after 6 months for those with partial thickness tears; 4-6 weeks for those with full thickness

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Evidence summary for Rotator cuff tear - suspected

The pathway is based on our interpretation of the following guidelines (3, 4, 9). All of these guidelines have been graded for quality and prioritised for inclusion based on their methodological quality. All intervention nodes (ie. those concerning therapy and therapeutic advice) have been graded for the quality of the evidence underlying them. Key non-interventional nodes are also referenced.

Search date: May-2006

Evidence grades:

1. Intervention node supported by level 1 guidelines or systematic reviews
2. Intervention node supported by level 2 guidelines
3. Intervention node based on expert clinical opinion
4. Non-intervention node, not graded

Evidence grading:

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References

This is a list of all the references that have passed critical appraisal for use in the pathway Shoulder pain
Rotator cuff tear - suspected
http://healthguides.mapofmedicine.com/choices/map/shoulder_pain8.html

ID Reference

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