Adhesive Capsulitis

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Objectives

• 1. Describe the pathophysiology of Frozen Shoulder (Adhesive Capsulitis)
• 2. Describe the physical exam findings in a patient with Frozen Shoulder
• 3. Describe the treatment options for a patient with Frozen Shoulder
Frozen Shoulder

• Painful, stiff shoulder
• Vague, nonspecific terminology
• Many etiologies
  – Full and partial rotator tear
  – Calcific tendinitis
  – Glenohumeral/acromioclavicular arthritis
  – Cervical Radiculopathy
Adhesive Capsulitis

• Chronic inflammation of the capsule subsynovial layer
  – Capsular thickening
  – Fibrosis
  – Adherence of the capsule to itself and anterior neck of the humerus

• Pain and mechanical restraint to motion
Pathology

- Exact pathogenesis is unknown
- Secondary adhesive capsulitis
  - Trauma or surgery
- Primary (idiopathic) predisposing factors
  - Diabetes (I or II)
    - Prevalence increases with longer duration of diabetes
  - Thyroid disease
  - Parkinson’s
  - Hypoadrenalism
  - Cardiac disease
  - Stroke

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Natural History

• Four Stages
  – Painful stage
    • Insidious onset
    • Nonspecific
  – Freezing stage
    • Progressively worsening glenohumeral motion
  – Frozen stage
    • Active and passive glenohumeral ROM restriction
    • Minimal pain
  – Thawing stage
    • Absence of pain
    • Improved ROM
Clinical Presentation

• Poorly localized pain
  – If localized, usually in anterior and posterior capsule, radiating to biceps
• Progressive pain and stiffness
• Impairment in sleep
Clinical Presentation

• Physical examination
  – Loss of active and passive ROM
    • Best appreciated on passive external rotation
  – Increased compensatory scapulothoracic motion
  – Tenderness at deltoid insertion and anterior/posterior capsule with deep palpation
Imaging

- X-rays typically normal
  - May show osteopenia of the humeral head and neck
Imaging

- MRI
  - Thickening of the dependent portion of the capsule
  - Scarring of the rotator interval
    - Located between subscapularis and supraspinatus

Treatment

• Condition is self-limited
  – Though may take months to years to resolve
• Anti-inflammatory medication
  – NSAIDs, oral corticosteroids
• Physical Therapy
Treatment

• Corticosteroid injection
  – Glenohumeral
  – Not effective in 3\textsuperscript{rd} and 4\textsuperscript{th} stages
• Hydrodilatation
• Invasive procedures
  – Manipulation under anesthesia
  – Capsular release
Questions?
Sources