Diagnostic and Management Approach to the Painful Shoulder
Introduction

What conditions causing shoulder pain commonly present in General Practice?

- Subacromial impingement
- Rotator cuff tears
- AC joint pathology
- Adhesive capsulitis
- (Instability)
Introduction

- How do we discriminate between these conditions?
- History
  - Acute/gradual onset
  - Distribution of pain
  - Activities worsening the pain
  - Activity restrictions
  - Night pain
- Examination
Subacromial Impingement

- Impingement beneath coracoacromial arch
- Intrinsic
  - Cuff thickening/bursitis
- Extrinsic
  - Instability – young
  - Subacromial spurs – old
- Pain with activity above shoulder height (and at night)
- Painful arc of abduction (“hitch”)
- Positive impingement signs
Adhesive Capsulitis

- Capsule sticks to humeral head
- GLOBAL RESTRICTION ROM
- NIGHT PAIN
- Cause often unknown – but beware diabetes
- Painful 6/12
- Restrictive 6/12
- Resolution 6/12
AC Joint Pathology

- Pain with activity (esp overhead, or weight training)
- AC Jt tender
- Crepitus/clicking
- Deformity
Rotator Cuff Tear

- Requires force
- Supraspinatus > Infraspinatus > subscapularis
- Reduced function and night pain
- Painful arc ("hitch")
- Drop test
Examination of the Painful Shoulder

- Observation
- Anterior
  - SCJ
  - Clavicle
  - ACJ
  - Shoulder height
- Posterior – wasting
  - Supraspinatus
  - Infraspinatus
- Abduction (180deg)
  - Scapular winging
  - Glenohumeral rhythm (2:1)
  - Hitch
- Forward flexion (180deg)
  - Winging
  - Rhythm
- External rotation
- Back scratch
- (IR in abduction)
Examination of the Painful Shoulder

- **Palpation**
  - SC joint
  - Clavicle
  - AC joint
  - Anterior joint
  - Long head biceps
  - Greater tuberosity
  - Posterior joint

- **Muscle Testing**
  - Supraspinatus – abduction
  - Infraspinatus – external rotation
  - LH biceps – forward flexion
  - Subscapularis - lift off
Provocation Tests

- AC Joint Tests
  - Horizontal flexion and adduction
  - Resisted abduction in horizontal flexion

- Impingement Signs
  - Empty can
  - Hawkins

- Stability
  - Sulcus
  - AP glide
  - Apprehension and relocation

- Labrum
  - O’Brien’s test
Is it Referred from the Cervical Spine?

- **Median nerve**
  - Thenar muscles
  - Index sensation

- **Ulnar nerve**
  - 1\textsuperscript{st} dorsal interossei motor
  - 5\textsuperscript{th} finger sensation

- **Radial nerve**
  - Finger extension
  - 1\textsuperscript{st} dorsal web sensation
Is it Referred from the Cervical Spine?

Where is the pain?
- Hand over deltoid – think shoulder
- Hand over traps – think neck
- Radicular pain – think neck

Examine
- Cervical spine ROM
- Spurlings test

Neurology
- C5 deltoid (S, M), biceps (R)
- C6 thumb (S), biceps (M), BrRad (R)
- C7 digit 3(S), triceps (M, R)
- C8 digit 5(S), FDP/S (M)
- T1 medial elbow (S), finger abduction (M)
Investigation of Shoulder Pain

- Local anaesthetic injection tests
- Plain XR
  - AP (IR and ER)
  - Trans-scapular
  - AC joint
Investigation of Shoulder Pain

- U/S scan
  - Cuff tears, tendinopathy, bursitis
  - Undercalls cuff pathology
  - Can inject at the same time
Investigation of Shoulder Pain

- **Bone scan**
  - Esp if referring for ACJ surgery

- **CT arthrogram**
  - Particularly useful for recurrent instability

- **MRI**
  - Cuff tears

- **MRA**
  - Labral pathology and instability
Treatment of Shoulder Pain

- Analgesia
- NSAID
- Activity modification
- Corticosteroid injection
- Physical therapy
- Surgery
Subacromial Impingement

- Pain with activity above shoulder height (and at night)
- Painful arc of abduction (“hitch”)
- Positive impingement signs
- Plain XR
- Ultrasound scan
- Local anaesthetic test
- Subacromial injection and rehabilitate
- Subacromial decompression
AC Joint Pathology

- Pain with activity (esp overhead, or weight training)
- Deformity
- Crepitus/clicking
- Provocation tests
- Plain x-rays
- Bone scan
- Activity modification
- NSAID
- CSI
- Surgery
Adhesive Capsulitis

- GLOBAL RESTRICTION ROM
- NIGHT PAIN
- Investigations often not required (glucose?)
- EDUCATION
  - Painful 6/12
  - Restrictive 6/12
  - Resolution 6/12
- Glenohumeral injection (or hydrodilatation)
- Avoid provocation (work within limits)
Rotator Cuff Tear

- Requires force
- Reduced function and night pain
- Painful arc ("hitch")
- Drop test
- Plain XR and U/S
- Bilateral pathology common on U/S > 50y – history and examination important
- Small tear > 50y – CSI and rehab
- Large tear, or < 50y – ortho opinion
Subacromial Injection – Posterior Approach

- Prepare
  - 2ml LA
  - 10mg Kenacort
  - 23g 1.25in – slim female
  - 21g 1.5in larger females, males
- Mark just below postero-lateral corner of acromion
- Arm resting in lap

- Prep skin
- Aim at coracoid
- Follow the curve of the acromion
- Never inject against resistance
- Make good notes
  - No touch technique
  - Side effects warning
Take Home Messages

- Adhesive capsulitis – global restriction of ROM
- Impingement – painful arc, but rotation should be preserved
- Cuff pathology is common on U/S in middle age – treat the patient, not the scan (think about what YOU would want)
- Don’t forget plain x-rays!