GP Assessment of the Shoulder

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Aims

- Refresh shoulder anatomy
- Classification of common shoulder conditions seen in primary care
- Review of management strategy for shoulder pathologies
- Objective assessment for common shoulder conditions
- Quick shoulder assessment guide (practical)
Shoulder Anatomy

- GH joint
- Labrum
- Rotator cuff
- Capsule
- AC joint
- Bursa
- Scapula
- Spinal/ribs
- Neural
Shoulder Anatomy
Shoulder muscular anatomy

- The rotator cuff
- Deltoid
- Biceps Brachii
- Axioscapular muscles
Basic classification

**Stiffness**
- Arthritis
- Frozen shoulder
- Infection
- Tumour
- AVN

**Instability**
- Traumatic
- Atraumatic
- Muscle patterning

**Shoulder Pain**

**Other**
- Spinal
- Rib
- Non MSK

**Long head biceps Impingement**
- Rotator Cuff
- Bursa
- AC joint
Impingement

- Rotator Cuff
- Bursa
- Labrum
- AC joint

75% of presentations in Primary Care?
Impingement

Intrinsic Factors
- Rotator Cuff Pathology
- Acromial / ACJ spurs / osteophytes
- Sub Acromial Bursitis
- Labral tears

Extrinsic Factors
- Muscle imbalance - scapulohumeral
- Postural change
- Capsule laxity or tightness
- Repetitive overuse
Impingement

Signs and Symptoms:

• Ache around deltoid, occ. goes to wrist
• Often associated with jobs/hobbies that involve overhead activities
• May have painful arc 90-130°
• PAIN/LOSS RANGE ABDUCTION
• HAWKINS sign POSITIVE
Impingement

Treatment and management

• Physiotherapy first
• Steroid injection
• Sub-acromial decompression
Rotator Cuff Tears

Partial tear or defect:

- Difficult to differentiate between tear and tendinopathy
- Common in elderly
- Reduced AROM – full PROM
- Resisted tests painful +/- weakness
- Refer to physio re imbalance
- Consider injection
- Surgery not reparative? debridement
Stiff Shoulder

- Arthritis
- Frozen shoulder
- Infection
- Tumour
- AVN
Stiff Shoulder (GHJ)

If passive external rotation is very limited

- Arthritis
- Frozen shoulder (not <25 or >65 years ?)
- Tumour
- AVN
- Infection
Stiff Glenohumeral Joint

- External rotation is the only pure Glenohumeral movement
- If loss External Rotation MUST X-RAY
- Relatively normal X-Ray = frozen shoulder

Loss Abduction > ER impingement
Loss ER > Abduction stiff Glenohumeral joint
Frozen Shoulder

• Signs and symptoms:
  • Mainly 40 to 65 year olds (frequently women)
  • Pain around shoulder, occ. Goes to wrist
  • Reduced GH joint ROM – active = passive
  • Capsular restriction – ER>Abd>IR
  • Resisted tests pain free
Frozen Shoulder

The treatment options range from:

1. Nothing.
2. Physiotherapy (GH joint mobs, caps stretches)
3. Locally acting steroid injections
4. Hydro-distension injections (up to 50ml)
5. Manipulation under anaesthetic (MUA)
6. Open/Arthroscopic capsular release.
History:
• Can be degenerative or traumatic
• Trauma often with elbow extended and forced internal rotation
• Degenerative in throwers and repetitive overhead manual work
• May have anterior and lateral arm pain

Examination
• May report clunking some mild instability sensations
• May have co-existing impingement
• Often has near full ROM
• Positive labral tests

Management
• Surgical opinion
Instability

Two types... **TUBS** or **AMBRI**

**T** – traumatic onset
**U** – unidirectional instability
**B** – Bankhart lesion
**S** – surgical intervention

**A** – atraumatic (congenital/acquired)
**M** – multi-directional instability
**B** – bilateral
**R** – responds to **physiotherapy**
**I** – inferior capsule surgery
Subjective history

- Onset
- Age: likely conditions?
- Site
- Spread
- Occupation / Hobbies / Activities
- Functional activities affected
- Medical history
- Investigations / treatment to date
Age can help as a *rough guide* to what may be the problem.

<table>
<thead>
<tr>
<th>Potential Problem</th>
<th>AGE</th>
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<tbody>
<tr>
<td>Instability</td>
<td>17 – 30 years</td>
</tr>
<tr>
<td>Impingement</td>
<td>30 – 45 years</td>
</tr>
<tr>
<td>Adhesive capsulitis</td>
<td>45 – 60 years</td>
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<tr>
<td>OA</td>
<td>&gt;60 years</td>
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</tbody>
</table>
Pain location

- Where pain is can help with diagnosis

- Lateral shoulder \(\rightarrow\) Cuff tear / Impingement
- Anterior shoulder \(\rightarrow\) Impingement/Labrum
- Whole shoulder \(\rightarrow\) Frozen shoulder
- Superior shoulder \(\rightarrow\) AC joint
- Trapezius/scapula \(\rightarrow\) Neck
- P&N in hand \(\rightarrow\) Neck
Basic objective shoulder examination

- 1. Observation - *wasting, swelling, deformity, scapula position*
- 2. Shoulder movement – *active and passive*
- 3. Resisted shoulder tests - *abdn, med rotn, lat rotn*
- 4. Special tests – *impingement, cuff, labrum, instability*
- 5. Palpation
1. Observation
2. Shoulder movement

- Any limitation in range of movement needs to be quantified:
  - Is it active or passive restriction
  - Is it limited by pain, inability, hard end feel
  - Is it a specific point in the range
  - Is external rotation stiff (BE AWARE)
  - Clear cervical spine
3. Resisted tests

- Myotomes if cervical spine still suspicious
- Resisted MR, LR, Abduction and elbow flexion
- Always compare to contra-lateral side
- Are the resisted tests weak
- Do they reproduce pain
4. Special tests

- Impingement tests
  *Active abduction, Hawkins Kennedy*

- Instability tests
  *Apprehension, load and shift*

- Labral tests
  *Grind test*
5. Palpation

- AC joint
- Neck
- Trapezius
- Lateral acromial border
Quick shoulder assessment guide

- OBSERVATION
- ACTIVE MOVEMENT ABDUCTION
- PASSIVE CAPSULAR PATTERN (EXTERNAL ROTATION)

SPECIAL TESTS –
- IMPINGEMENT (HAWKINS KENNEDY)
- RESISTED TESTS (ROTATOR CUFF)
- STABILITY (LOAD AND SHIFT)
- LABRUM (GRIND TEST)
- ACJ/ACROMION (PALPATION)

- DIAGNOSIS?
- ? FROZEN SHOULDER
- ? IMPINGEMENT
- ? ROTATOR CUFF TEAR
- ? LABRUM
- ? INSTABILITY
Imaging

XRAY
• Good to check for GHJ or ACJ arthritis
• Can pick up calcific tendinitis, os acromiale, sub-acromial spur.

USS
• Good to pick up rotator cuff pathology, calcific tendon, bursitis, dynamic impingement
• Cannot see labrum
• Must have good passive ROM for worthwhile scan.
• Good for superficial structures

MRI
• Good to pick up labrum, arthritis, calcific tendinitis, rotator cuff
• Good for deep structures
• Not dynamic