A Pragmatic approach to Shoulder Assessment in Primary Care

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Session Overview

- Pragmatic – Workshop
- Anatomy recap
- The framework of a shoulder assessment
- 3 Case studies of the most common presentations you will see
Shoulder Pain

- Prevalence of shoulder complaints is around 14%
- 1 – 2% of adults consult their GP annually with shoulder pain
- Shoulder problems account for 2.4% of all GP consultations
- Subacromial Pain accounts for 70% of all new shoulder problems
- Painful shoulders pose a significant socioeconomic burden impairing work, household tasks, sport
A Normal Shoulder

**Acromion** (top back part of the shoulder blade)

**Coracoacromial ligament** (fibrous connective tissue that extends to the coracoid process)

**Bursa** (flat membrane that keeps shoulder parts from rubbing against each other)

**Supraspinatus** (tendon and muscle that help form the rotator cuff)

**Long biceps tendon** (fibrous connective tissue that attaches biceps muscle to shoulder blade)

**Humerus** (upper arm bone)

**Coracoid process** (front part of the shoulder blade)

**Clavicle** (collarbone)

**Scapula** (shoulder blade)
Right place first time

- Correct early diagnosis can streamline patient care
- BESS/BOA algorithm can help with assessment framework and clinical diagnosis
**Diagnosis of Shoulder problems in Primary Care:**

**Guidelines on treatment and referral**

**Is it Neck or Shoulder?**
- Ask the patient to first move the neck and then move the shoulder.
- Which reproduces the pain?

**Neck**
- Follow local spinal service guidelines.

**Shoulder**
- History of Instability?
  - Does the shoulder ever partly or completely come out of joint?
  - Is your patient worried that their shoulder may dislocate during sport or on certain activities?

**Primary Care**
- Instability
  - Common age 10 - 35 yrs
  - Physical or Atraumatic

**Refer to Shoulder Clinic**
- Instability
  - Traumatic dislocation
  - Ongoing symptoms
  - Atraumatic with failed physio

**Acromioclavicular Joint Disease**
- Common age 30 yrs
- Rest/NSAIDS/analgesics
- Steroid injection
- Physio
- X-ray if no improvement

**Glenohumeral Joint**
- Frozen shoulder
  - Common age 55-65 years
  - Arthritis
  - Common age 60 years
  - X-ray to arthroplasty.
  - Rest
  - NSAIDS/analgesics
  - Patient information
  - Cortisone injection

**Rotator Cuff Tendinopathy**
- Common age 55-65 yrs
- Rest / NSAIDS / analgesics
- Subacromial Injection
- Physiotherapy

**Other cause of Neck or Arm pain**

**Red Flags = Urgent Referral**
1. Truma, pain and weakness - ? Acute cuff tear
2. Any mass or swelling - ? Tumour
3. Red skin, fever or systemically unwell - ? Infection
4. Trauma / epileptic fit /electric shock leading to loss of rotation and abnormal shape - ? Unreduced dislocation

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The British Elbow and Shoulder Society supports

Patient Care Pathways for the Shoulder
Assessment Framework

- Exclude Red flags
- Where are the symptoms? Pain/weakness/ sensory?
- Mechanism of onset
- Knowledge of pathologies
- Previous history of symptoms/ Med Hx
- Physical examination and tests
- Clinical diagnosis
- Management – short term
- Subsequent management
RED FLAGS

- **Emergency referral – same day A&E**
  - Acutely painful, hot, red joint – suspected infection
  - Trauma leading to loss of rotation or abnormal shape – unreduced shoulder dislocation

- **Urgent referral <2/52**
  - Suspected sinister pathology – e.g. swelling/mass
  - Sudden loss of ability to raise arm with trauma – Acute cuff tear - MSK
  - New symptoms of inflammation in several joints – systemic inflammatory joint disease – Rheumatology triage
BESS BOA Patient Care Pathways

- [https://77.68.43.20/index.php/health-professionals/patient-care-pathways](https://77.68.43.20/index.php/health-professionals/patient-care-pathways) go to Health professionals section of Bess.org website

- Subacromial pain
- Frozen shoulder
- Glenohumeral Osteoarthritis
- Traumatic shoulder instability

- SMSKP website – patient information
Subacromial Pain

- 70% of all shoulder problems
- Tendinopathy, calcific tendinitis
- Rotator cuff tears

- Combination of intrinsic and extrinsic factors are thought to be involved – age related degeneration of the rotator cuff with inflammation and cuff insufficiency versus physical narrowing secondary to posture, bony spurs
Subacromial Pain
Shoulder Plain X-ray
Clinical presentation

- Insidious onset
- Often aged over 40
- A pattern of getting worse and better
- Lying on the shoulder may be painful

- Combination of pain and weakness
- Usually with elevation and external rotation
- A battery of tests MAY help diagnosis
Rotator cuff presentations

- Irritable
- Non-irritable
- Degenerative
Clinical presentation

- Pain or difficulty with elevation
- Not necessarily weak
- Cuff testing is not reliable, does not identify specific muscles but may detect massive cuff tears

- Acute cuff tear – In a younger patient post trauma
  Urgent referral to MSK
Management

- Irritable: Relative rest – enough activity to reduce pain in a 24 hour period
- Injection therapy

- Non-irritable: Progression of a rehab programme

- Degenerative: Dependent on clinical picture – irritable versus no-irritable – often well compensated but may present with a recent flare up or injury
The Case for Physiotherapy

- Graduated and supervised exercise has at least equivalent outcome to surgical intervention ASAD – general benefit of exercise, faster return to work and lower cost than surgery (Lewis, 2011)

- Graduated exercise programme substantially reduces the need for surgery for up to 80% of people who have already had failed non-surgical treatment (Holmgren et al 2012)

- Diagnosis of a traumatic partial thickness tear of the supraspinatus tendon, a graduated physiotherapy exercise programme was as beneficial as surgery ASAD, or ASAD and RC repair (Kukkonen et al 2014)

- Patient negative perception of physiotherapy was the strongest predictor for surgery
Frozen Shoulder

- Typically occurs in 5th and 6th decades of life
- Can be extremely painful and debilitating
- Either Primary idiopathic or secondary associated with trauma e.g. post-op
- 3 overlapping phases – painful phase often difficult to differentiate from acute calcific tendinopathy as mechanical but can refer down to the hand/ thumb
- Extension or HBB often painful
- Self limiting although only 59% full recovery at 4.4 years
Frozen shoulder

- Global reduction in range of motion in a capsular pattern
- Loss of passive external rotation range
- True passive abduction
- Differentiate from osteoarthritis/AVN or dislocation by X-ray – important at referral stage for potential injection
- Often aches most of the time but with an intense pain on sudden movements upper arm

- Pain management
- Steroid injection
- Supervised physiotherapy/manual therapy and education
Cases

1) 53 year old man office based, plays tennis, dominant sided shoulder pain, has had an ultrasound scan which shows a thickened bursa and a small subacromial effusion

Key Messages:

- Physiotherapy management – a graded rehab programme as opposed to ‘ultrasound’ or passive treatment
- Manage patient expectations and modification of activity
Case study 2

2) 66 year old man, insidious onset shoulder pain 10/12. Related to dumbbell exs at home. Presented to MSK with x-ray and USS arranged by GP. Patient concerned with results of scan – full thickness tear of SS

Key Messages:
- Usefulness of imaging – can be detrimental
- Consequences of surgery – prolonged rehab, potential risks or undesirable outcome
Case Study 3

3) 62 year old woman, Insidious onset of shoulder and arm pain, Painful and waking at night, debilitating pain on sudden movement

Key Messages

- Early physio can aggravate frozen shoulder
- X-ray needed prior to referral to MSK for injection
- Patient expectation in terms of time frames 18 months to 2 years – usually a full recovery – some residual stiffness
Case study 4

- 47 year old woman presents with right scapula and arm pain after carrying heavy bags of shopping

- **Key Message**
  - Be clear on location of pain – scapula usually neck related
  - Ask about associated symptoms
Imaging

- USS or MRI are unlikely to be helpful and may in fact be detrimental – normal age related changes on scan are bursal thickening, a subacromial effusion and partial thickness or full thickness tears – prevalence of a cuff tears of 34% in the general population
- Massive cuff tears in patients >75 are generally not repairable
- X-ray may be useful to exclude calcific tendinopathy or ACJ OA to guide management or exclude bony pathology in stiff shoulders
- X-ray prior to injection for frozen shoulder
Management

- Activity modification
- NSAIDs/ analgesia
- Physiotherapy – targeted rotator cuff rehab
- Good evidence for specific exercise programmes
- Subacromial Injection – no more than 2 corticosteroid injections
- Surgery usually after conservative rehab
- Rotator cuff repair

http://sussexmskpartnershipcentral.co.uk/
Same story, different outcome

I LIKE TO PREDICT CATASTROPHES!

THAT WAY, WHEN THINGS GO WRONG...

I CAN STILL BE RIGHT!
Recommendations for
ROTATOR CUFF TENDINOPATHY
From Physio Edge podcast 47 with Dr Chris Littlewood

1. Rotator cuff tendinopathy
   Patients with rotator cuff tendinopathy will present with:
   - Insidious onset of pain in the shoulder
   - Often be older than 40
   - A pattern of getting worse AND better, not progressively worse
   - Lying on the painful shoulder may be painful.

2. Imaging
   Findings on ultrasound are often normal age related changes, particularly in patients over 40, and can be thought of as “wrinkles”.

3. Bursal thickness or effusion is not associated with clinical outcomes, and does not necessarily influence a patient’s pain.

4. Stiff painful shoulders include OA or frozen shoulder. Use lateral rotation as a test – identifying if they have at least 50% ROM of the unaffected side, or if it is obviously restricted. This can be compared to a passive lateral rotation.

5. Meaningful assessment of the rotator cuff
   Your assessment should include the activities that reproduce the patient's pain, identifying their meaningful “baseline test” eg reaching for something, a pushup, a boxer might punch etc

6. Cervical referred pain
   Clues that the cervical spine could be referring pain to the shoulder include pain in the neck or trapezius pain, and aggravating activities such as sitting, sustained positions or neck movements.

7. Treatment
   Use the most painful resisted movement for the therapeutic exercise. Test the response in your clinic to 3 sets of 10 or 15 into the painful direction, and check that pain levels return to baseline afterwards.

8. Pressure on, then pressure off can be compared to isometric holds for 30-45 seconds in your individual patients.

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Instability

- BESS/BOA Patient care Pathways
- Traumatic anterior shoulder instability, 2015
Instability

- 40% of patients over 40 will have a cuff tear after a dislocation
- Test for external rotation weakness to exclude a large tear
- Risk of recurrent dislocation is high in young males <22 particularly involved in contact sports or occupations involving overhead activities