Recurrent Shoulder Instability

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Recurrent Shoulder Instability

- The shoulder has an extensive range of movement at the expense of stability
- Most commonly dislocated joint in the body
- Ancient problem (Papyras 3000-2500 BC, Hippocrates 460BC)
- Multiple anatomical layers attempt to increase stability
- Instability may be in the form of dislocation or subluxation
- 95% Anterior, 5% posterior or multidirectional
- Laxity vs. instability
Shoulder Anatomy
Stability

- Passive
  - Dished glenoid and normal labral compliance
  - Competent capsule with limited joint volume
  - Functionally intact capsule ligaments

- Active
  - Rotator cuff muscles resist deltoid shear
  - Superficial muscles balance external torque (deltoid, biceps, triceps, pec maj, lat dorsi)
  - Scapulothorasic muscles orient shoulder to torso
Classifications

- Directional (Bankart)
- Rockwood 1979 (Presence absence of trauma)
- Thomas and Matsen 1989 (TUBS & AMBRII)
- Schneeberger and Gerber 1998 (laxity, trauma and direction)
- Stanmore triangle 2004 (Structural, patterning, continuum)
Investigations

- History and Examination
- Perpendicular plain films
- CT or CT arthrography
- Arthroscopy
- EUA
- Functional EMG analysis
Clinical tests

- Sulcus
- Apprehension (+/-) relocation
- Fulcrum
- (Modified) Load and Shift
- Jerk Test
Anterior Instability

- Described by Bankart
- Traumatic. Acute abduction, external rotation and extension
- Bankart (1939) and Hill-Sachs lesions
- 5 yr recurrence rate up to 55% dependant on age
Anterior Dislocation
Anterior Dislocation

glenoid

scapula

humerus head

acr

clavicle

co
Bony Bankart Lesion
Hill-Sachs Lesion
Treatment of Anterior Instability

- Conservative, physiotherapy with biofeedback (Bailey et al – 80% of involuntary instability can be successfully treated this way)

- Surgical
  - Frequent painful dislocation
  - Bankart repair
  - Capsular procedures
  - Bony procedures
  - Arthroscopic vs. Open
Posterior Instability

- Traumatic. Posteriorly directed force when shoulder flexed, adducted and internally rotated
- Rare and often missed
- Reverse Hill-Sachs
- Modified apprehension and drawer tests
- Responds well to conservative treatment
- Surgery reserved for refractory cases
Posterior Dislocation

Light bulb sign
Posterior Dislocation
Multidirectional Instability

- Described by Neer et al. 1980
- Capsular and ligamentous laxity, occasionally shoulder muscle weakness
- Little force required to sublux
- Can progress from anterior or posterior to inferior then multidirectional
- Diagnosis difficult
- Treatment is muscle strengthening and joint control
Atraumatic Instability

- Congenital anatomical abnormalities or severe ligamentous laxity
- Painless voluntary subluxation
- Need to assess emotion stability of patient
- Treatment is conservative and surgery should be avoided
The Classification of Shoulder Instability: new light through old windows!

Summary

- Clear review of problem and literature
- Close look at Laxity vs. Instability
  - Degree, chronicity, volition and direction
- Aetiology
- Classifications
- Clear description of their model
- Good advice on history, examination, investigation and management as related to where they fall in their model
- Detailed descriptions of polar groups I, II & III
Clinical Assessment of Three Common Tests for Traumatic Anterior Shoulder Instability.

Farber et al (2006) JBJS 1467 - 1474
Summary

☐ Clear aims

☐ Large control group compared to subject group

☐ Groups demographically different

☐ Apprehension and relocation (done to their specification) seem to be highly sensitive when assessed on apprehension rather than pain