shoulder Instability and capsulolabral pathology

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Fellowship in shoulder surgery
Glenohumeral Instability

- unstable joint (50% of all dislocation)
- Young age is a specific risk factor
- Anterior instability
  (>90% recurrent dislocations)
- **Instability (symptom)**
  - vague sense of shoulder dysfunction  ⇔  obvious fixed dislocation

- **Laxity (sign)**
Shoulder Joint Stabilizers

- Bony anatomy
- Glenoid labrum
- Joint capsule
- Rotator cuff muscles
- Glenoid version
- Negative intraarticular pressure
- Synchronous mobility of the scapula and humeral head
Glenoid labrum (fibrocartilaginous ring)

- ↑ surface area and depth of glenoid cavity (50%)
- point of attachment for GH ligaments and long head of biceps
- chock block” to humeral head translation
Joint capsule (capsuloligamentous complex)

- Lax capsule reinforced by glenohumeral ligaments
- (SGHL-MGHL-IGHL)
RC, deltoid, scapular muscles & long head of the biceps (Dynamic stabilizers)

- concavity-compression mechanism
Synchronous mobility of the scapula and humeral head
Pathology

- no essential pathological lesion
- Bankart lesion is the most common pathological lesion (>80%)
- Excessive laxity of the shoulder capsule (>20%)
- Hill-Sachs lesion (a secondary pathological lesion)
- Glenoid rim fractures
Matsen's classification system

**TUBS** or “Torn Loose”
- Traumatic aetiology
- Unidirectional instability
- Bankart lesion is the pathology
- Surgery is required

**AMBRI** or “Born Loose”
- Atraumatic:
- Multidirectional instability
- Bilateral: asymptomatic shoulder is also loose
- Rehabilitation
- Inferior capsular shift: surgery required if conservative measures fail
Stanmore Classification (Bayley Triangle)

Lewis, Kitamura & Bayley
Current Orthopaedics. 18:97-108. 2004

Polar Type I
- Traumatic
- Structural

Polar Type II
- Atraumatic
- Structural

Less Muscle Patterning

Polar Type III
- Muscle Patterning
- Non-Structural

Less Trauma
Normal capsulolabral
Shoulder arthroscopy evolved our understanding of the anatomy and pathophysiology of the capsulolabral

Glenoid Labrum

- Loosely Attached:
  - Superior
  - Anterosuperior

- Firmly Attached:
  - Inferior
Shoulder arthroscopy evolved our understanding of the anatomy and pathophysiology of the capsulolabral...
Labral pathology

- soft-tissue
- Bankart
- Perthes lesion
- GLAD
- ALPSA
Capsular pathology

HAGL lesion
(Humeral Avulsion Glenohumeral Ligament)
Associated injuries in ant. shoulder instability

- Bony bankart Lesion
- Glenoid bone loss (inverted pear glenoid)
- Hill-Sachs lesions
  - Engaging
  - Non engaging
- Other Labral lesion
  - SLAP
  - Post. bankart
- Rotator cuff tear
Pathological Lesions

SLAP Tear

Rotator Cuff Tear

Bony Bankart

Bankart Tear

Posterior Labral Tear

www.shoulderdoc.co.uk
Operative Treatment of Anterior Shoulder Instability

Soft tissue procedures:
- Subscapularis Muscle Procedures (Putti-Platt, Magnuson-Stack)
- Capsular Reconstruction (Neer capsular shift)
- Bankart Procedure

Bony procedures:
- Coracoid Transfer (Bristow-Latarjet Procedure)
- Bone Block (Eden-Hybbinette Procedure)
Soft tissue procedures:

Subscapularis Muscle Procedures

- Not correcting a labral or capsular defect
- Restriction of ER

History
Soft tissue procedures:

**Bankart Procedure**

- gold standard
- recurrence rates from 5% to 10%
- Open or arthroscopic
Soft tissue procedures:

Capsular Reconstruction (Neer capsular shift)

- Procedure for multidirectional instability
- Correct loose, redundant inf. pouch
Bony procedures:

Coracoid Transfer (Bristow-Latarjet Procedure)

- Not correcting a labral or capsular defect
- Restriction of ER
- Possibility of nerve damage
- Decrease of IR power
- Osteoarthritis
Burkhart SS, DeBeer JF. Arthroscopy 16:677, 2000.)
Engaging Hill-Sachs Lesion

→ Remplissage
Summary

- Advancement in arthroscopic techniques
  - development new instrument & implants
- Surgeons knowledge and experience

Recognition and proper treatment of instability pathology

Thank you for attention