Shoulder Dyslexia: The Alphabet Soup

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Mystery Cases
Case 1
Case 2
Case 3
Case 4
Shoulder Dyslexia:
The Alphabet Soup
Shoulder dyslexia: addressing
the endless alphabet soup

- **Ant-inf labrum:**
  - Bankart, Perthes, ALPSA, GLAD

- **Inferior capsule:**
  - HAGL, PHAGL, Axillary pouch injuries

- **Posterior labrum:**
  - GARD, GIRD, Kim’s lesion, Bennett lesion
Shoulder dyslexia: Part 1
Ant-Inf Labrum

Anterior inferior labral pathology: Consider in anterior shoulder dislocations

GLAD

- Torn labrum, torn periosteum
- Torn labrum, stripped but intact periosteum
- “Medialized” labrum, intact periosteum

Glenoid labral articular disruption

- Bankart
- Perthes
- ALPSA
GLAD lesion

- Glenoid Labral Articular Disruption
- Anterior-inferior labral tear involving the adjacent articular cartilage
Clue: look for disrupted articular cartilage

Not associated w/ ant shoulder disloc/subluxation

Mechanism: Forced adduction of shoulder in ABER position with impaction of HH against glenoid fossa
Shoulder dyslexia: Part 1
Ant-Inf Labrum

Anterior inferior labral pathology: Consider in anterior shoulder dislocations

GLAD

Glenoid labral articular disruption

Torn labrum, torn periosteum
Bankart

Torn labrum, stripped but intact periosteum
Perthes

“Medialized” labrum, intact periosteum
ALPSA
18 yo w/ acute shoulder dislocation
Classic Bankart lesion (case 2)

- Detached ant-inf labrum
- Detached periosteum
GLOM (glenoid labral ovoid mass) in setting of Bankart lesion
Shoulder dyslexia: Part 1
Ant-Inf Labrum

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Torn labrum, torn periosteum

Torn labrum, stripped but intact periosteum

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Glenoid labral articular disruption

Bankart

Perthes

ALPSA
Perthes Lesion

- Detached, labro-ligamentous complex
- Medial stripping of anterior scapular periosteum
Perthes Lesion

- Sometimes only seen on ABER position
- May look normal on arthroscopy
Normal vs. Perthes lesion

Axillary

ABER
Shoulder dyslexia: Part 1
Ant-Inf Labrum

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- Torn labrum, torn periosteum
  - Bankart

- Torn labrum, stripped but intact periosteum
  - Perthes

- “Medialized” labrum, intact periosteum
  - ALPSA

Glenoid labral articular disruption
ALPSA: “medialized Bankart”

- “Differs from the classic Bankart lesion because the avulsed anterior labroligamentous structure is pulled medially by an intact anterior scapular periosteum and eventually heals in this abnormal position, leading to an incompetent anteroinferior glenohumeral ligament. This lesion has been referred to as the medialized Bankart lesion. The significance of the ALPSA lesion to the arthroscopist is that the labrum and attached ligaments, rather than floating free, heal in an abnormal position and eventually resynovialize, and may be difficult to identify as abnormal at the time of arthroscopy”
Acute ALPSA lesion

- Medially/inferiorly displaced, detached anterior labrum
- Intact ant scapular periosteum
Chronic ALPSA lesion

- Thickening, irregularity of anterior medial aspect of capsule-periosteal junction → synovialized ALPSA lesion
ALPSA

Medially & inferiorly displaced labrum
Clue: look for “labral mass” medial and inferior to glenoid.
“MEDIALIZED BANKART LESION”
ALPSA: “Medialized” Bankart lesion (case 1)
Shoulder Dyslexia, Part II
Axillary Sling

CLUE: All have MR contrast leakage below the inferior capsule. Look for location to differentiate: anterior, axillary pouch, or posterior

Axillary Sling/Inferior Capsule

AIGHL: -HAGL -BHAGL

Axillary Pouch: “hammock”

PIGHL: -PHAGL
HAGL

- Humeral avulsion of AIGHL
- BHAGL (bony avulsion of AIGHL)
- CLUE: arthrogram contrast extravasation at humeral neck
- Associated w/ subscapularis tendon tears

PHAGL

- Posterior humeral avulsion of PIGHL
- CLUE: arthrogram contrast extravasation at humeral neck
HAGL (case 3)
PHAGL
Probable Axillary Pouch Injury
Shoulder Dyslexia, Part II
Axillary Sling

CLUE: All have MR\@ contrast leakage below the inferior capsule. Look for location to differentiate: anterior, axillary pouch, or posterior.

Axillary Sling/
Inferior Capsule

AIGHL:
- HAGL
- BHAGL

Axillary Pouch:
“hammock”

PIGHL:
- PHAGL
Shoulder Dyslexia: Part III
Posterior Capsule/Labrum

“Cyst” at jxn of cartilage + post labrum
Post labrum thickening in throwing shoulder
Bone & cartilage disruption at post glenoid rim

Posterior capsule/labrum

- Bennett
- Kim’s lesion
- GIRD
- GARD
Shoulder Dyslexia: Part III
Posterior Capsule/Labrum

- Posterior capsule/labrum
- Bennett Lesion
  - Crescentic bone at post-inf glenoid; EXTRA-articular
  - “Cyst” at jxn of cartilage + post labrum
  - Post labrum thickening in throwing shoulder
  - Bone & cartilage disruption at post glenoid rim
- Kim’s lesion
- GIRD
- GARD
Bennett lesion

Mechanism: traction of PIGHL during deceleration phase of pitching
Bennett lesion: throwing athletes (case 4)

- “crescentic” bony mineralization at posterior-inferior glenoid rim
- EXTRA-articular posterior capsule avulsive injury
- Assoc w/ posterior labral tears and RCTs
Shoulder Dyslexia: Part III

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- Bennett Lesion
  - Crescentic bone at post-inf glenoid; EXTRA-articular
  - Kim’s lesion
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  - GARD

- “Cyst” at jxn of cartilage + post labrum
- Post labrum thickening in throwing shoulder
- Bone & cartilage disruption at post glenoid rim
Kim’s Lesion

- Mechanism: force applied in posterior direction.
- Force exerted on PIGHL → post labral tear, propagating in medial to lateral direction
- Preserved chondro-labral junction.

Loss of posterior labral height & contour
Shoulder Dyslexia: Part III
Posterior Capsule/Labrum

Posterior capsule/labrum

Bennett Lesion

“Cyst” at jxn of cartilage + post labrum

Post labrum thickening in throwing shoulder

Bone & cartilage disruption at post glenoid rim

Crescentic bone at post-inf glenoid; EXTRA-articular

Kim’s lesion

GIRD

GARD
GIRD

- Glenoid internal rotation deficit
- Tight posterior capsule in the throwing shoulder (i.e., pitchers)
- MRI finding: thickening of the posterior capsule and labrum
GIRD

Major League Baseball Pitcher

Images courtesy of Arash Tehranzadeh
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- Kim’s lesion
- GIRD
- GARD
GARD: glenoid articular rim divot

22 yo M w/ shoulder impaction injury while weightlifting, w/ posterior labral tear

- Osseous defect at posterior glenoid rim
- Labral cyst
- Displaced posterior labral tear
Both are similar lesions in different locations!
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Asanas with Props

The ancient yogis used logs of wood, stones, and ropes to help them practice asanas effectively. Extending this principle, Yogacharya Iyengar invented props which allow asanas to be held easily and for a longer duration, without strain.

The Rest of Us
The MSK Ladies of UCSD
It’s called the BONE PIT for a reason!!!
Thank you!
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