MRI of the Shoulder: Glenohumeral Instability
SGHL

- Sup. glenoid tubercle to lesser tuberosity
  - Blends w/ coracohumeral ligament
- Parallels coracoid
MGHL

- Origin-ant/sup labrum or glenoid neck
- Fuses with subscapularis at insertion
- Variable size
IGHL

- Most important stabilizer
- **Origin**—entire inferior glenoid labrum
- **Insert**—inferior anatomic humeral neck
Labral Pathology

- Torn labrum
- Detached labrum
- Labro-ligamentous tear
- Fraying and degeneration
Normal Variants

- Sublabral recess
- Sublabral foramen
- Buford Complex
Sublabral Recess

- Present in 70% shoulders
- Coronal images
- Can mimic SLAP tear
Sublabral Foramen

- Detachment of labrum
  anterior superior glenoid
- 10-25% shoulders
- Confusion w/ tear
- Knowledge of location
Buford Complex

Williams et al, Arthroscopy 1994; 10: 241
Tirman et al, AJR 1996; 166: 869

• Absent anterosuperior labrum

• Thickened “cord-like” MGHL

• ~ 3% population
Classic Bankart
18 y.o college basketball player
Injured while playing post position
Osseous Bankart
20 y.o collegiate wrestler
ALPSA LESION

“Anterior Labral Periosteal Sleeve Avulsion”

• Similar mechanism to Bankart

• Scapular periosteum intact but elevated

• Labrum medially displaced and internally rotated

• ? CAUSE FOR FAILED SURGERY
Posterior labral tear
25 y.o weight lifter c/o posterior subluxation
HAGHL

Humeral Avulsion Gleno Humeral Ligament

Tirman et al. SKEL RAD 1996; 25: 743

• Seen with anterior dislocations

• Often older patients

• Assoc biceps disloc/subscap tears
SLAP Lesion

(SUPERIOR LABRUM - ANT. TO POST.)

- Not uncommon
- Often assoc w/ throwing
- May be due to pull of biceps
- Multiple “TYPES”

Described surgically

NOT WITH MRI
Suprascapular Nerve Entrapment


- 2° ganglion cysts or varices
- Assoc w/ labral tears
- Atrophy of infraspinatus
- Atrophy of supraspinatus less common

SEEN ALMOST EXCLUSIVELY IN MEN

TX: surgical or percutaneous drainage
Parsonage-Turner Syndrome

Acute brachial neuritis

- Unknown etiology
- Sudden onset of severe pain
- Profound weakness and atrophy
- Self-limited course
- Suprascapular nerve most often
Parsonage-Turner Syndrome

Precipitating Factors:

- Viral illness
- Vaccinations (25%)
- Surgery

- 30 -35% Bilateral

- Gradual recovery:
  - 36% 1 yr
  - 75% 2 yr
6/2007
Quadrilateral Space Syndrome

- Shoulder pain

- $2^\circ$ Axillary nerve compression

- Usually fibrous bands

- Weakness & atrophy in Teres Minor - Deltoid spared

LINKER, et al; RADIOLOGY 1993
QUADRILATERAL SPACE

(Posterior View)

TERES MINOR
TERES MAJOR
AXILLARY NERVE
TRICEPS
Conclusion

- Many entities can mimic cuff or labral pathology

- Awareness can:
  - Increase dx accuracy
  - Avoid unnecessary surgery