

Treatment Rationales for Acute and Chronic Anterior Shoulder Instability in Athletes

What to Do and Why

William R. Post, MD

Mountaineer Orthopedic Specialists, LLC

Morgantown WV



Disclosures

No commercial disclosures

Only other relevant disclosure 3
decades of experience

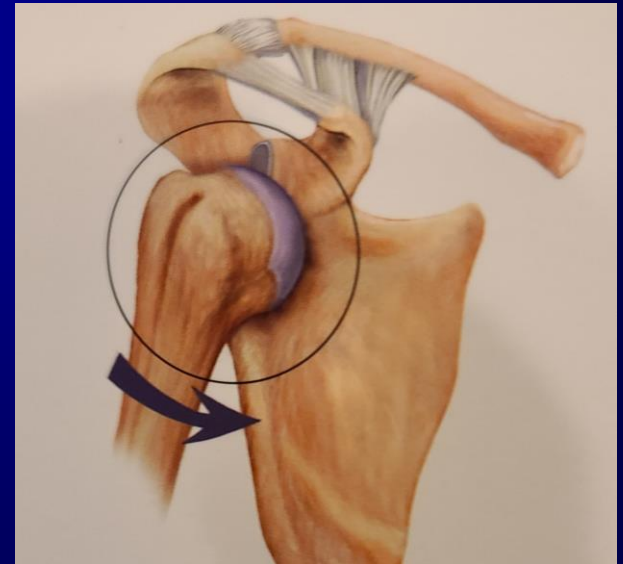


Acute Anterior Shoulder Dislocation

Traumatic injury, may be self-reduced

Subluxation (partial dislocation) spontaneously reduces

Both injuries result in labral and capsular tears most commonly in young athletes



Stability factors: any joint

Ligaments provide constraint at the end of full range of motion

Muscles provide compression of joint

Shape of joint surfaces provide congruity

Neuromuscular control



Shoulder stability

Ligaments: capsule and labrum

Muscles: rotator cuff / scapular muscles

Articular surface congruity: shallow joint
made more shallow by bone loss and
labral tears

Neuromuscular control



What's typically injured?

Under 40 y.o. Anterior labrum torn
from glenoid with ligament tears,
may extend posteriorly too

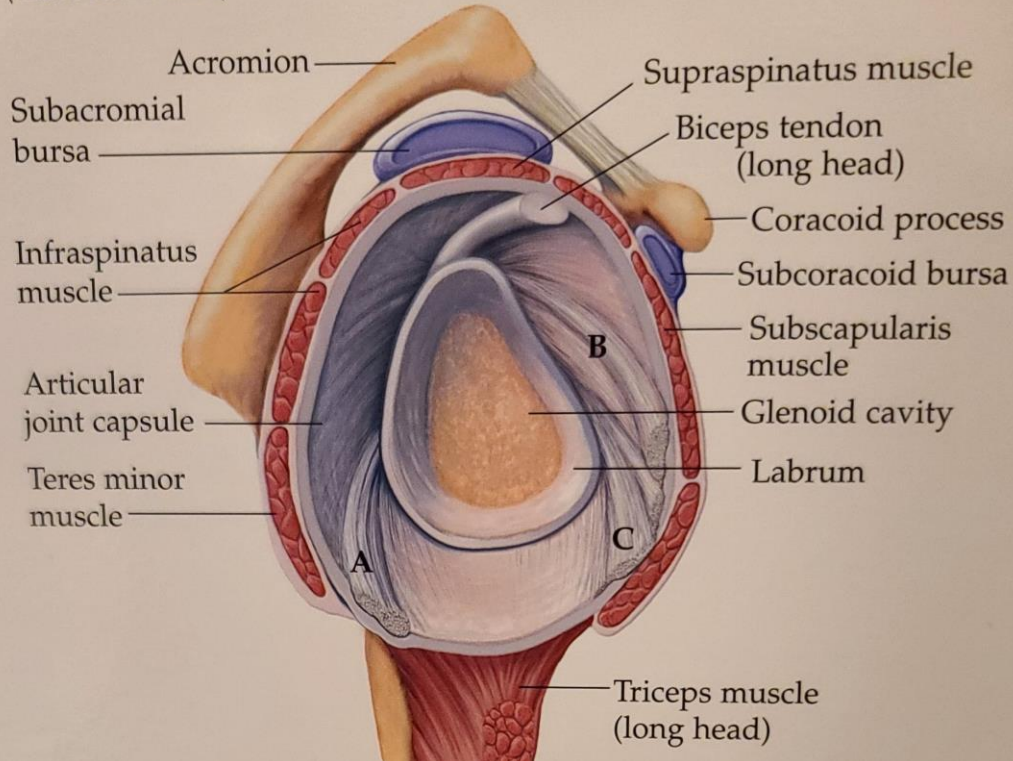
Over 40 y.o. could include cuff tears

Key point: remember this

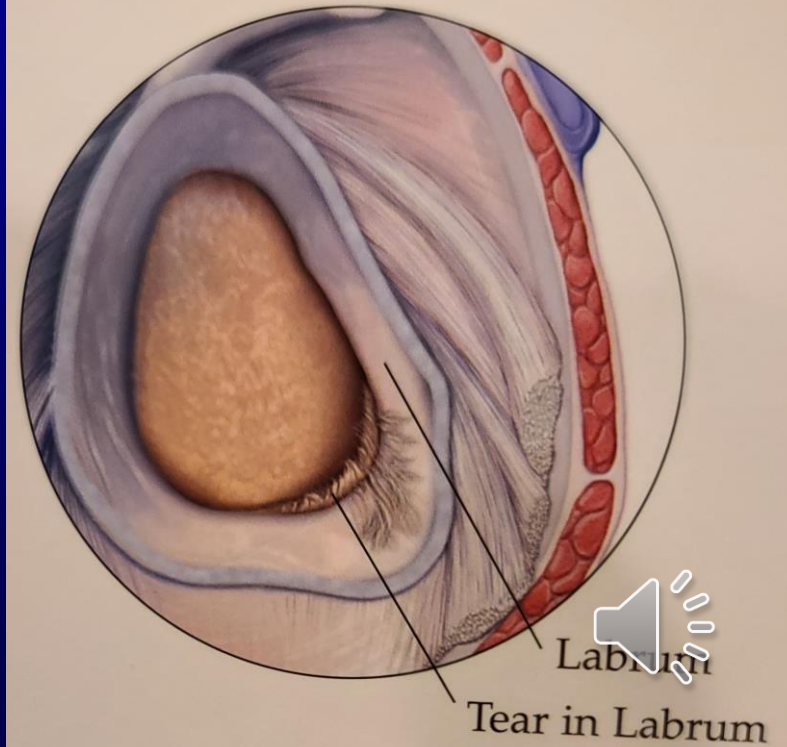


What's usually torn?

Socket of Right Shoulder Joint
(Lateral view)

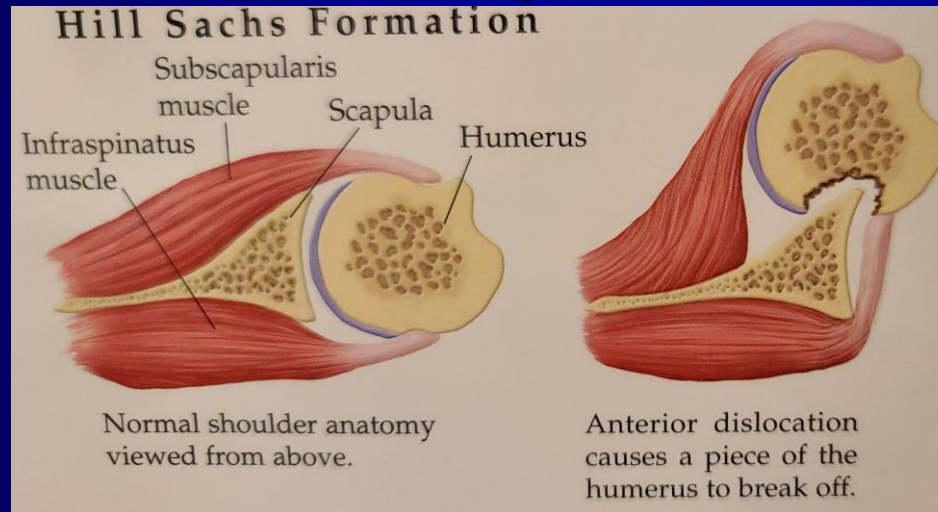


Bankart Lesion



Bone injury with anterior dislocation

Humeral head defect (Hill Sachs lesion)



Anterior glenoid bone avulsion (Bankart fracture)

Both result in increased risk of recurrence



What's less commonly injured?

Humeral avulsion of glenohumeral ligaments
less common, more likely to need surgery

Rotator cuff tears very unusual with
dislocations under 40 y.o. more likely to need
surgery in older patients with dislocation

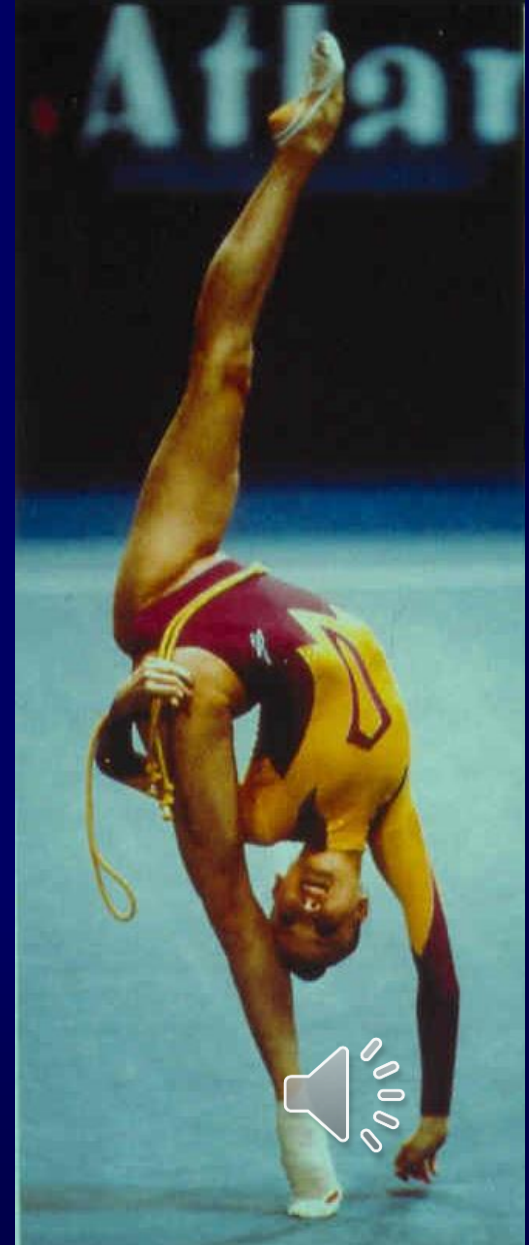


Hypermobile patients

these patients are different

Dislocation/subluxation require
less trauma

Less likely to have osteochondral
damage



Physical exam pearls

In acute setting, check for axillary nerve palsy
(decreased sensation over lateral deltoid)

Subacute and chronic setting, apprehension
sign / relocation sign likely positive

Strength should be close to normal in
subacute/chronic after rehabilitation

Evaluate for hypermobility



Preferred treatment

Be sure good set of x-rays have been done after reduction to evaluate possible bone defects

Short term immobilization for comfort/ice/analgesics

Early motion and strengthening

If early surgery may be considered, MRI



Initial treatment: Immobilization

Length of time controversial

Accelerated return to play 7-10 days often possible

Prolonged immobilization or position of immobilization (external rotation, 35% reduce on MRI) not shown definitively to decrease recurrence



Bracing for return to play

No studies show definitive success vs no brace

No harm to use brace

Some braces restrict movement

Brace selection should be based on sport



Brace types: Sawa and Sully



Sawa more restrictive



Sully less restrictive

Recurrent instability with non-op treatment

Wide range of results 39-94%

Patients less than 20 y.o. 72-84%

Contact sports 92% **Sachs JBJS 2007**



Multiple recurrences affect prognosis

Risk of bone defects increases with multiple dislocations

Bone defects complicate surgical treatment

Surgical repair of ligament/labral pathology alone not sufficient



Treatment of college athletes

Without surgery 40% returned to play

Return to play after off-season arthroscopic stabilization 90%

No difference in RTP post-op if multiple in-season episodes before off-season repair

Dickens et al, AJSM 2017



Return to play same season

27% successful without recurrent instability episodes

73% return same season

67% able to complete season

Those with subluxation vs dislocation 5x more likely to return same season



Dickens et al AJSM 2014

Preferred treatment

Must be patient specific and consider risk factors

Age, collision sport, overhead sport,
dominant shoulder, male, bone loss

In-season considerations,



Rationale for primary repair

Initial opportunity to repair damage where it occurs

Prevent recurrent instability and osteochondral damage

Flips the odds of recurrence

One rehabilitation period

Not for everyone, but should be considered



Rationale for primary repair

Success of arthroscopic repair decreases
with multiple dislocations

Vaswani Arthroscopy 2022

Drain Orth J Sp Med 2022



Acute Repair

Patients who cannot afford the chance of recurrent instability due to work or sport considerations and willing to accept risks and expense of surgical treatment



Dealing with bone defects

These problems best avoided

Avoid frequent recurrences

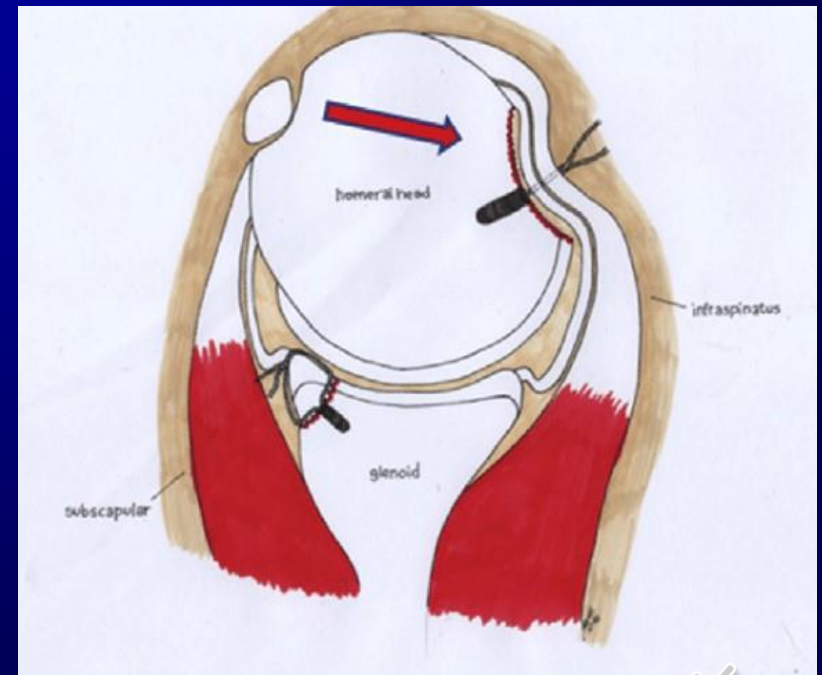
Recognize the defects and treat at the
initial surgery

Prognosis can still be very good



Dealing with bone defects

Large humeral head Hill Sachs defects require treatment to fill defect with posterior capsule (remplissage procedure)



Dealing with bone defects

Large glenoid bone defects require surgical treatment to reconstruct/fill the bone defect (Latarjet or glenoid bone grafting)



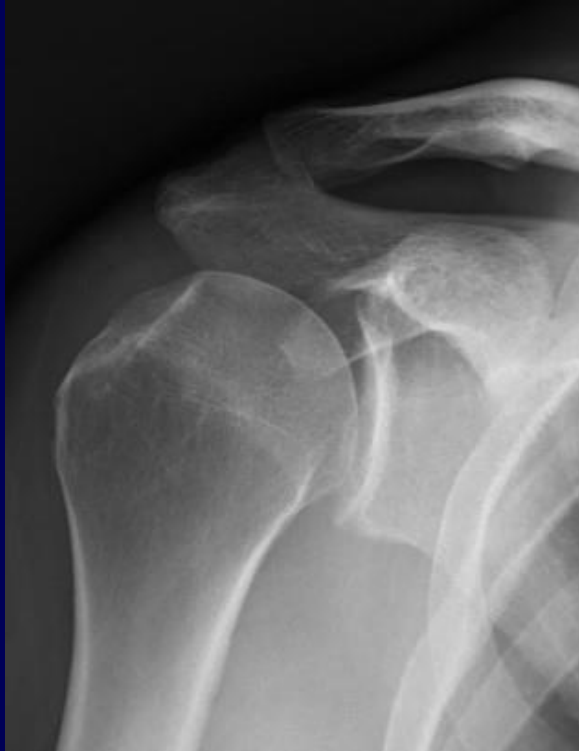
Case: 41 y.o. whitewater guide

9 traumatic anterior dislocations over 9 yrs, c/o pain and instability affecting work and recreation

PE full ROM, excellent strength, positive apprehension/relocation test



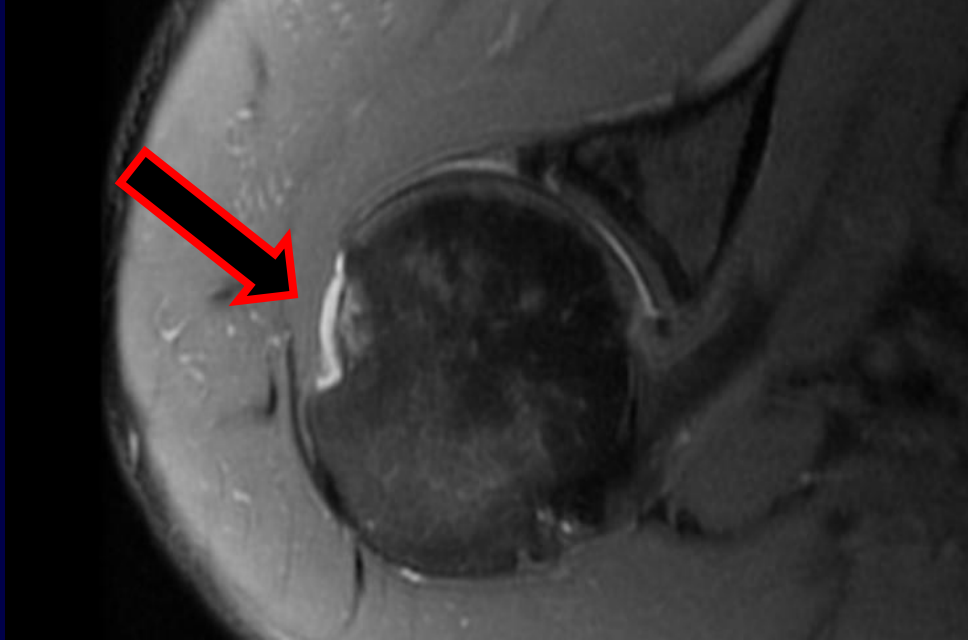
Imaging



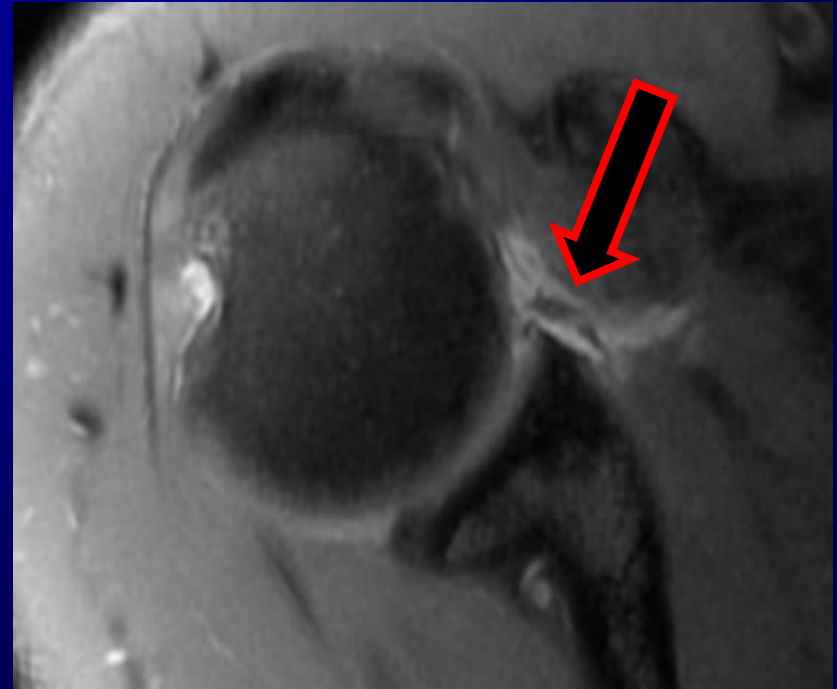
Hill Sachs lesion, no glenoid bone loss



MRI

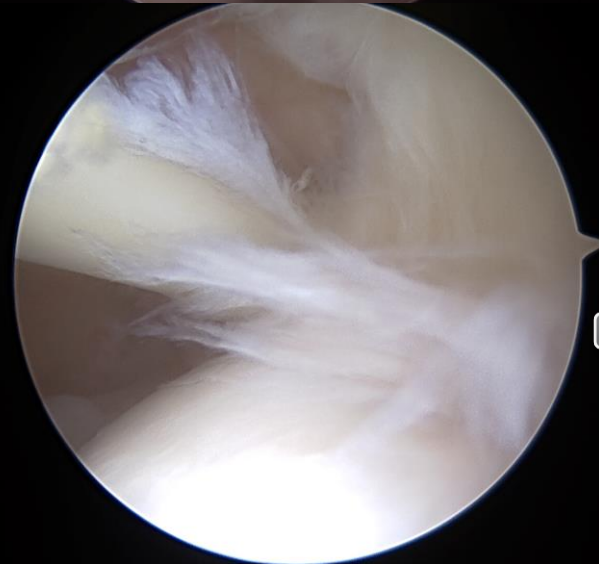
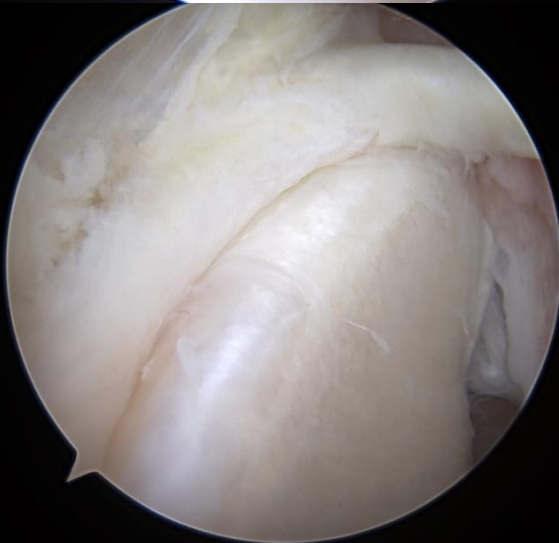
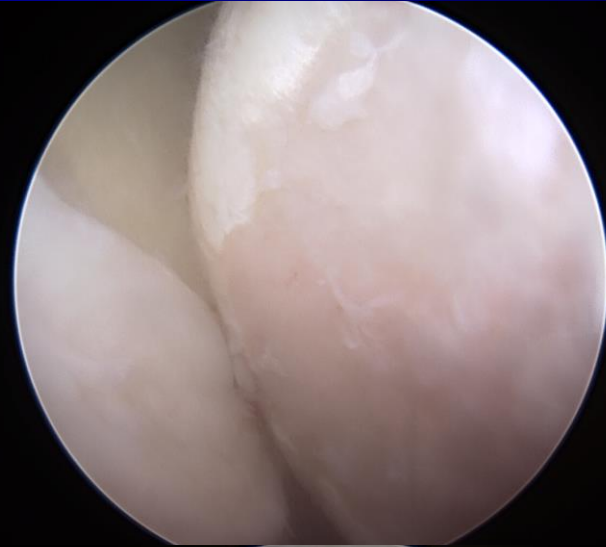
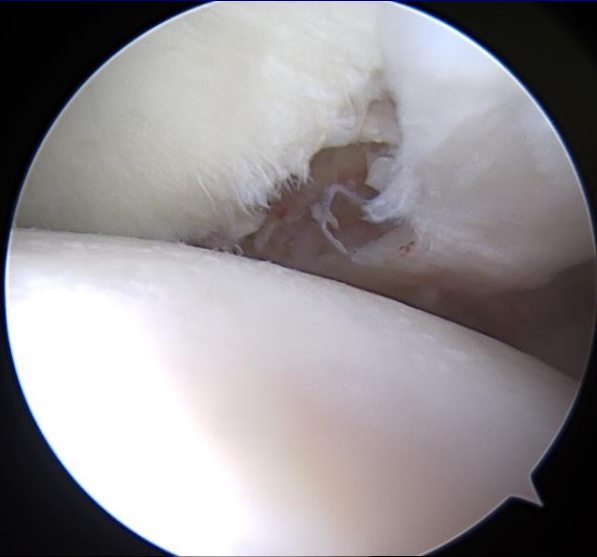


Hill Sachs lesion

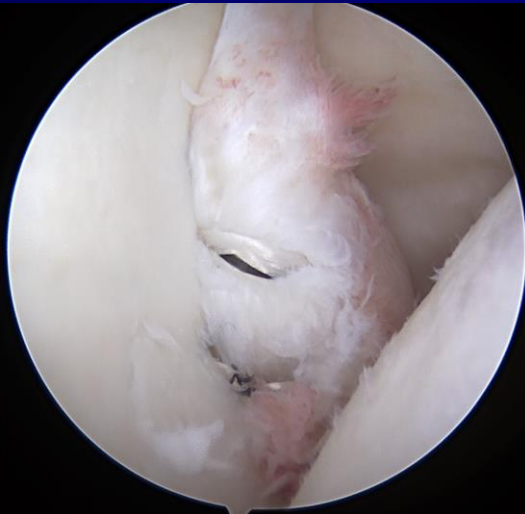
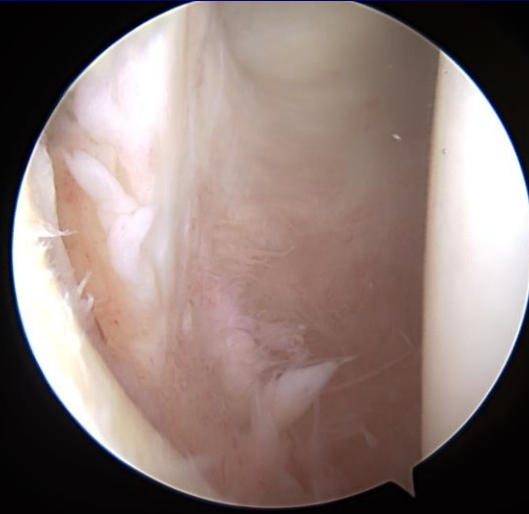
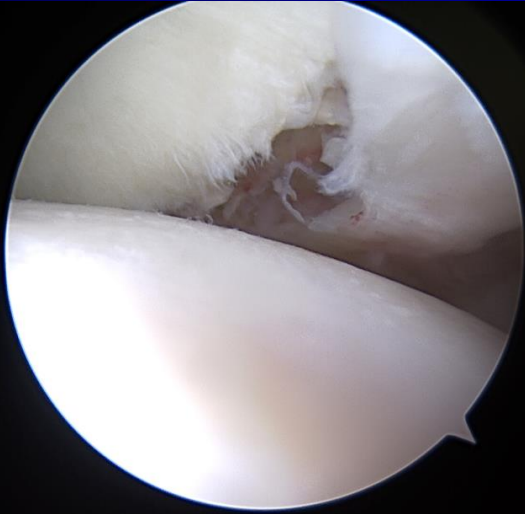


Anterior labral tear

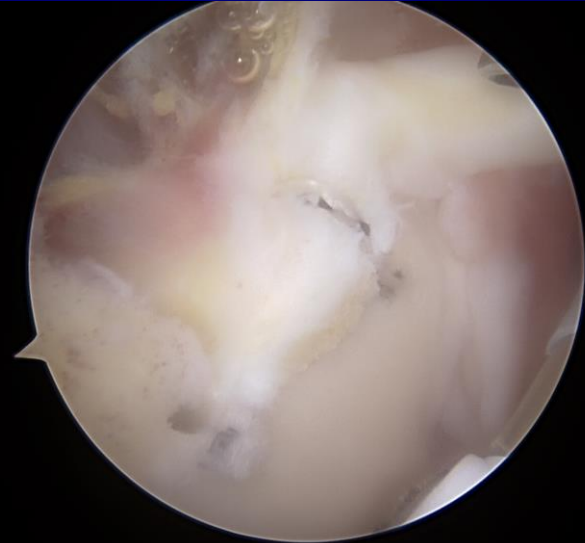
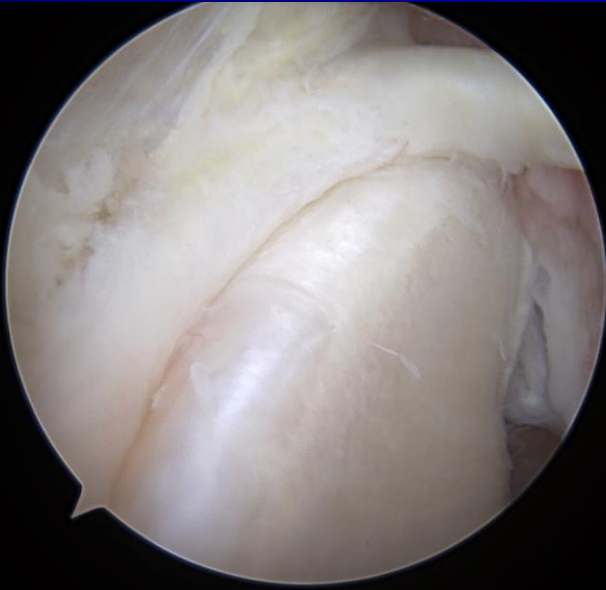
Scope images



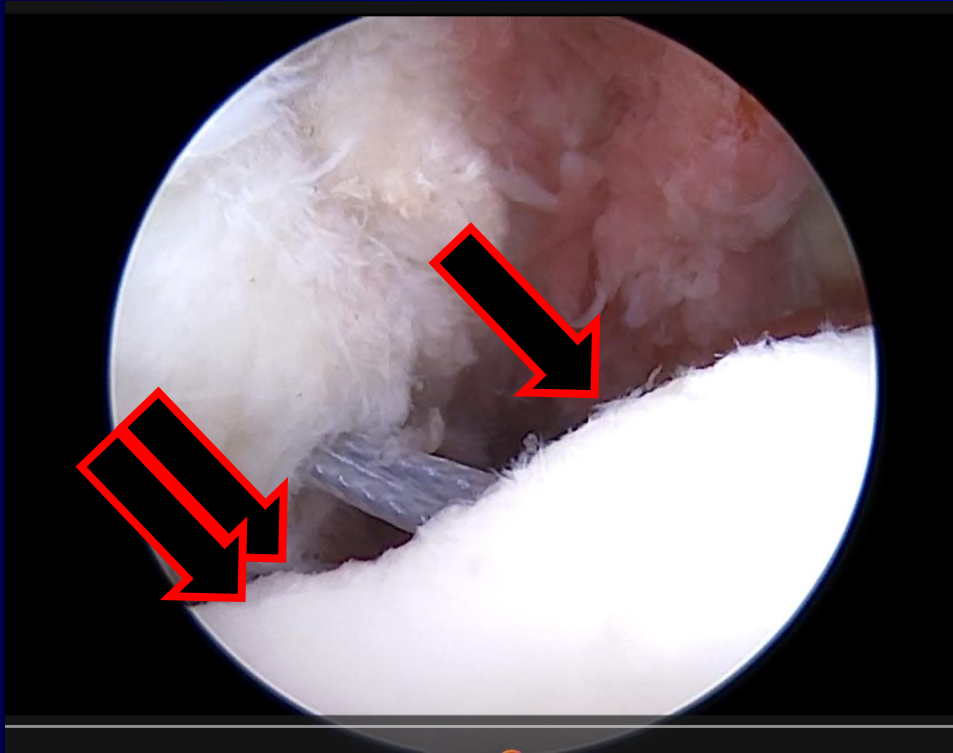
Anterior labral repair



Posterior labral repair



Arthroscopic remplissage



Posterior capsule fills the Hill Sachs lesion





Perspective is critical



Thanks for your attention

Questions ?

Please reach out to me at
wpost@wvortho.com or via
our website **wvortho.com**

