

Σύνδρομο Υπακρωμιακής Προστριβής

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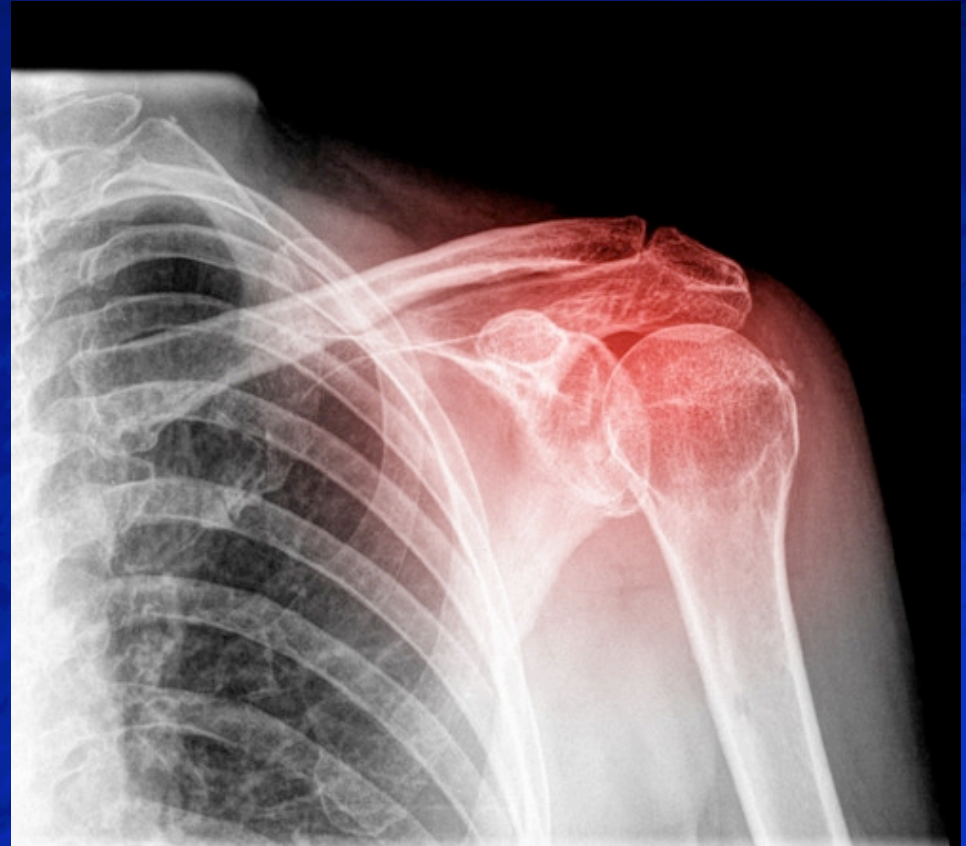
ΙΑΣΩ General, Αθήνα

Γενικός Γραμματέας Ελληνικής Αρθροσκοπικής Εταιρείας



Shoulder Pain

- Common complaint
- 35% of patients 25-75 years
- Exceed only by back and neck pain in the general population



Shoulder Impingement

represents a clinical description of several different entities that have a similar constellation of histories, pain patterns, and findings on physical examination.

Shoulder Impingement

Anterior Acromioplasty for the Chronic Impingement Syndrome in the Shoulder

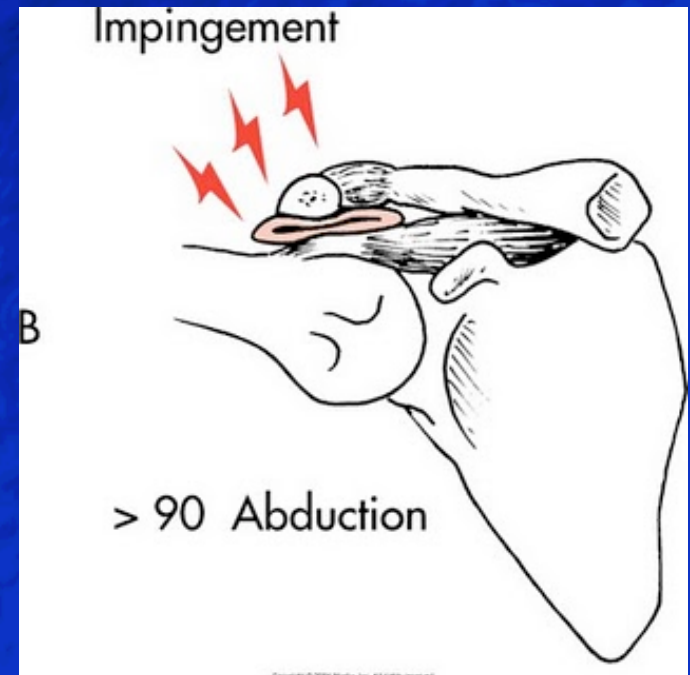
A PRELIMINARY REPORT *

BY CHARLES S. NEER II, M.D.†, NEW YORK, N. Y.

VOL. 54-A, NO. 1, JANUARY 1972

Shoulder Impingement

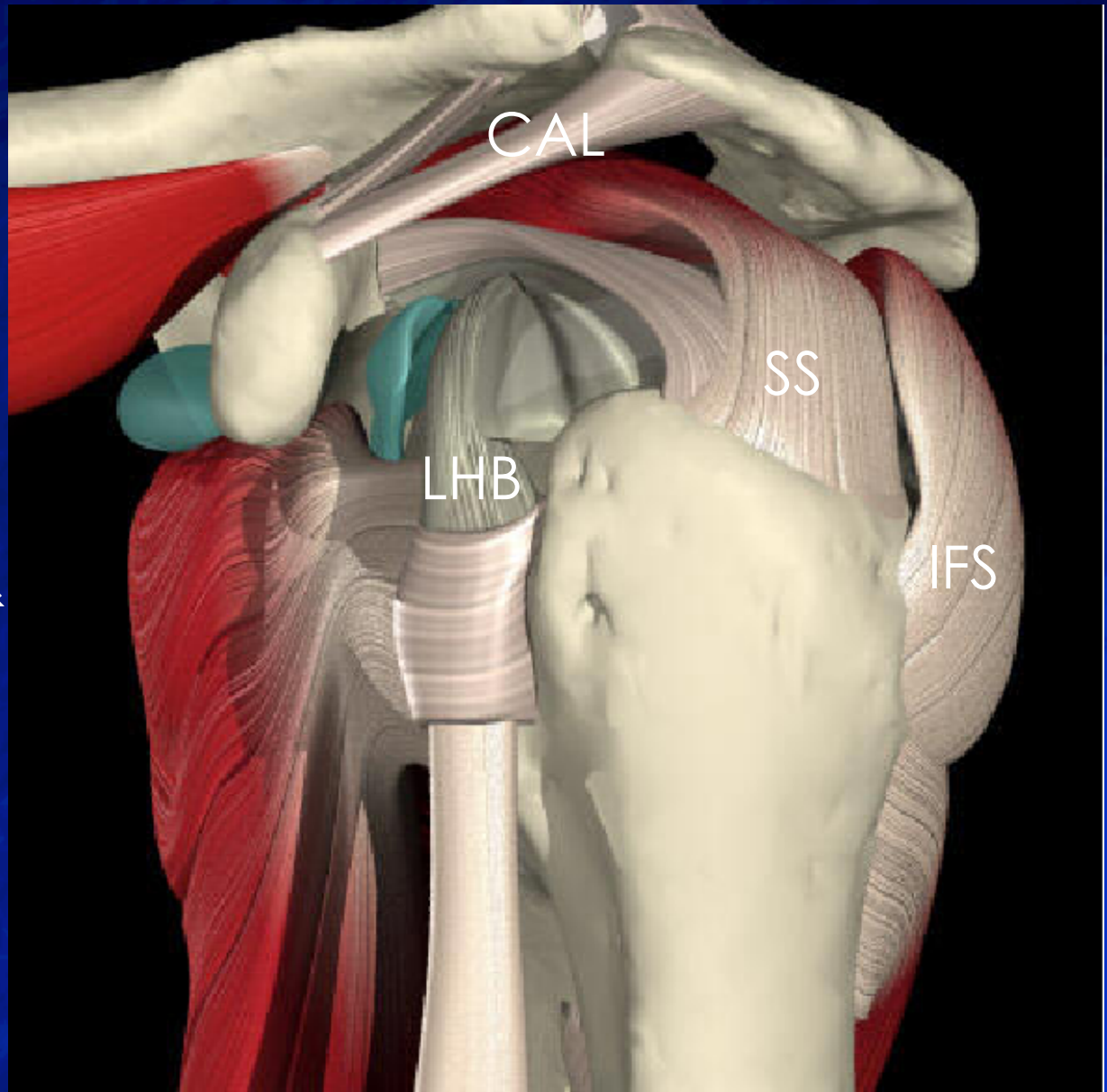
mechanical impingement of the rotator cuff tendon beneath the anteroinferior portion of the acromion, especially when the shoulder is placed in the forward-flexed and internally rotated position.



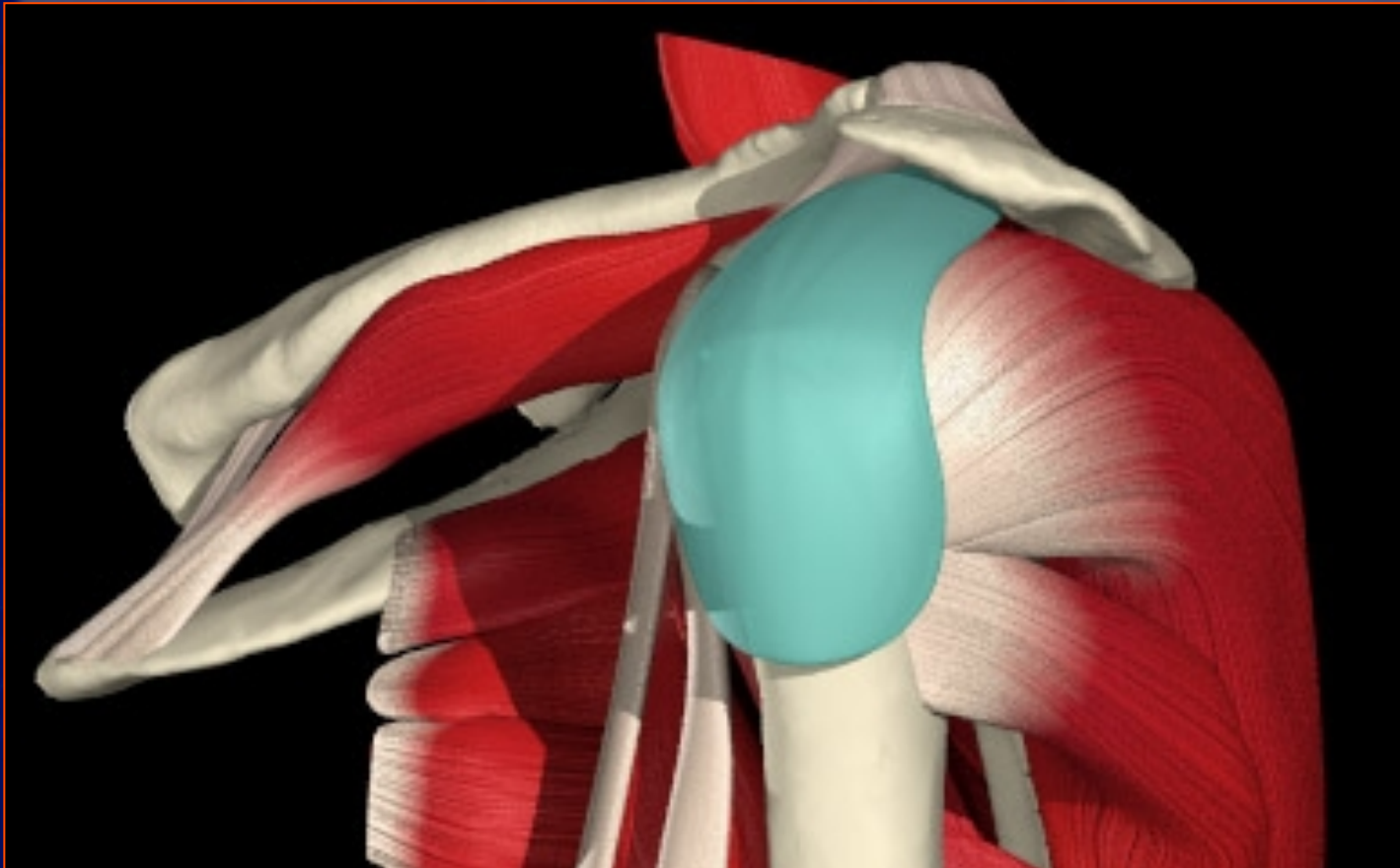


The supraspinatus outlet

- LHBT
- Superior capsule
- SST
- Upper margins of SSC & ISP tendons
- Subacromial bursa
- Inferior surface of ACJ



Subacromial bursa



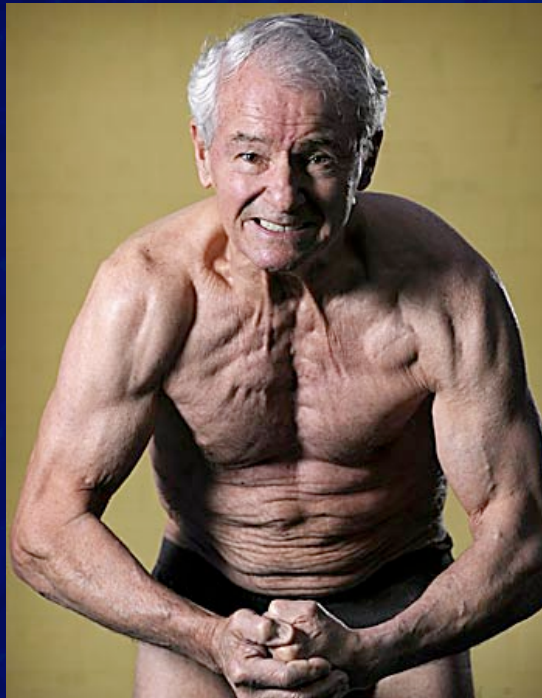
- under anterior 1/3 of acromion
- major component of the subacromial gliding mechanism
- contains free nerve endings, Ruffini endings, Pacinian corpuscles, and two kinds of unclassified nerve endings

largest concentration of pain fibers



Bursa > RC > biceps tendon

Shoulder Impingement

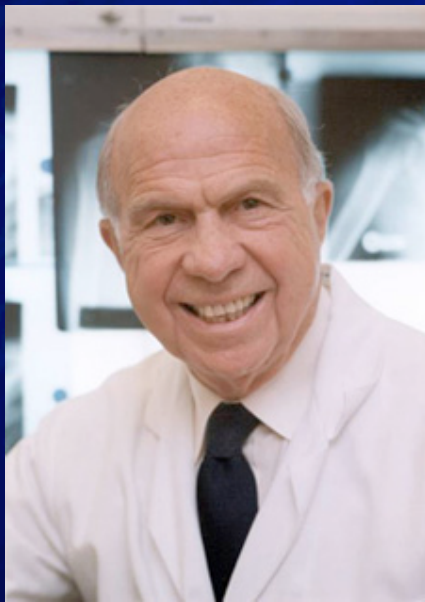


Shoulder Impingement



Shoulder Impingement

Primary



Neer

Secondary



Codman

Stages of Shoulder Impingement (Neer)

Stage 1

<25 yrs, acute inflammation, edema, and hemorrhage in the RC.
Intermittent mild pain with overhead activities
Reversible with nonoperative treatment.

Stage 2

25-40 yrs
fibrosis and tendonitis
Mild to moderate pain with overhead or strenuous activities
Commonly requires operative intervention.

Stage 3

>40 yrs
RC tear
Pain at rest or with activities, night pain, weakness
osteophytosis along the anterior acromion

Primary Impingement

- older age group
- anterior acromial hook or spur
- overhead athletes with prominent CAL
- the most predictable operative success with ASAD



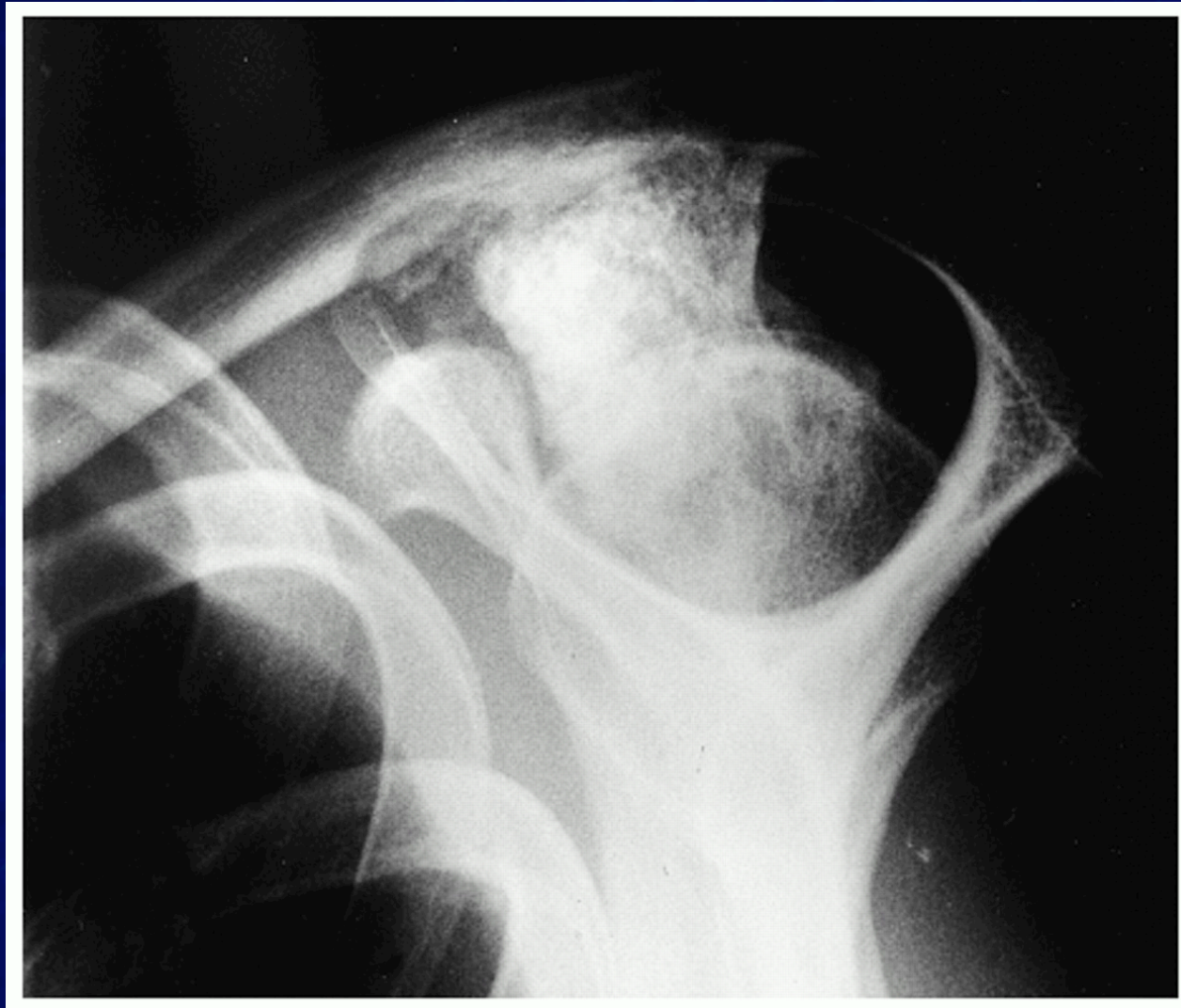
Outlet impingement



Normal



Large acromial spur



osseous mass occupying 2/3 of the supraspinatus outlet

Secondary Impingement

- intrinsic tendinous degeneration
- younger patient population
- overhead arm motion
- bony architecture is unremarkable.



Extrinsic Causes

Secondary impingement

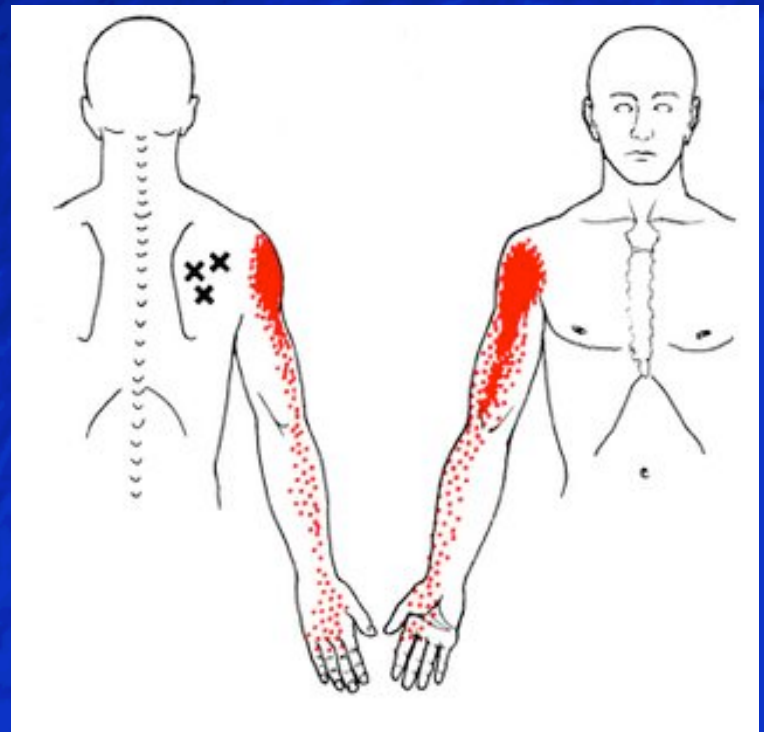
- Rotator cuff overload/soft tissue imbalance
- Eccentric muscle overload
- Glenohumeral laxity/instability
- Long head of the biceps tendon laxity/weakness
- Glenoid labral lesions
- Muscle imbalance
- Scapular dyskinesia
- Posterior capsular tightness
- Trapezius paralysis

History

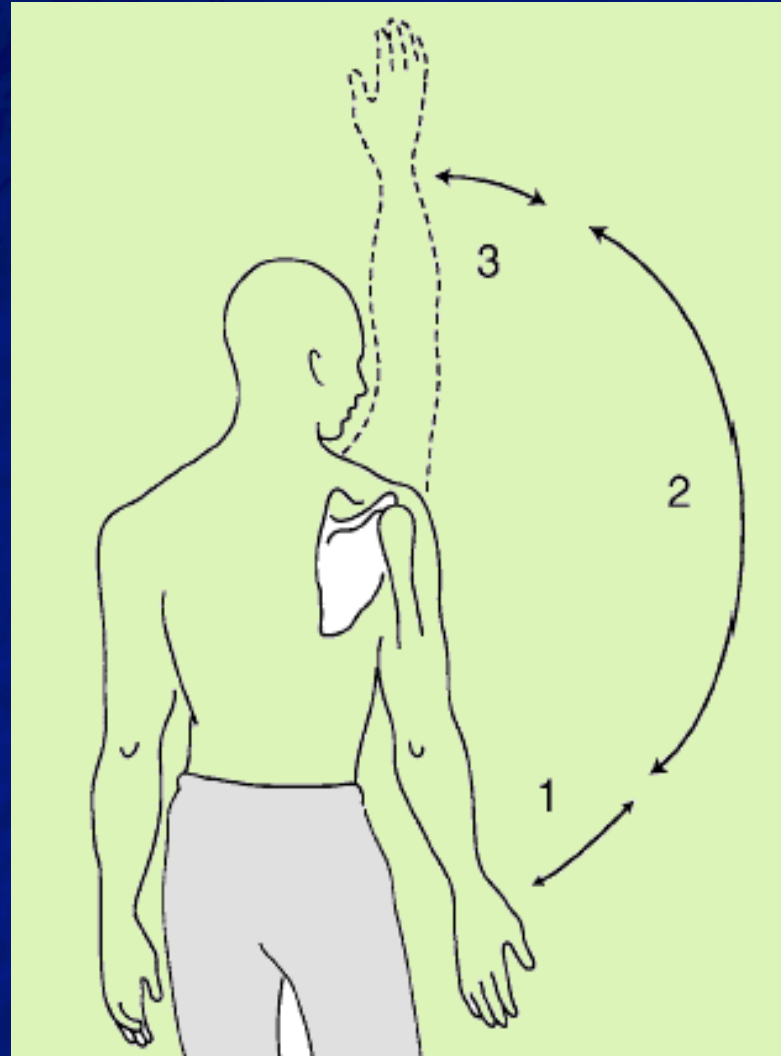
- Age
- Hand dominance
- Occupation
- Injury?
- Injury mechanism
- Length of time symptoms
- Overhead use -- athletics/repetitive work
- Night pain
- Radicular symptoms
- Neck pain
- Any injections and location?
- Specifics rehabilitation?
- Surgery?

Clinical Presentation

- insidious onset of pain
- exacerbated by overhead activities
- anterior and lateral shoulder
- night pain (RCT)



painful arc
60-120 degrees of elevation



Physical Exam: impingement tests

- Neer impingement test
- Neer impingement sign
- Hawkins test
- Jobe test
- Internal impingement test



Impingement Test I

|



Impingement Test III



Impingement Test II



Impingement Test IV

Imaging

Radiographs

AP may show

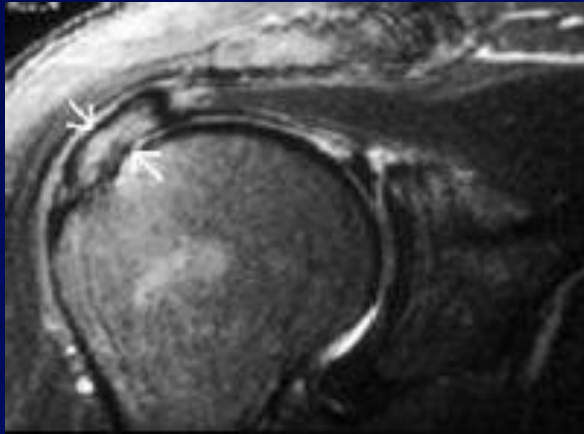
- traction osteophytes
- calcification in the coracoacromial ligament
- cystic changes within the greater tuberosity
- proximal migration of humerus seen with chronic RCT

outlet view may

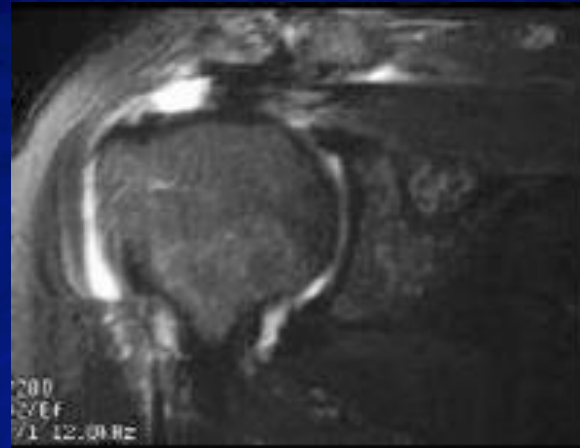
- Type III-hooked acromium
- os acrominale

MRI

evaluate degree of rotator cuff pathology



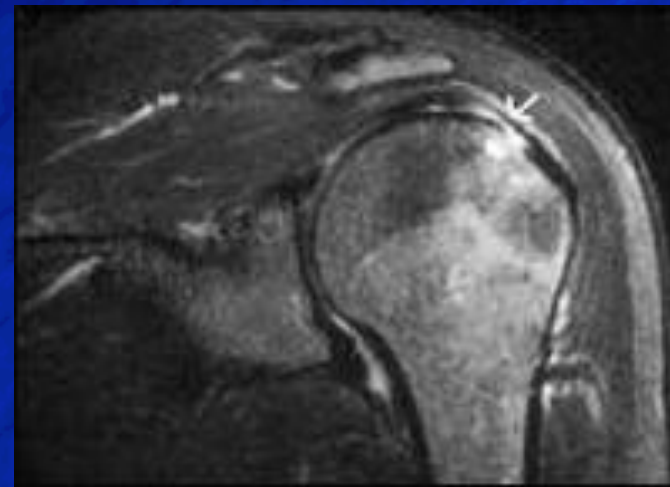
Tendinopathy



Full thickness tear

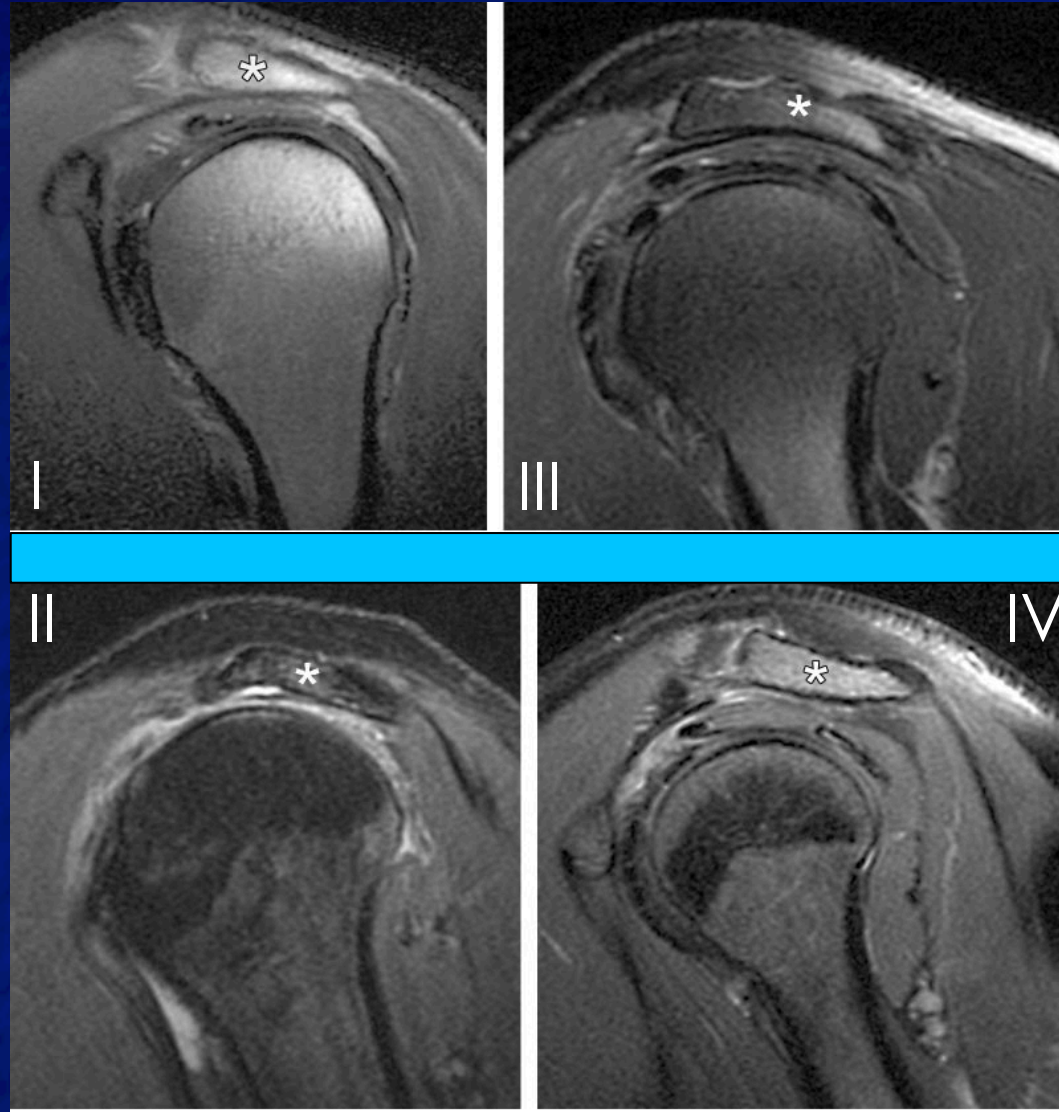


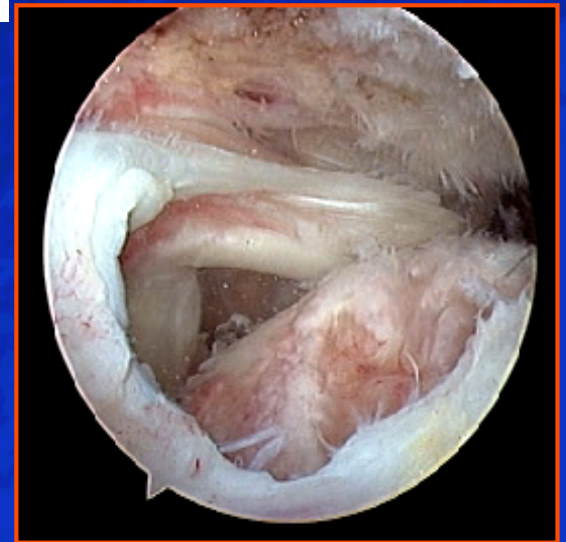
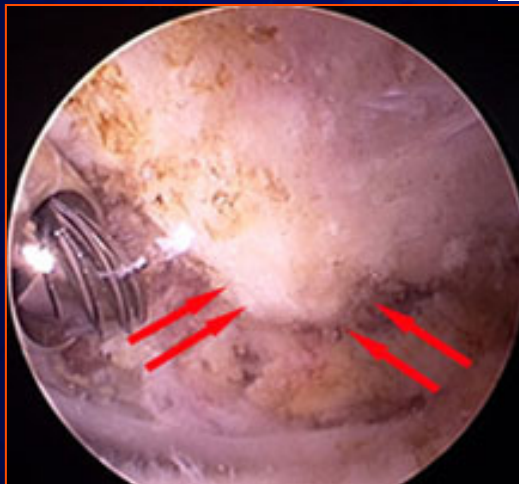
Articular partial tear



Articular and bursal partial tears

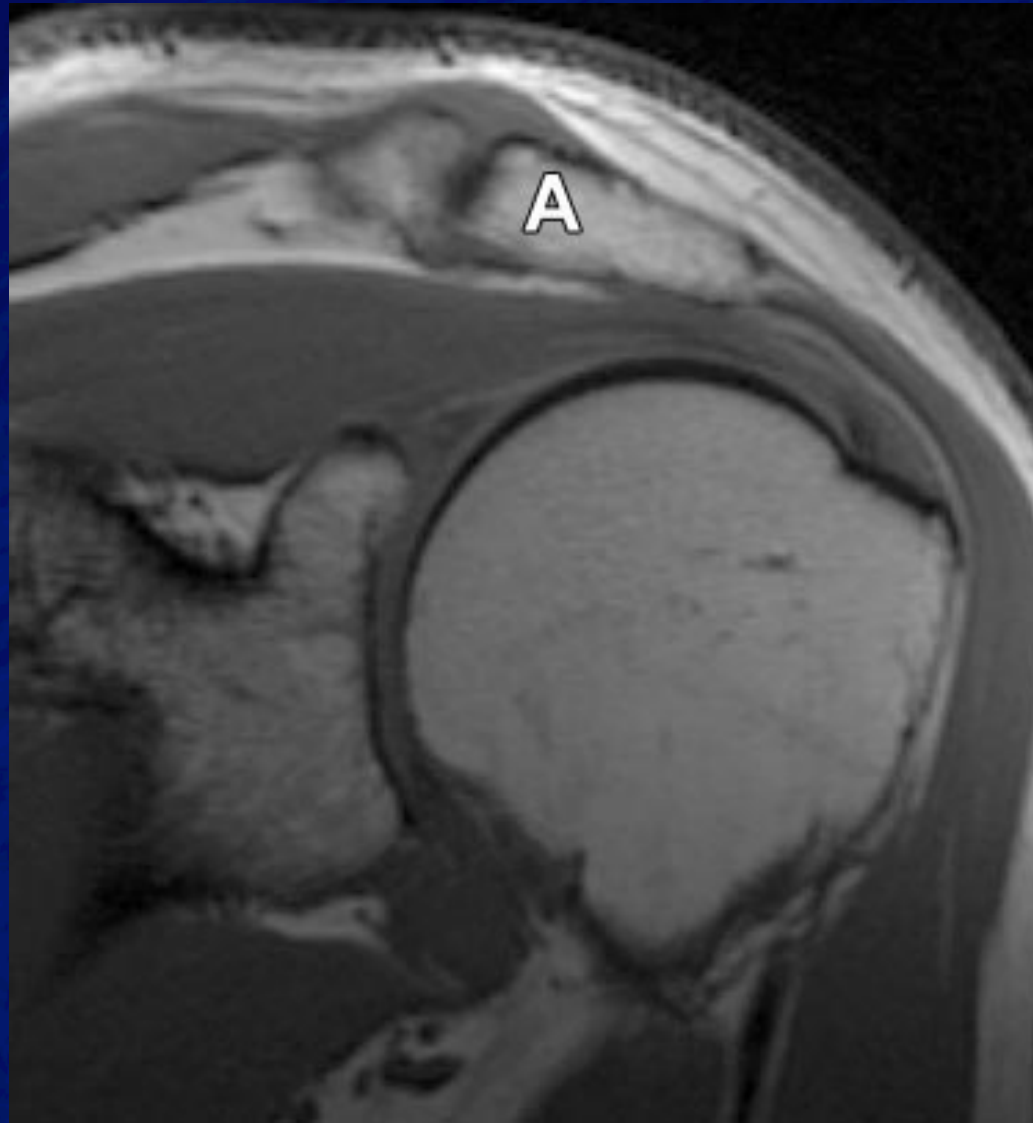
Acromion Types



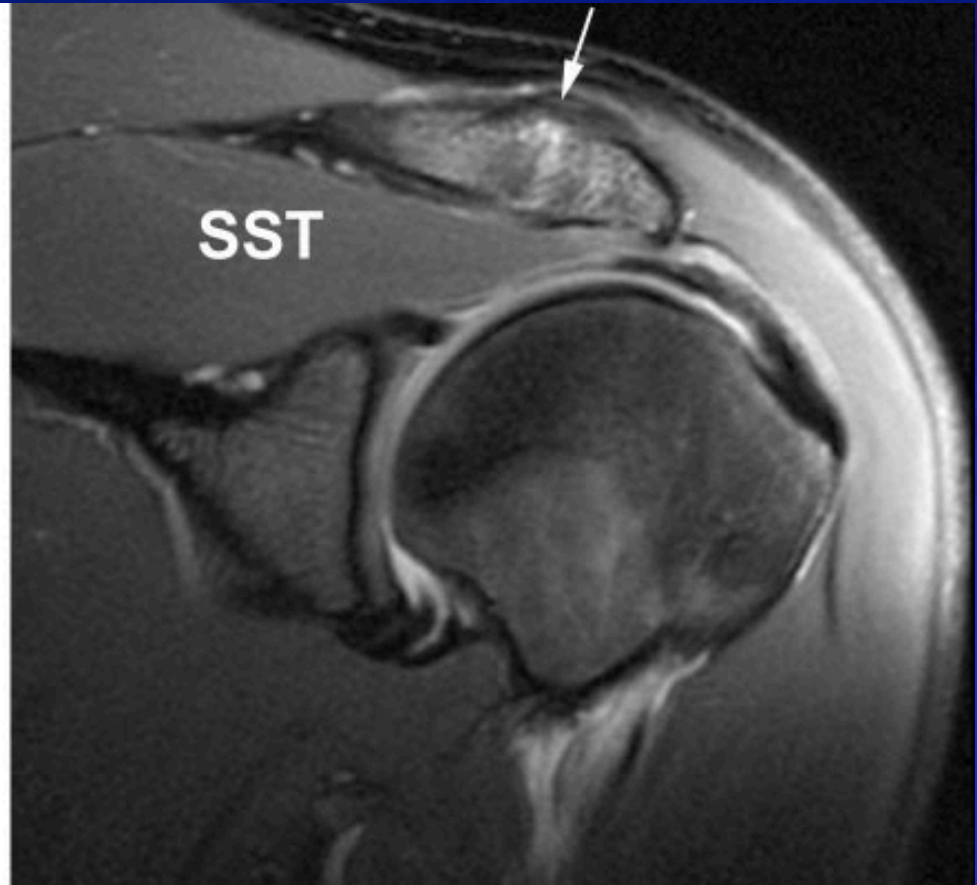
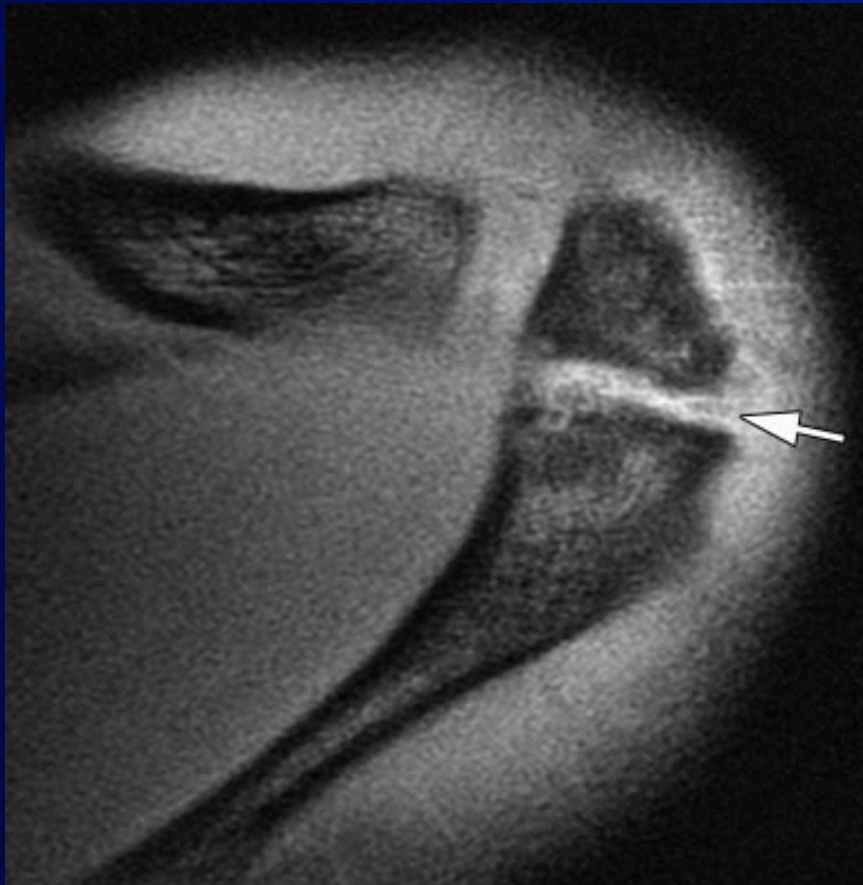


- Acromion morphology is a secondary occurrence
- The majority of partial tears are articular

Downsloping acromion



Os acromiale



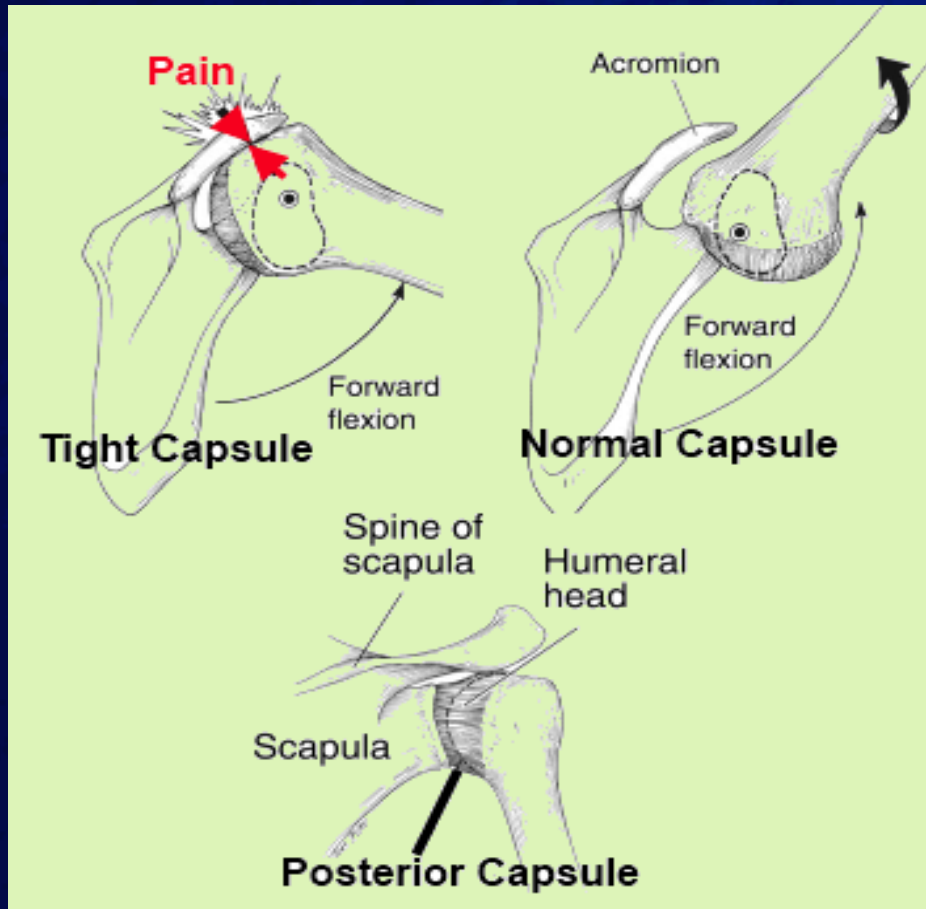
Subacromial Impingement Associated Injuries / Differential Diagnosis

- RC tendinopathy
- RC partial and complete tear
- Biceps tendonitis
- Internal impingement
- Os acromiale
- Posterior capsule contracture
- Adhesive capsulitis
- Shoulder instability
- AC arthritis
- SLAP tear
- Cervical radiculopathy

Impingement Syndrome in Athletes



Posterior capsule tightness



- Normal capsular laxity allows the humeral head to remain centered during elevation.
- Tightness of the posterior capsule may create obligate anterosuperior translation with shoulder flexion.

GIRD: glenohumeral internal rotation deficit



posterior capsule stretches

The two most common stretches for the posterior capsule are:

1. Sleeper stretch



2. Cross body stretch



Treatment: Nonoperative

- physical therapy
- oral anti-inflammatory medication
- subacromial injections
- activity modification
 - modify sports biomechanics

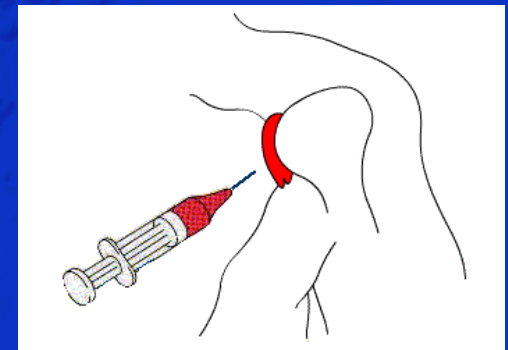
Conservative Treatment

- 2/3 of the pts improve
- In pts >60 yrs 50% success rate
- Acromion type I 91% success



CS injections

- Improve the duration of the pain-free period
- No more than 2 injections



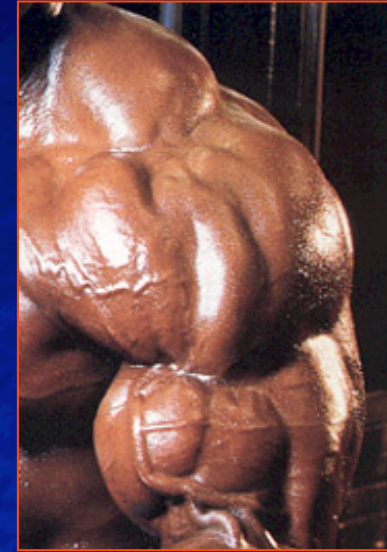
Treatment: Operative

- Subacromial Decompression (Acromioplasty)
- Os acromiale

Best indication: primary extrinsic impingement

Be careful!

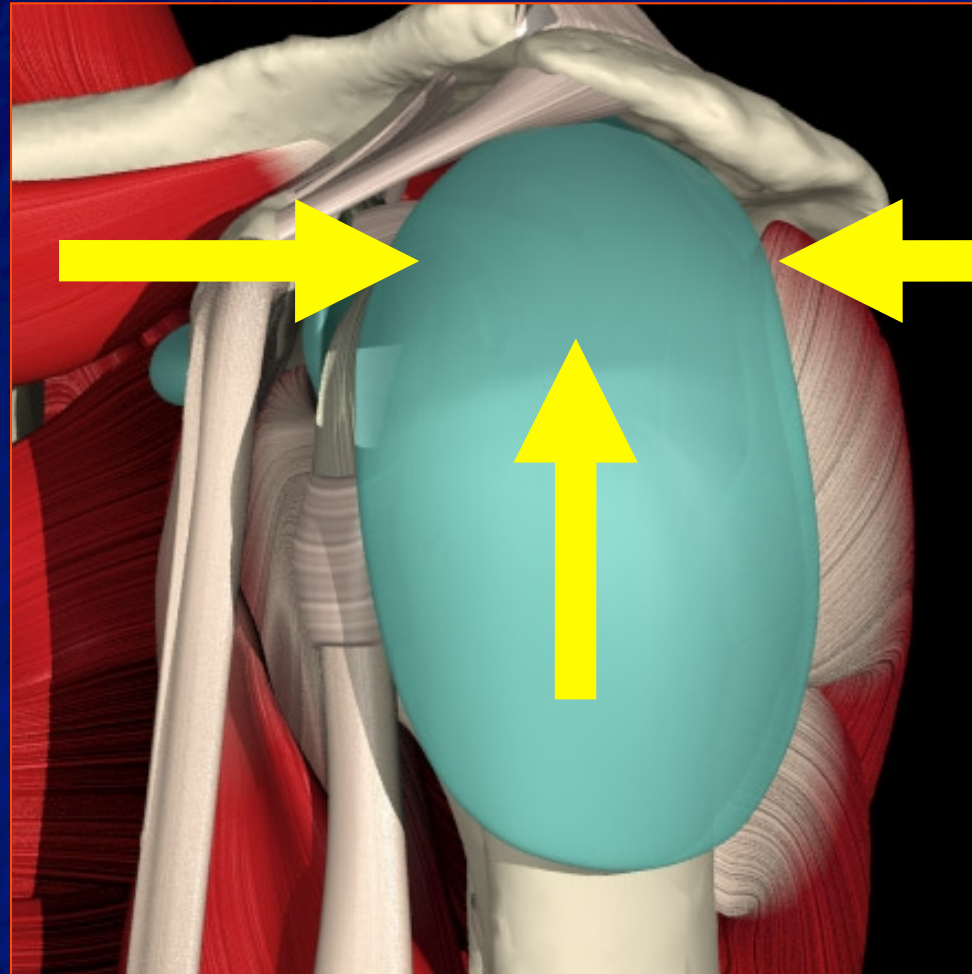
- ❑ Stiffness
- ❑ OA
- ❑ MDI
- ❑ Workman's compensation
- ❑ Unrealistic expectations



Beach Chair Position



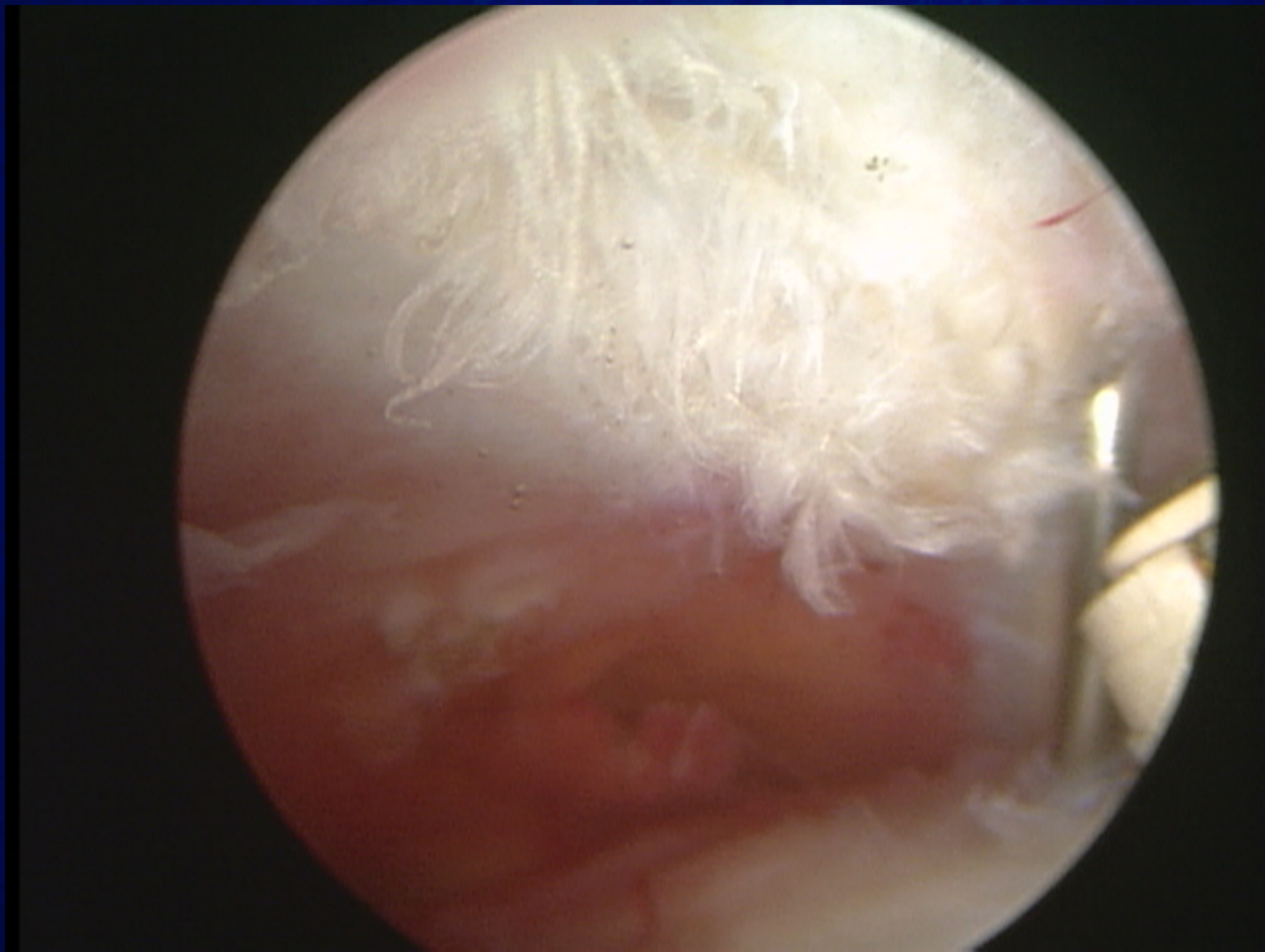
portals

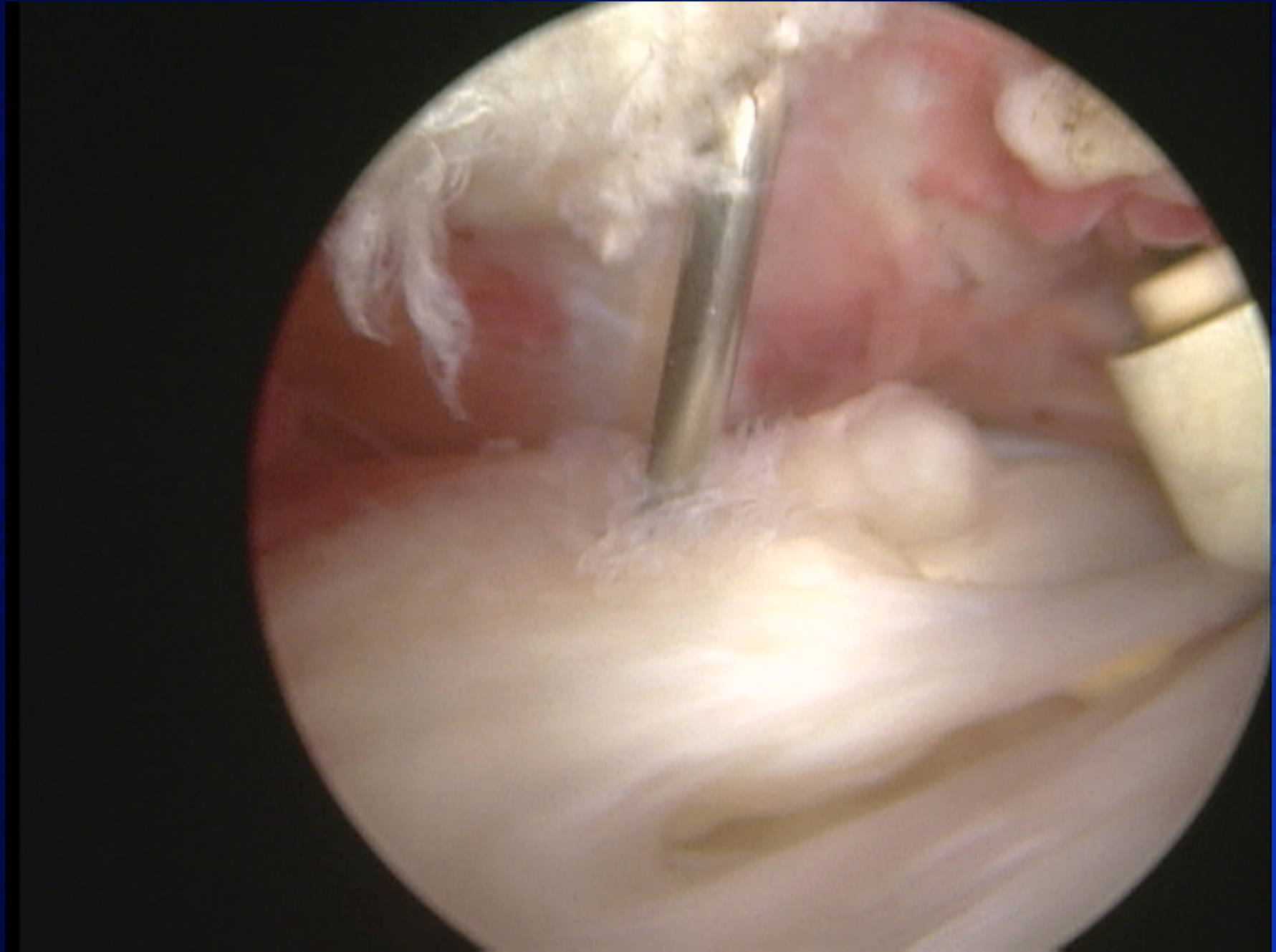


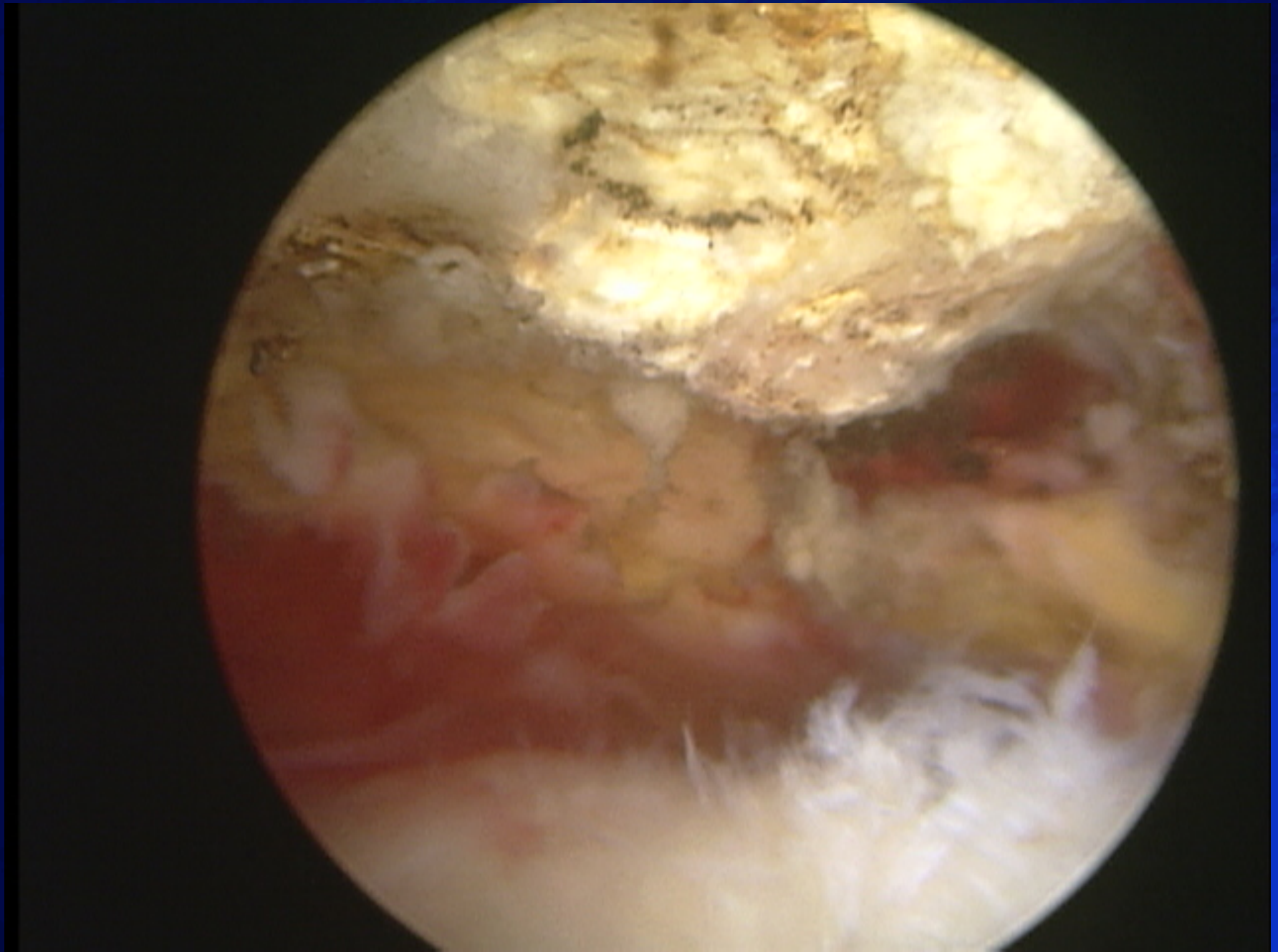
Rockwood acromioplasty

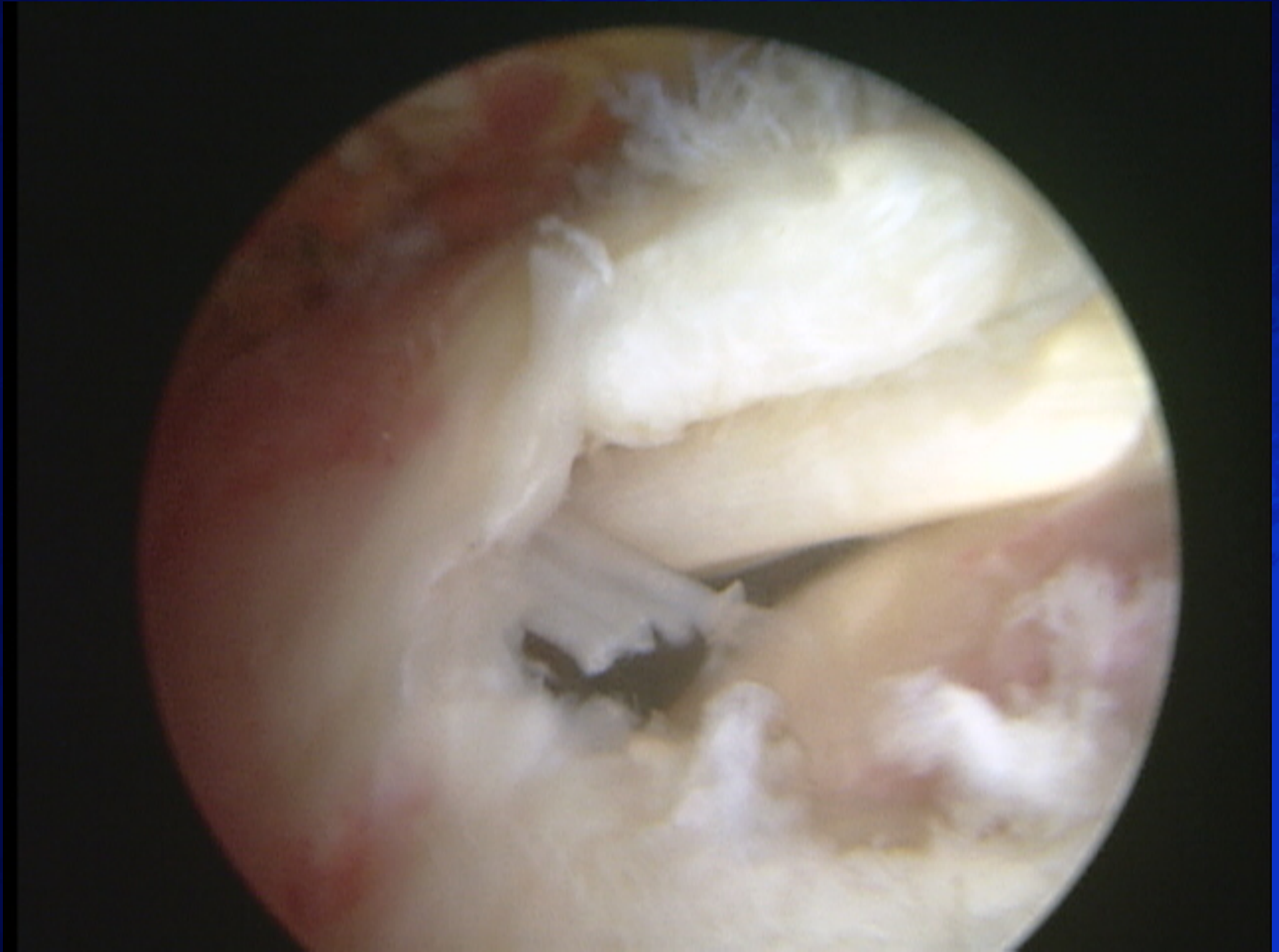
Resection of the anterior (5 mm) and
inferior part of the acromion
(8 mm limit)







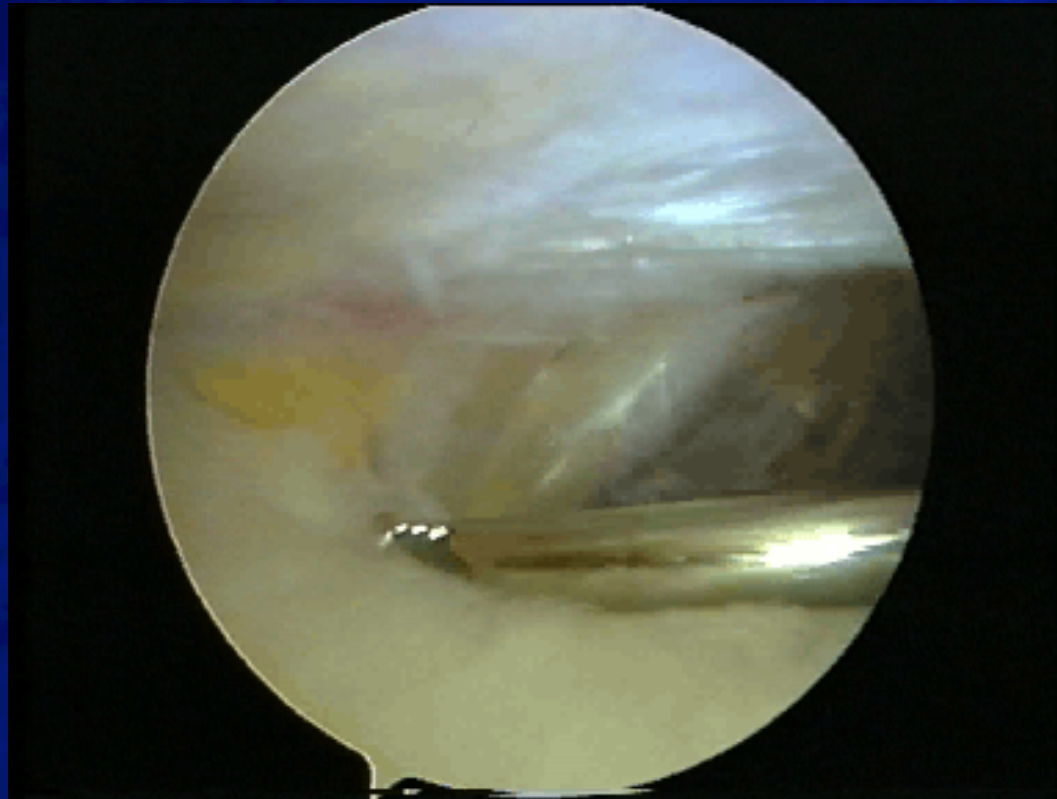


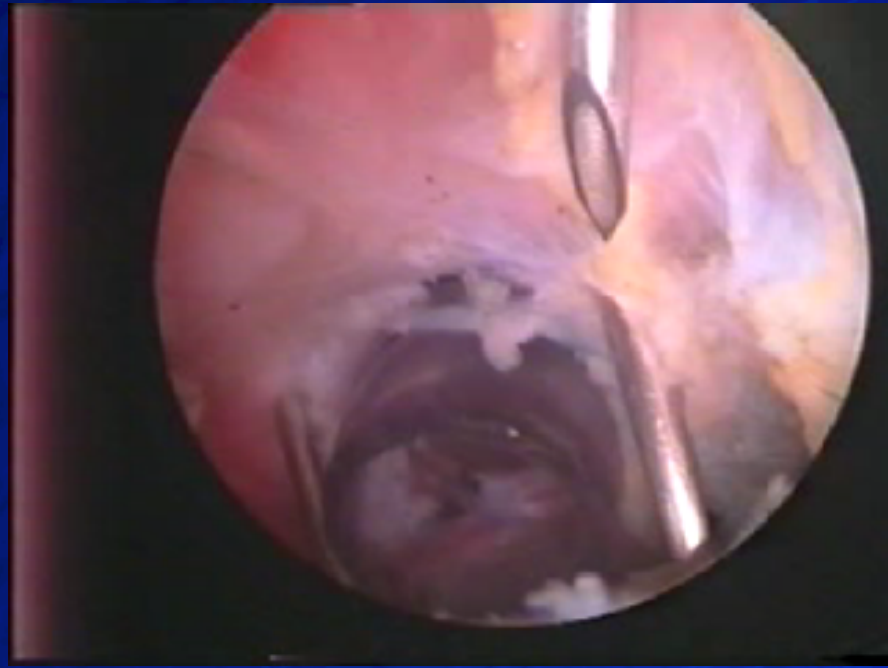




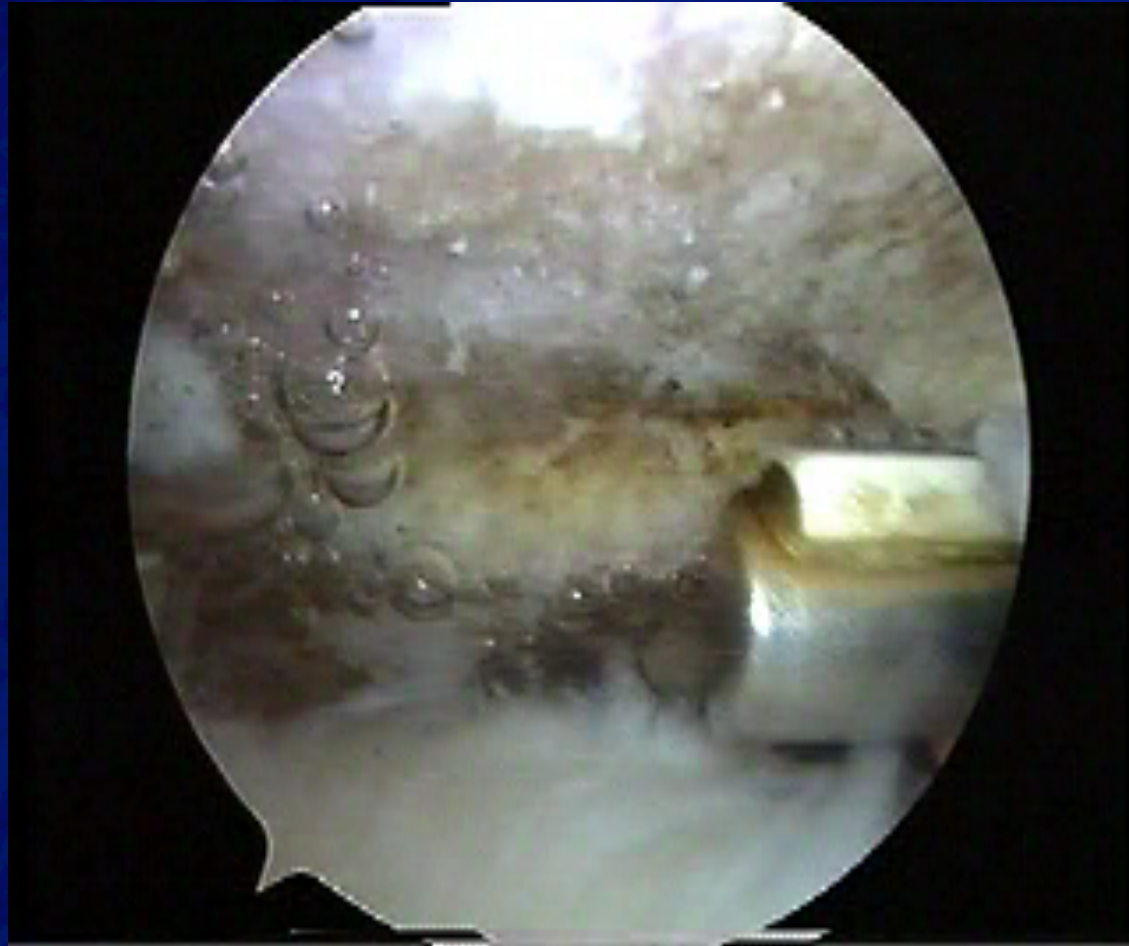
Normal Subacromial Space







acromioplasty

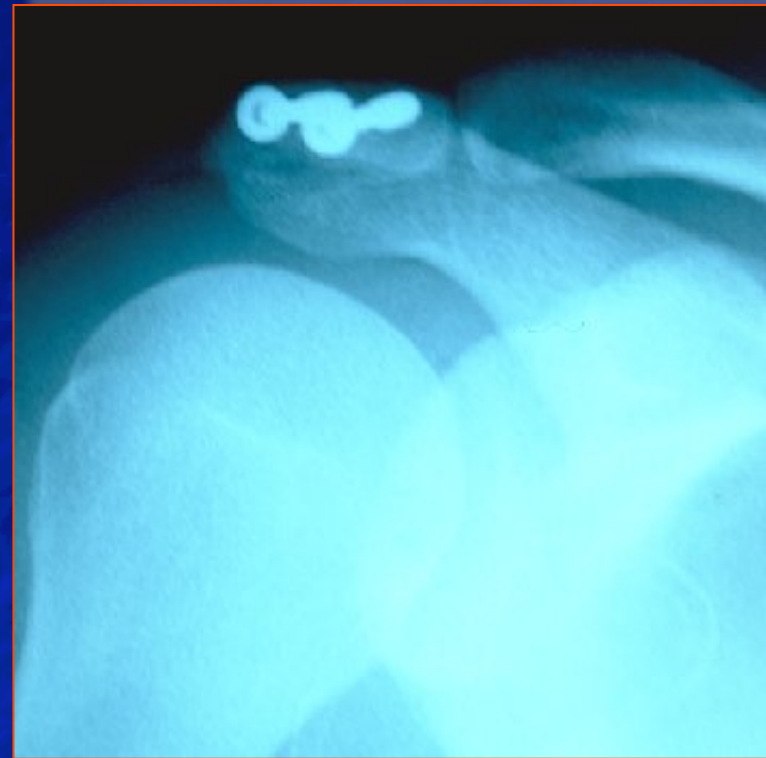
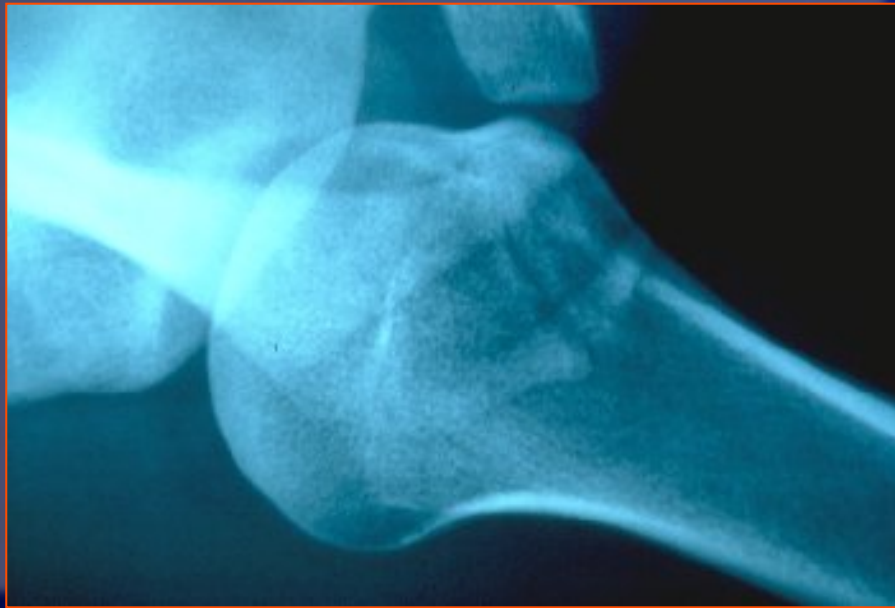


Improvement after ASD

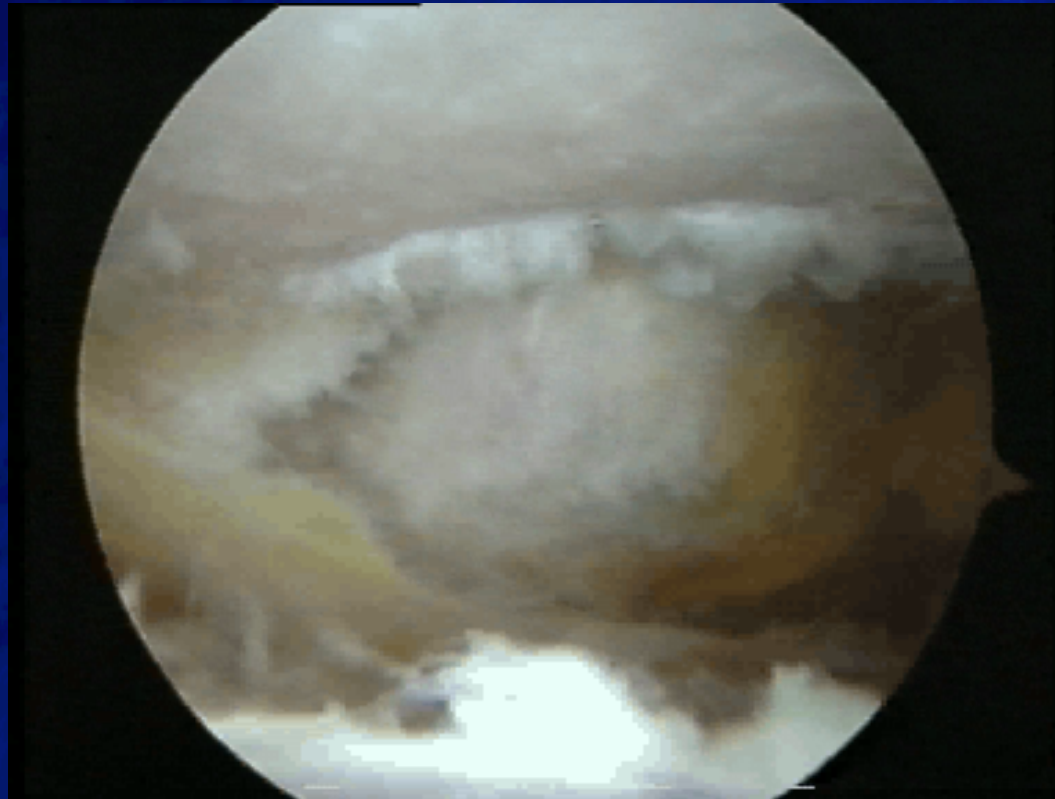
- Possible impingement sign (NO)
- Type III acromion
- lateral acromion angle $< 75^\circ$
- US proven dynamic impingement
- Bursal side tear

Additional Procedures

Os Acromiale



Distal Clavicle Excision



Rotator Cuff Tear



Partial Articular Surface RC Tear



Full RC tear

