

Entesopathies

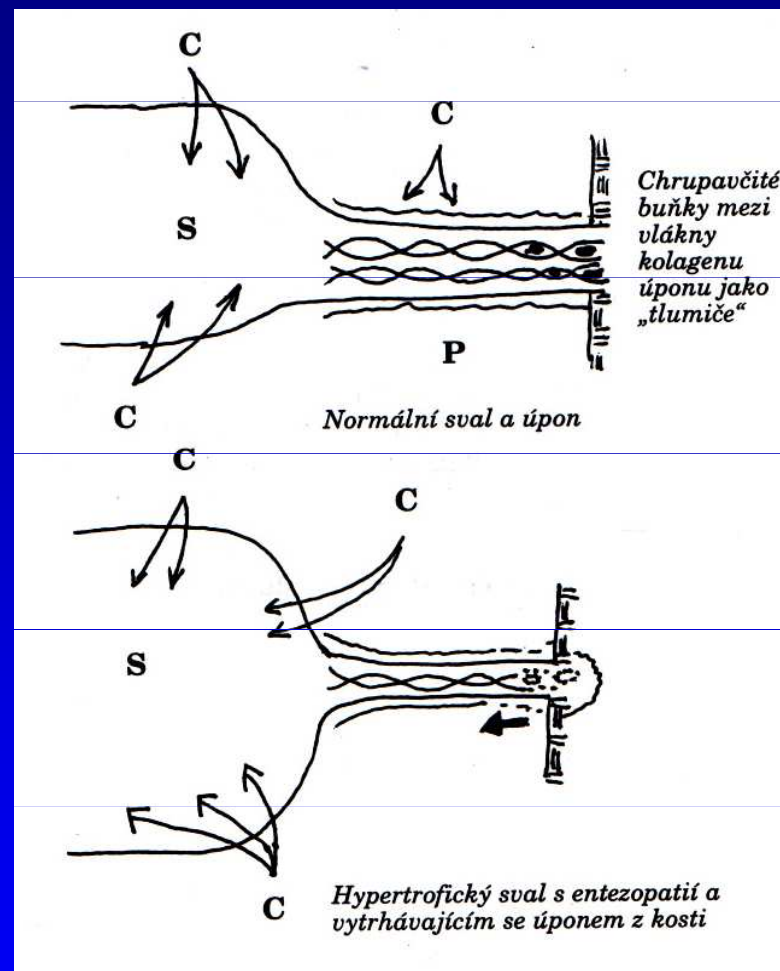
Z. Rozkydal

I.Ortopedická klinika MU v Brně

Entezopathy

Pathological changes of insertions of tendons, ligaments and joint capsules into the bone

Dystrophia, microruptures of Sharpey's filaments from bone inflammation, periostitis ossifications, metaplasia



Cause

Acute and chronic overloading

Microtraumatisation

Repetitive movements and activities

Epicondylitis radialis humeri

Tennis elbow

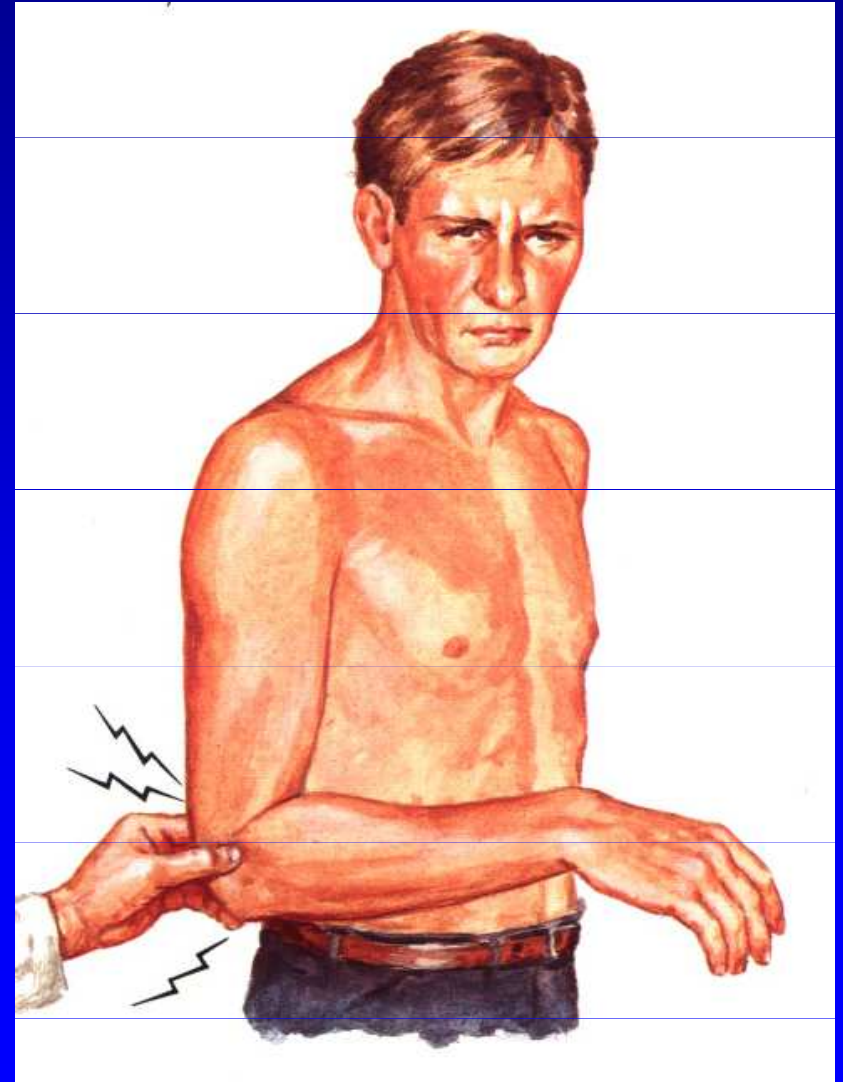
Pain with activity of extensors

Tenderness

Painful supination

Painful resisted dorsiflexion of the wrist
and of the third finger

Chair test



Tennis elbow- the cause

Entesopathy

Bursitis

Ossifications of insertion of extensors

Painful annular ligament

Painful synovial plica

Osteochondrosis dissecans

Pressure of radial nerve

Referred pain from cervical spine and shoulder

Tennis elbow

Conservative treatment:

Rest, NSAID

Stretching, sling

Corticoids locally

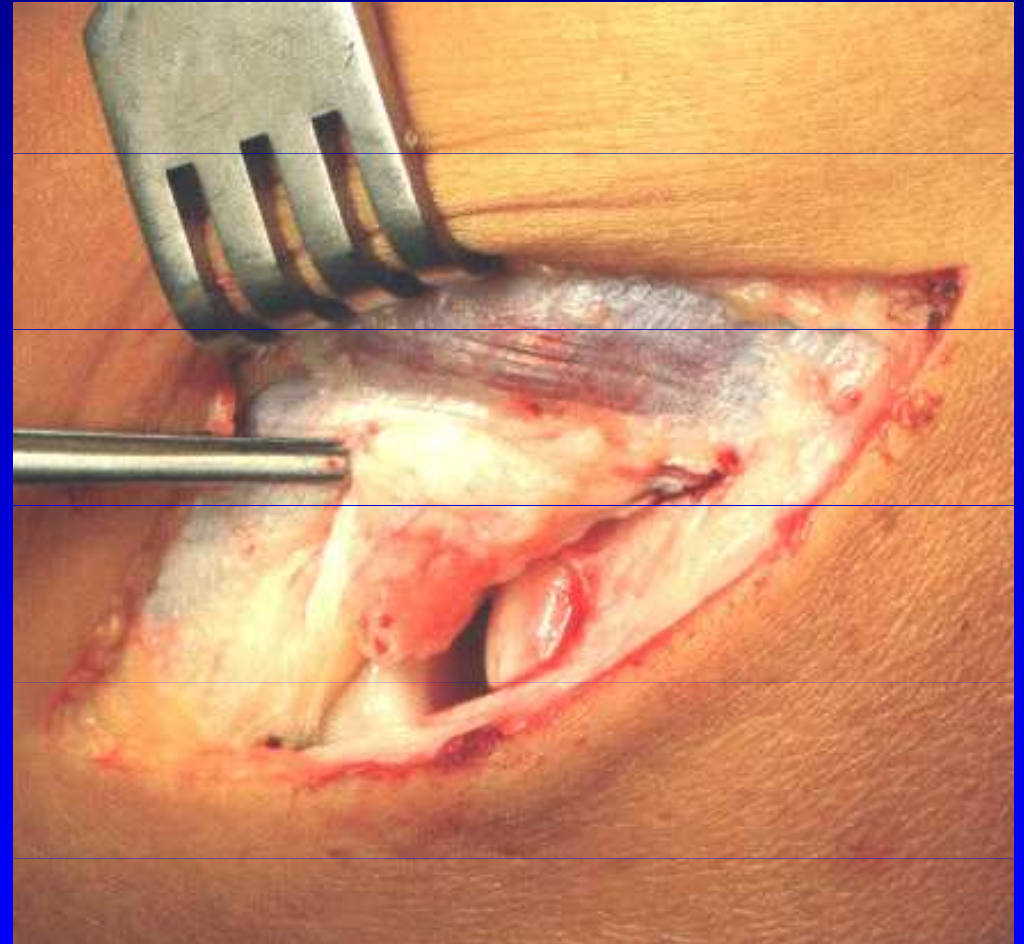
fysiotherapy

Orthosis or immobilisation

Operative treatment

Op. sec. Hohman

Op. sec. Boyd- McLeod



Golf elbow - Epicondylitis ulnaris humeri

Entesopathy of insertions of flexors
on ulnar epicondyle

Pain, tenderness

Resisted movements

Treatment:

Conservative

Operative

Distalisation of flexor's insertion



Bursitis of olecranon

Swelling and fluid
Tenderness

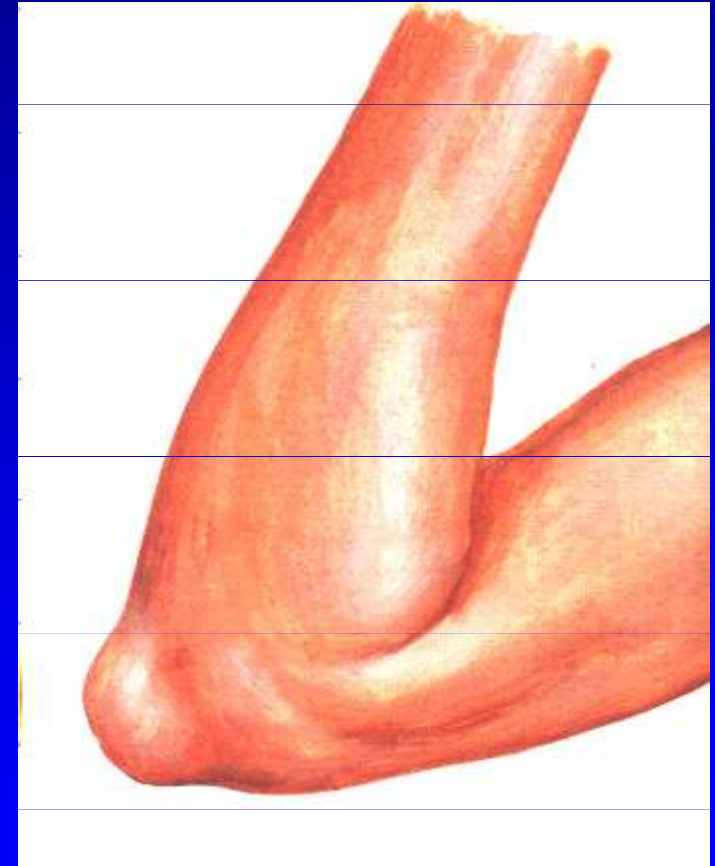
Treatment:

Aspiration, NSAID

Bandage, immobilisation

Corticoids locally

Risk of pyogenic inflammation



M. de Quervain

Stenosing tenosynovitis of
long abductor and short extensor
of the thumb

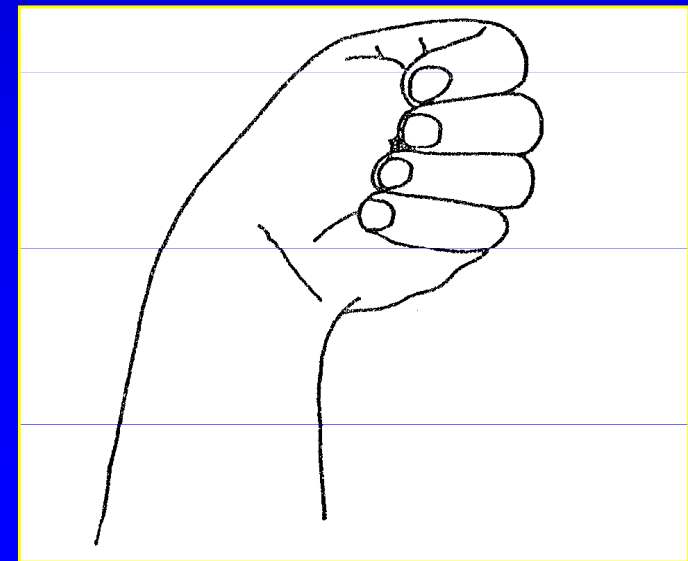
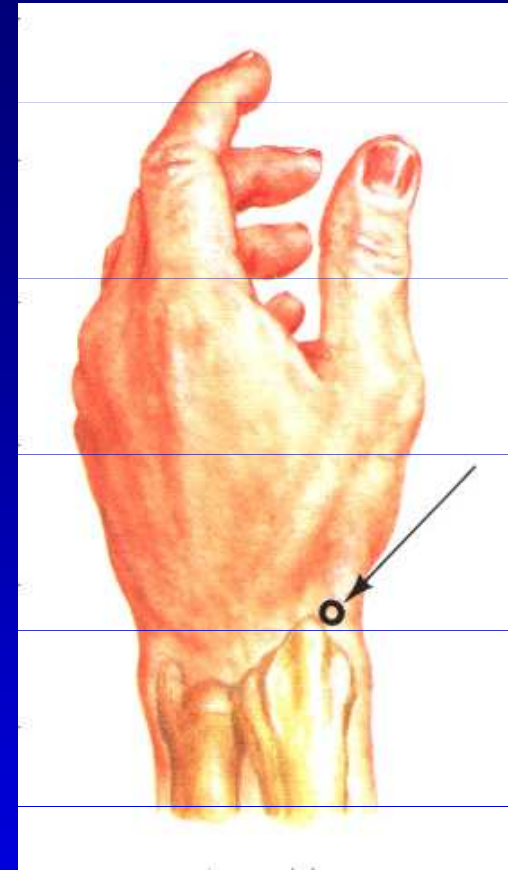
Tenderness over styloid process
Finkelstein test

Treatment

Rest, orthosis, plaster

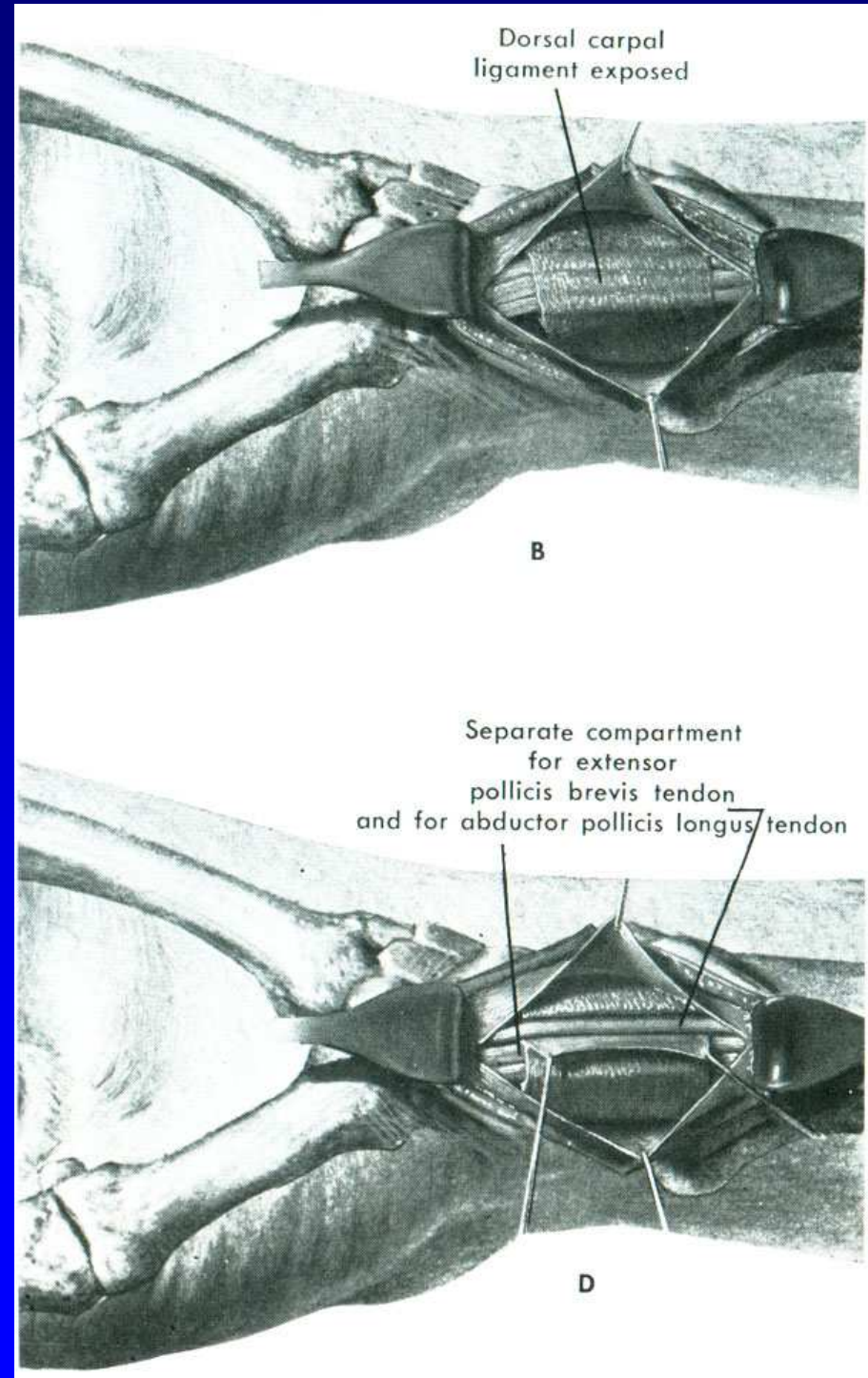
NSAID, corticoids

Surgery



M. de Quervain

Dissection of the tendon sheat



Bursitis and entesopathies in hip region

Greater trochanter

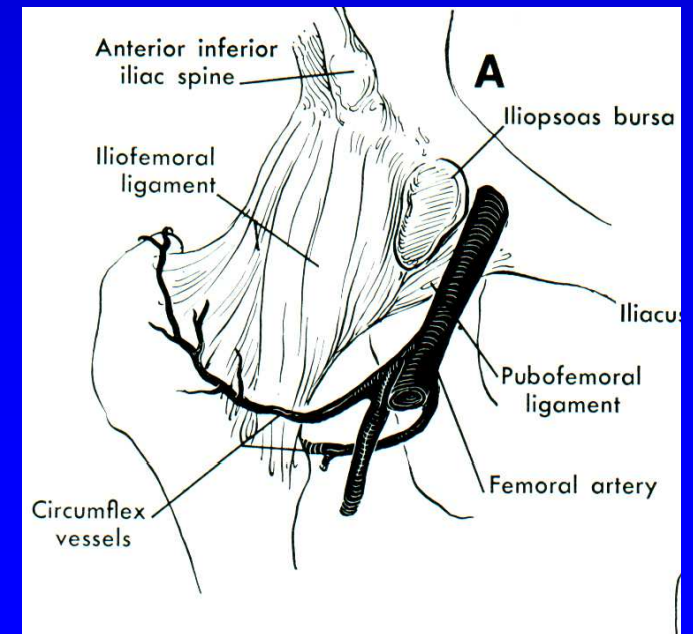
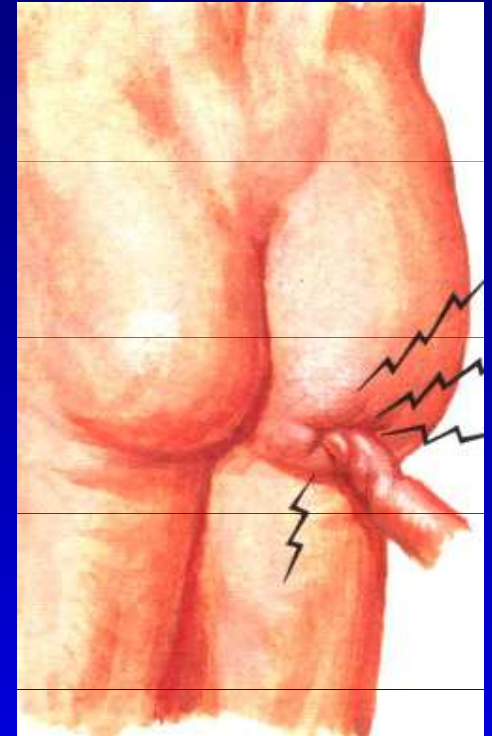
Ischial tubercle

Bursa ileopectinea

Gracilis syndrom (natažené tříslo)

Spina iliaca ant. sup.

Spina iliaca ant inf.



Bursitis in the knee region

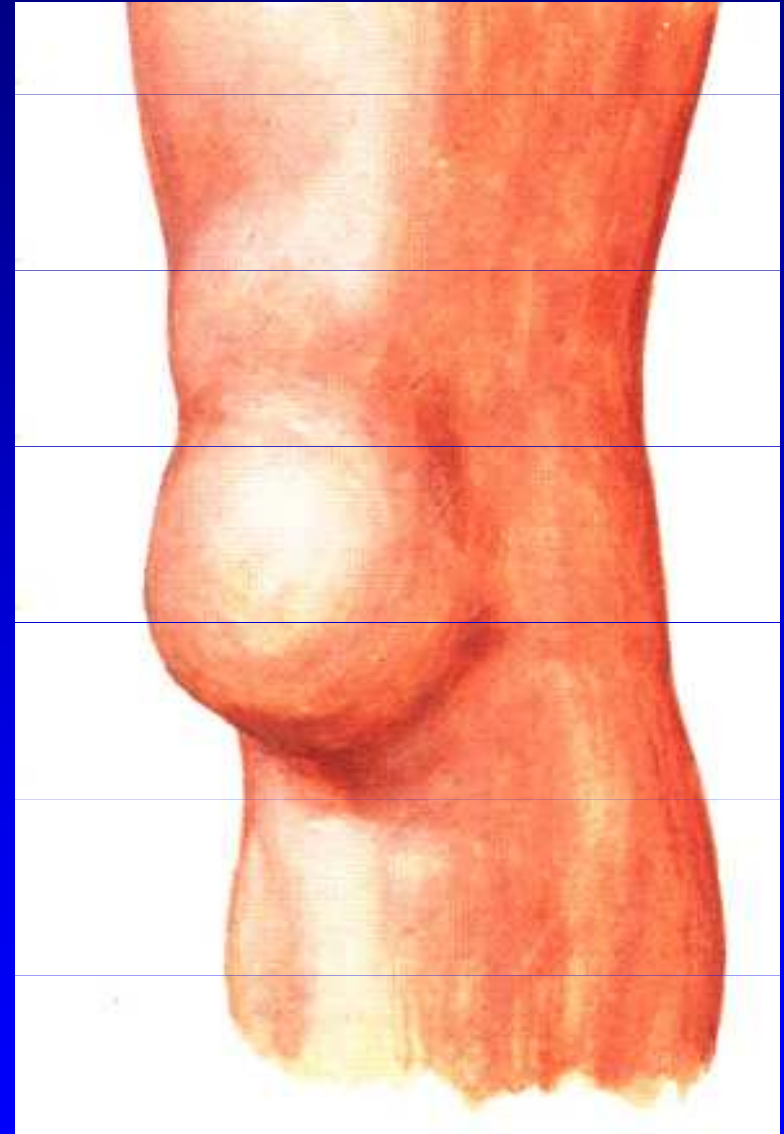
Prepatellar bursitis

Bursitis of pes anserinus

Therapy:

Rest, aspiration, corticoids

NSAID, surgery



Baker's cyst

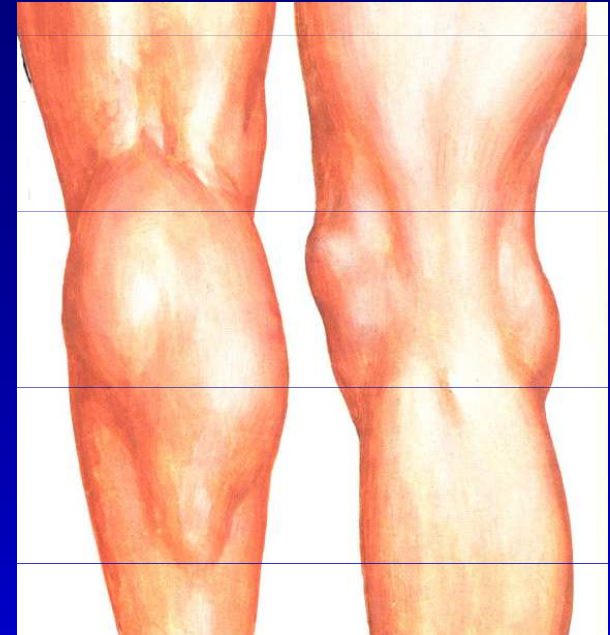
Bursa gastrocnemio- semimembranacea
Is connected with joint space
Swelling, soft mass in popliteal region
Limited movements
Pressure onto large veins in
popliteal region.

Secondary to pathology in the knee

Therapy:

Conservative – aspiration, local corticoids,
NSAID

Surgery



Entesopathies in knee region

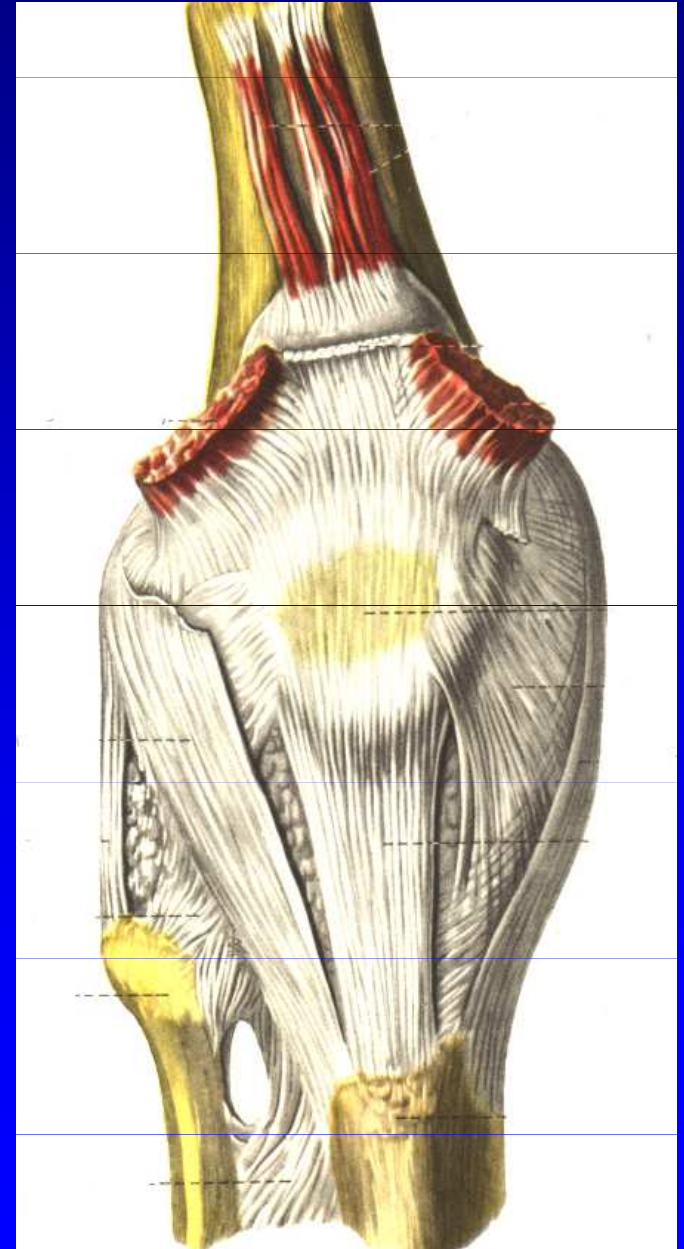
Jumper's knee

- distal pole of the patella

m. Osgood- Schlatter

Entesopathy in ligaments insertion

Entesopathy at Gerdy's tubercle



Bursitis and entesopathies in the foot

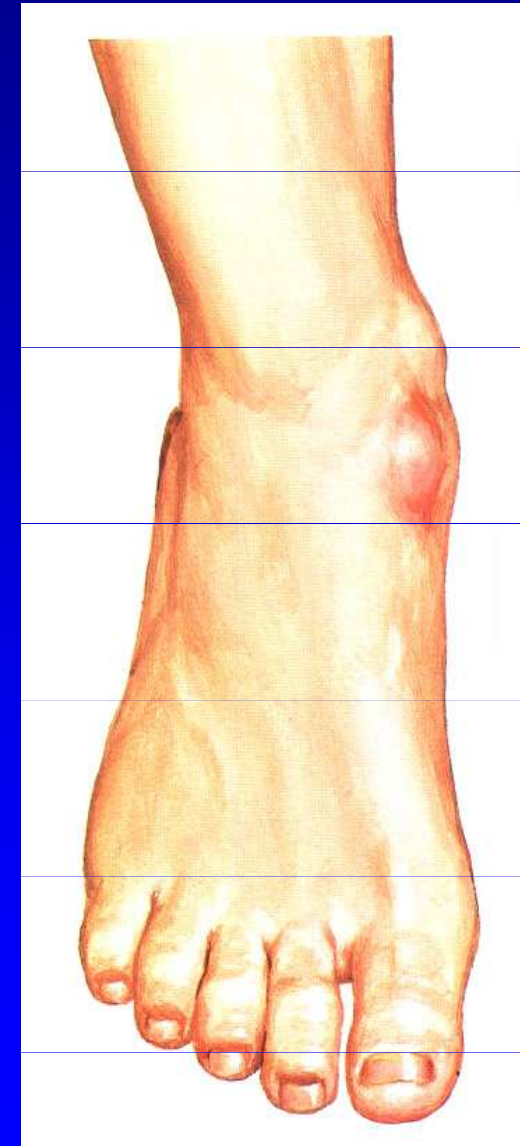
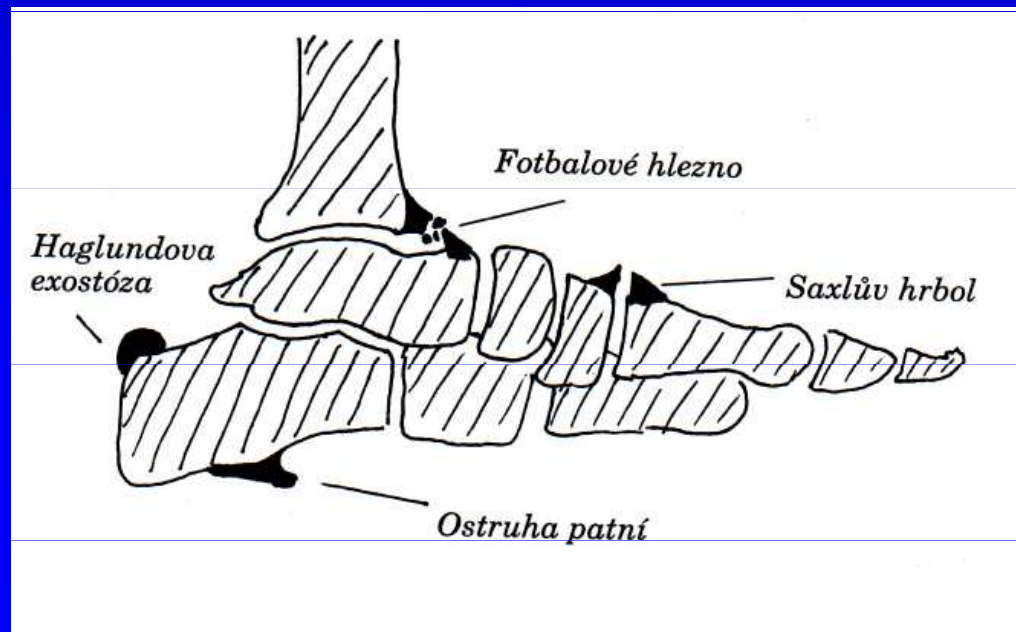
Achillodynia

Calcaneal spur

Haglund's exostosis

Osteophytes – dorsal

Os tibiale externum



Achillodynia

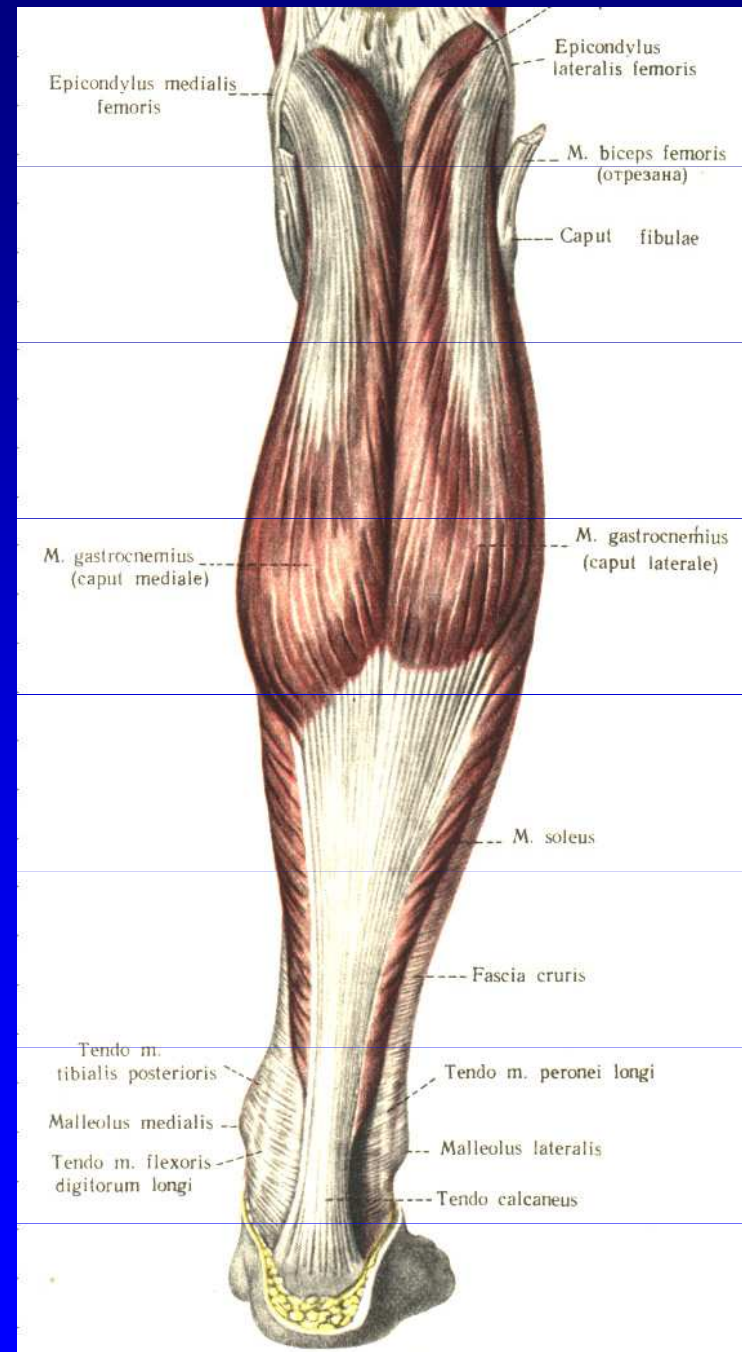
Painful Achilles tendon
and it's insertion

Degeneration

Haemorrhage, ruptures

Peritenonitis

The risk of rupture



Achillodynia

Conservative treatment:

Rest, taping, NSAID

Physiotherapy

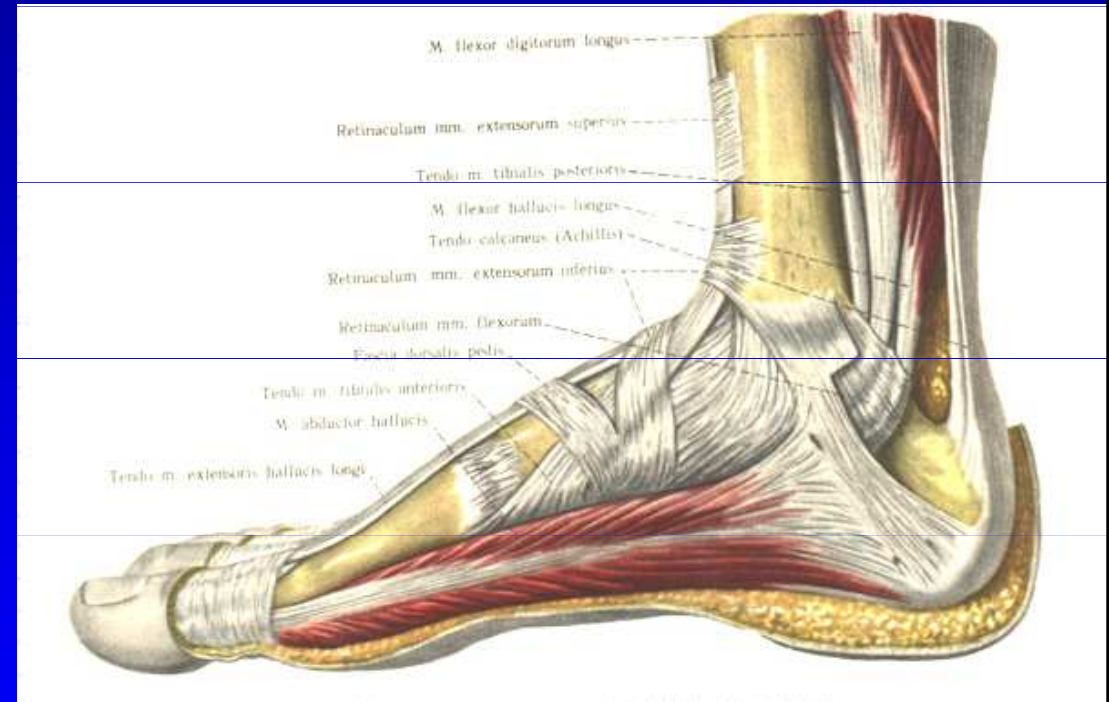
Orthosis

No corticoids !

Surgery:

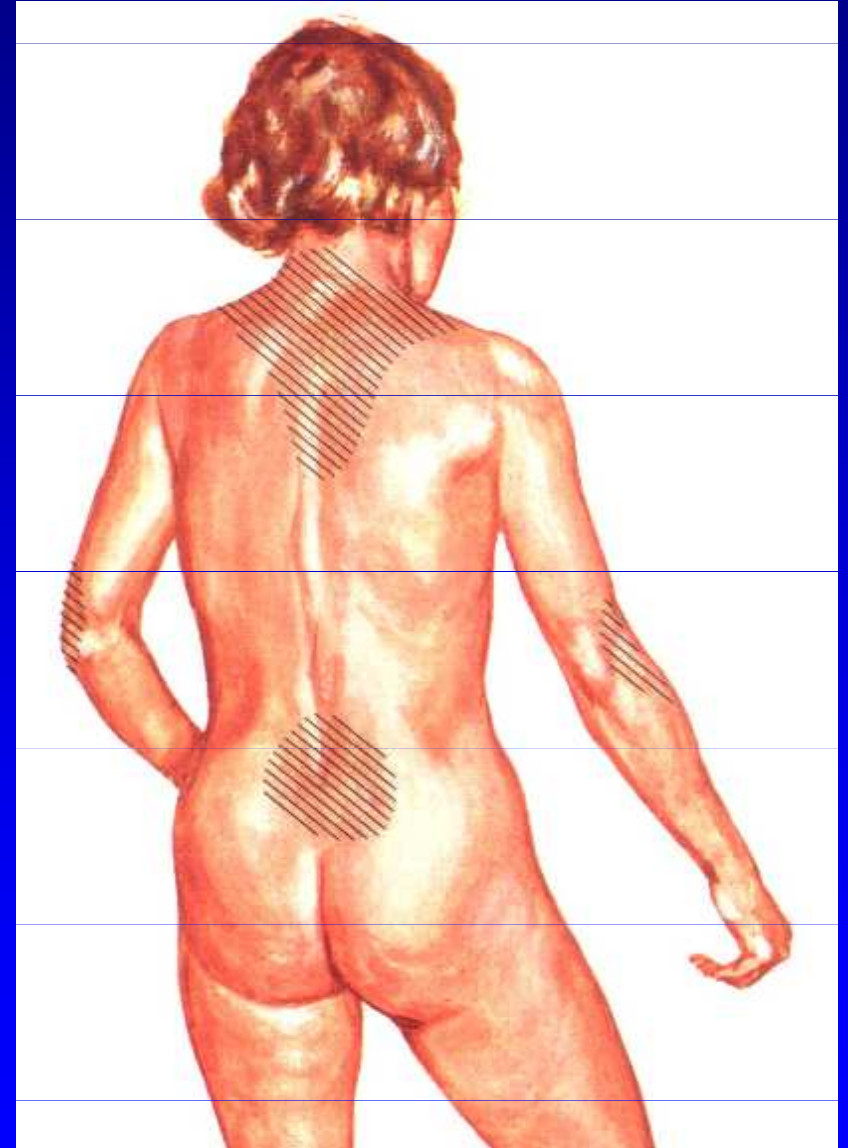
Peritenonectomy

Excision of necrotic tissue



Entesopathy at the spine

Painfull insertions of ligaments
and tendons:
Transverse or spinal process
Scapula, pelvis



Painful shoulder

Tenosynovitis of tendon of long head of biceps

Rupture of tendon of long head of biceps

Subacromial bursitis

Supraspinatus tendinitis

Rotator cuff rupture

Impingement syndrom

Frozen shoulder syndrom

Osteoarthritis of glenohumeral joint

Disorders of acromioclavicular joint

Inflammations

Tumors

Referred pain from cervical spine

Tenosynovitis of long head of biceps

Tenderness

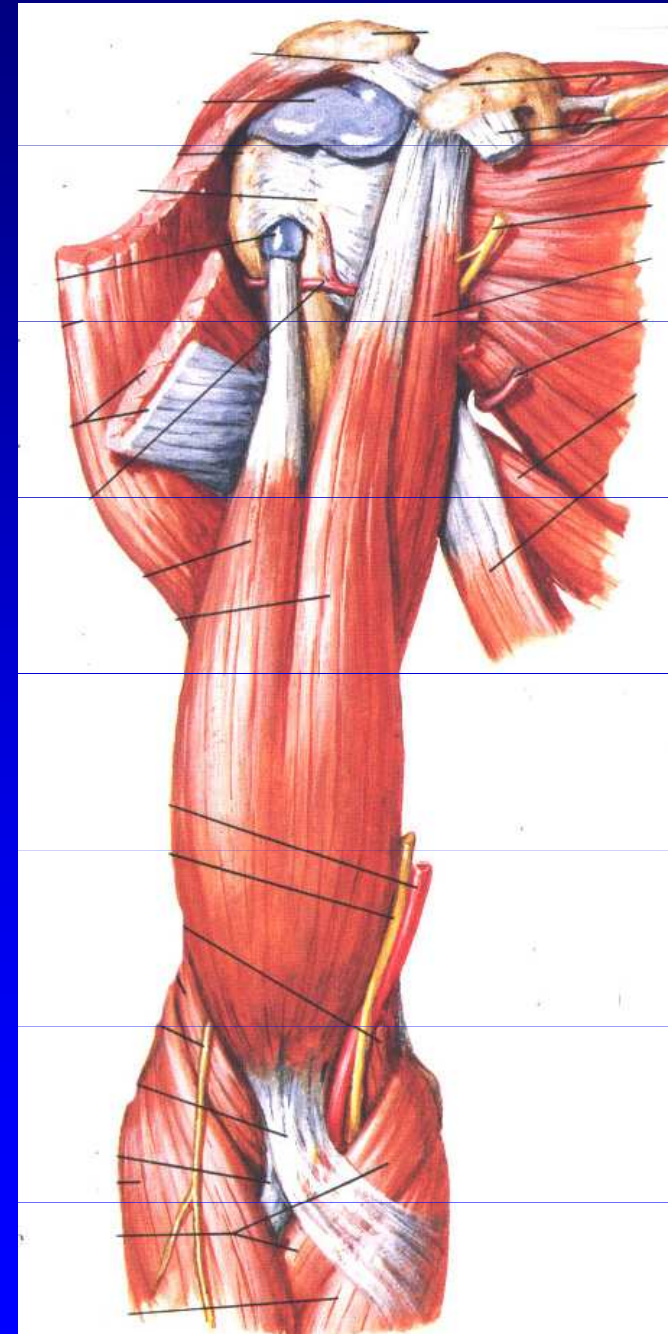
Resisted flexion and supination
of the elbow

Therapy:

Corticosteroids locally

Rest, sling

NSAID

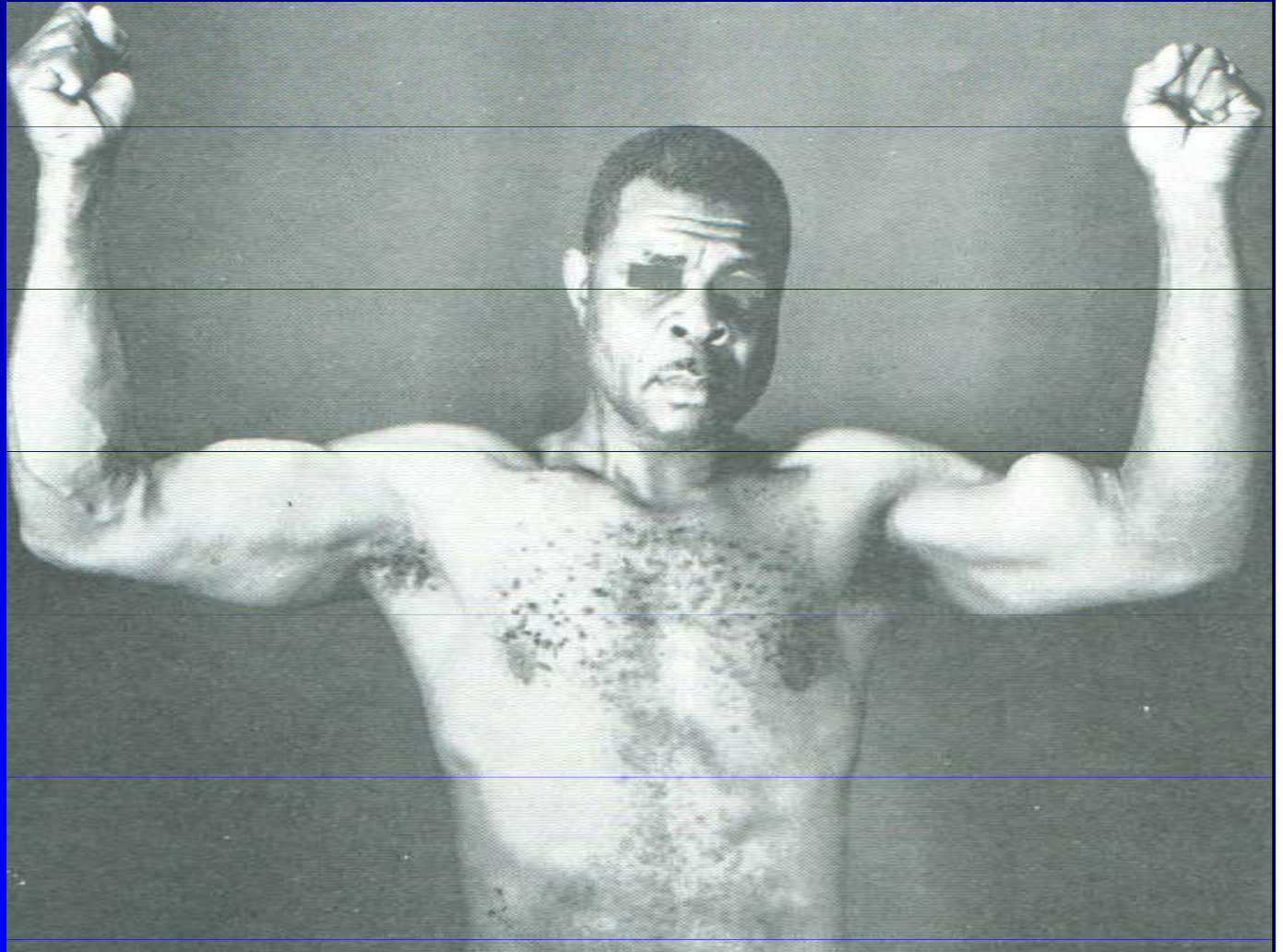


Rupture of long head of biceps

Tenderness

Distalisation of
muscle belly

Diminished strength



Rupture of long head of biceps

Therapy:

Rest, sling

NSAID

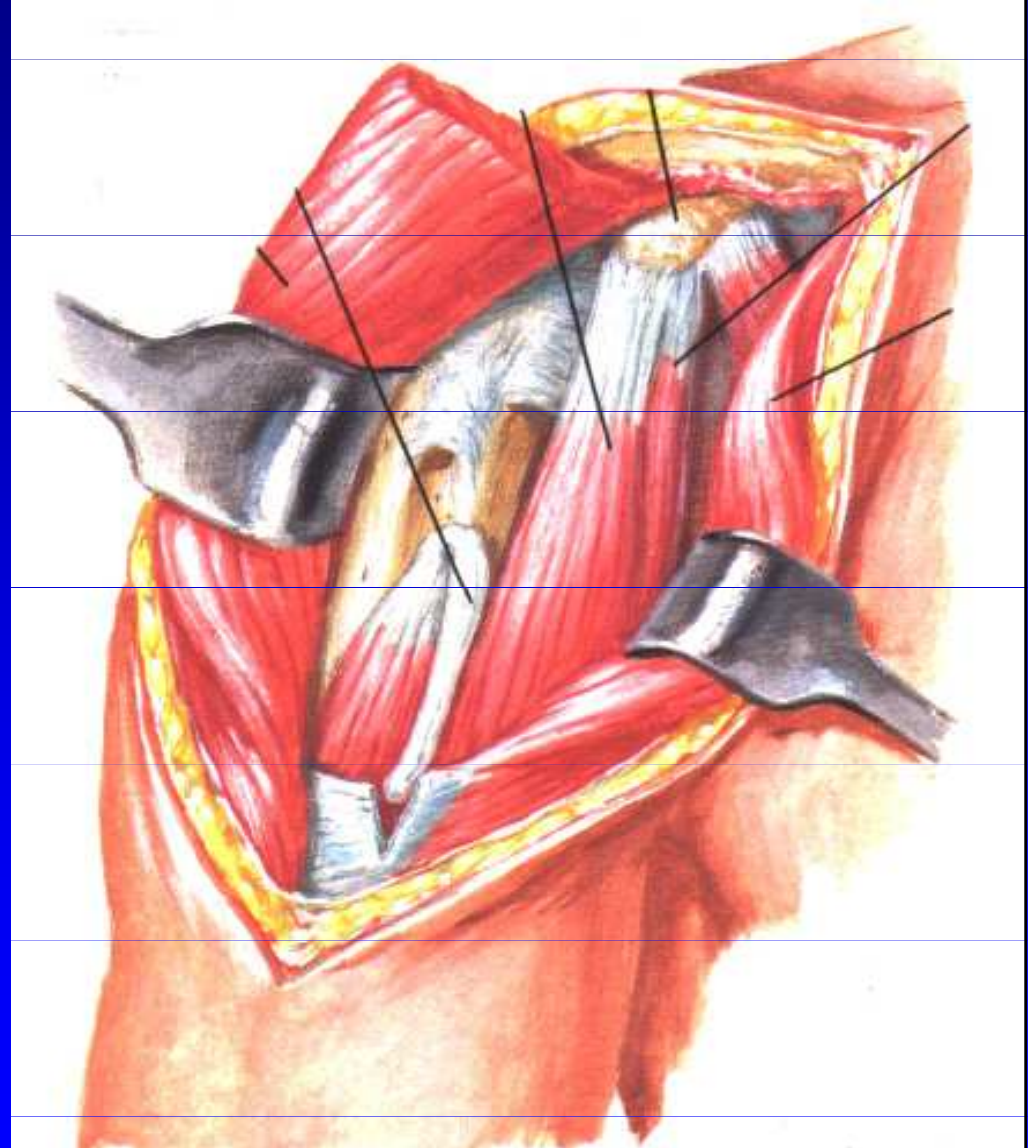
Surgery – up to 40 years

Conservative- over 40 years

Surgery:

key hole fixation to the humerus

Suture to the short head
of biceps



Subacromial bursitis

Inflammation

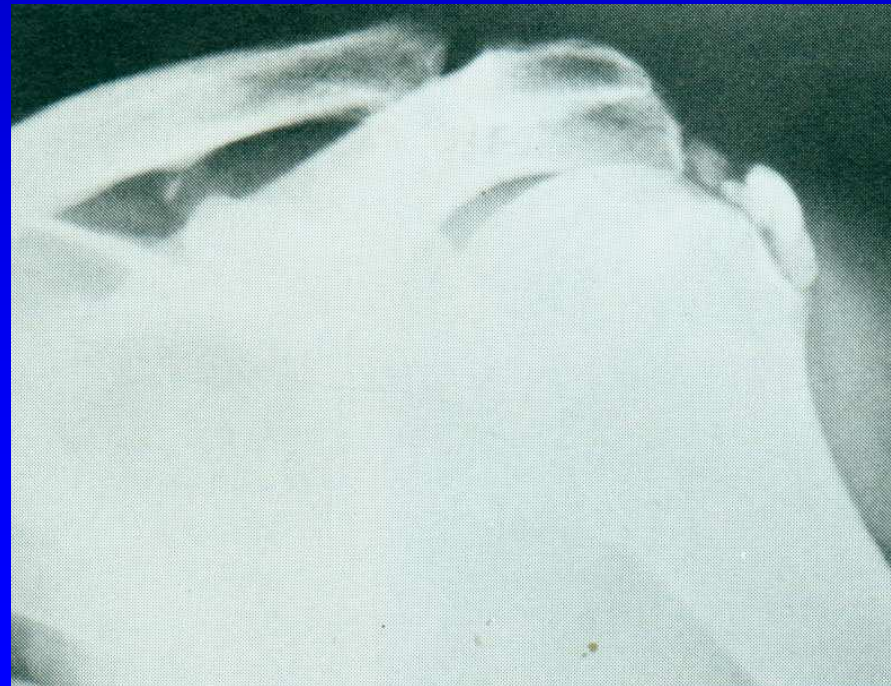
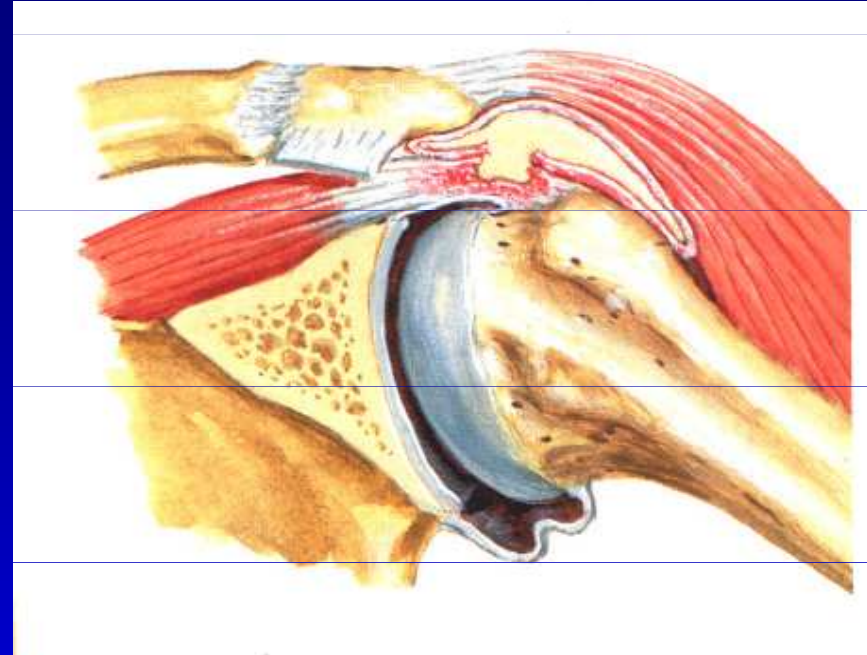
White fluid

Severe, burning pain

Restricted movements

Tenderness

Calcifications



Subacromial bursitis

Conservative treatment:

Rest, sling

Lavage with 2 needles

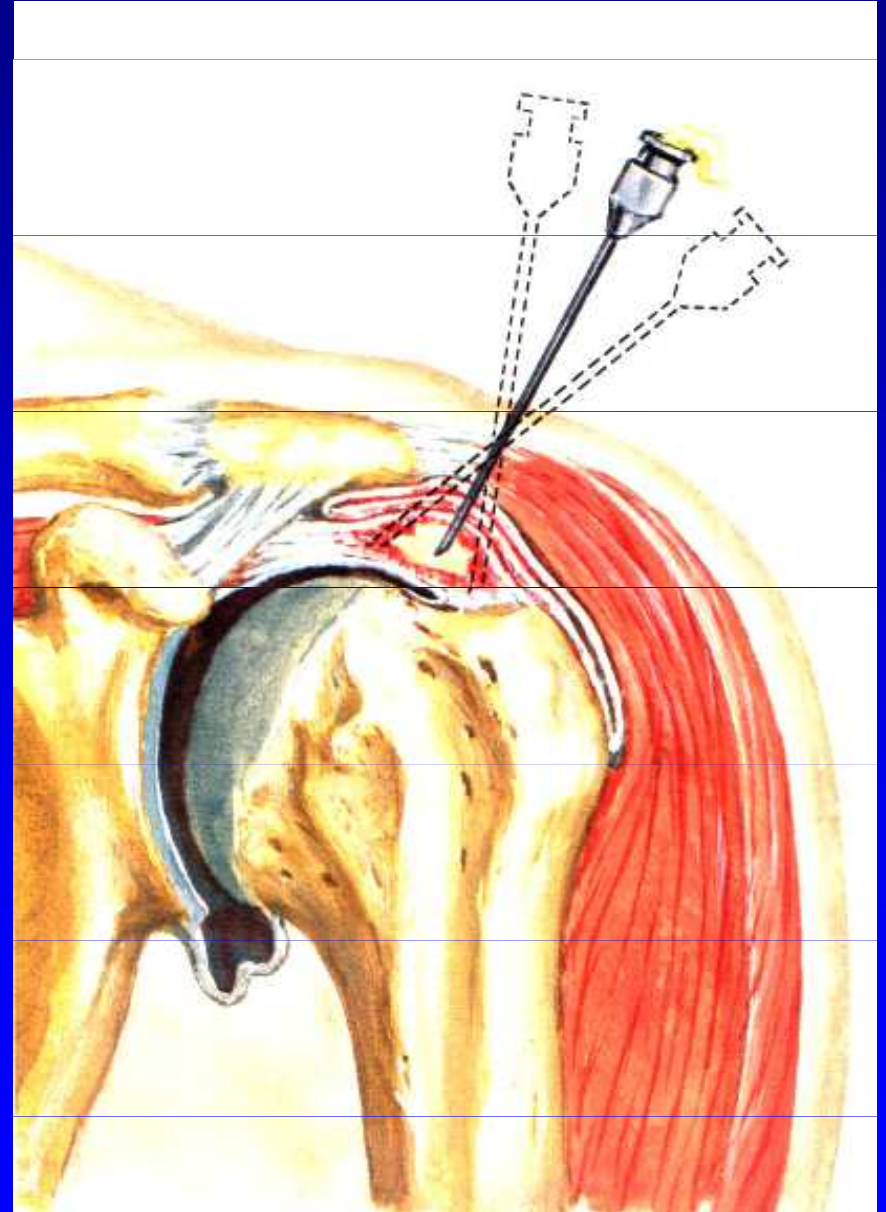
Corticosteroids locally

NSAID

Physiotherapy

Surgery:

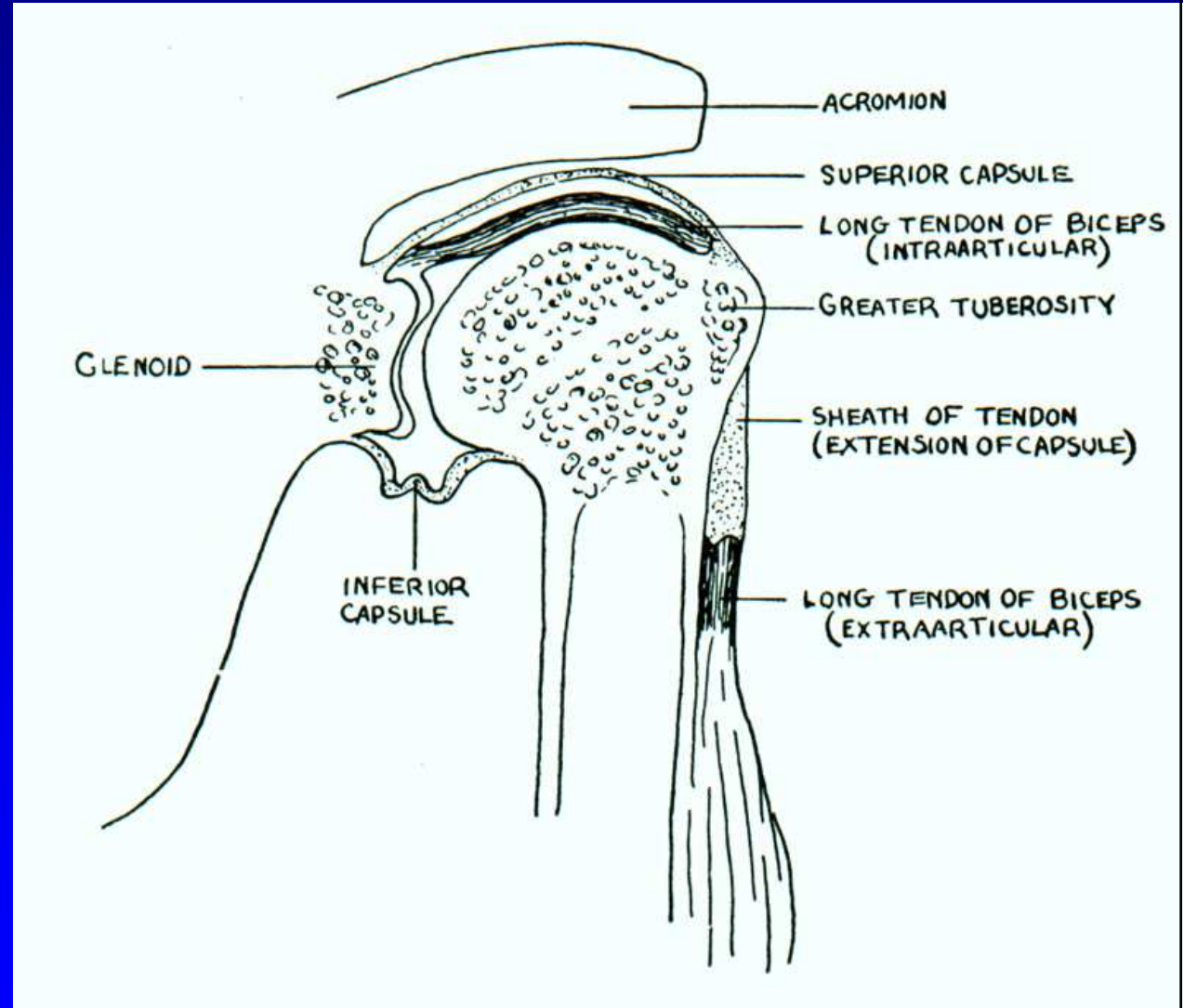
Removal of bursa



Supraspinatus tendinitis

Tenderness over greater tuberosity
Limited movements

Therapy:
Rest, NSAID
Corticosteroids
Physiotherapy



Rotator cuff

Rotator cuff:

m. supraspinatus

m. infraspinatus

m. teres minor

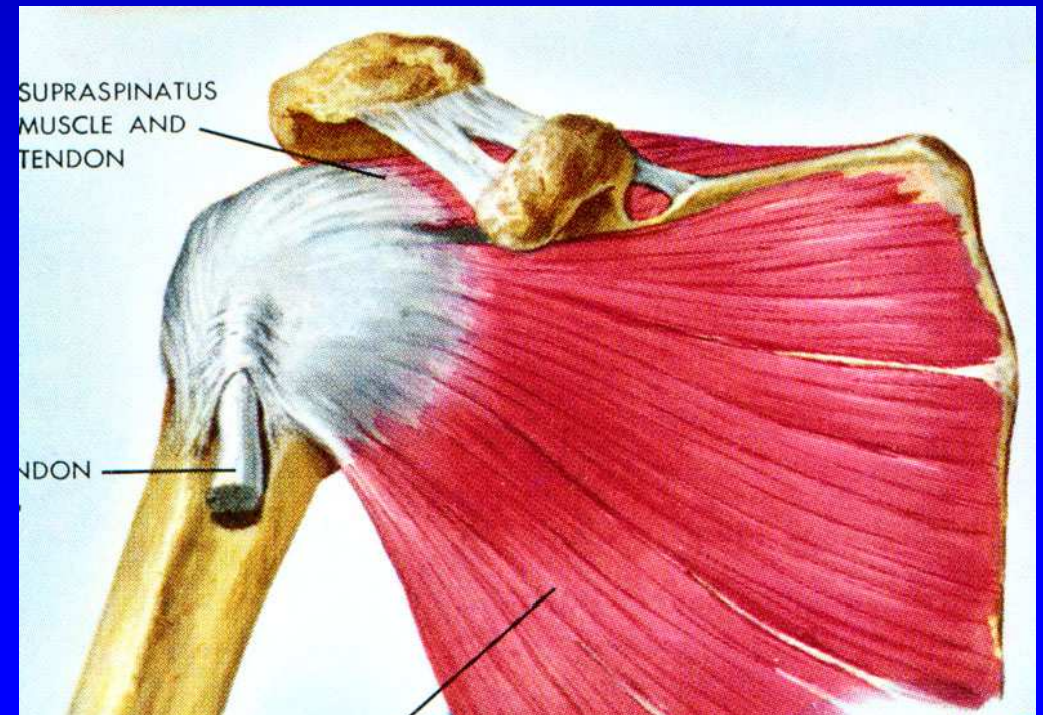
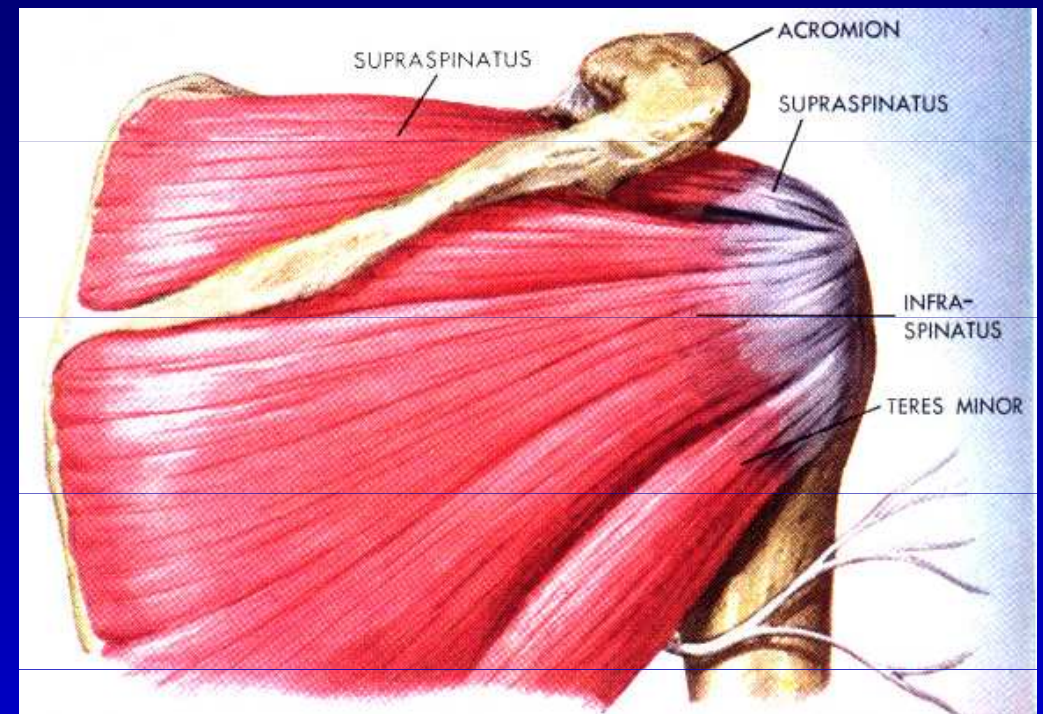
m. subscapularis

Function:

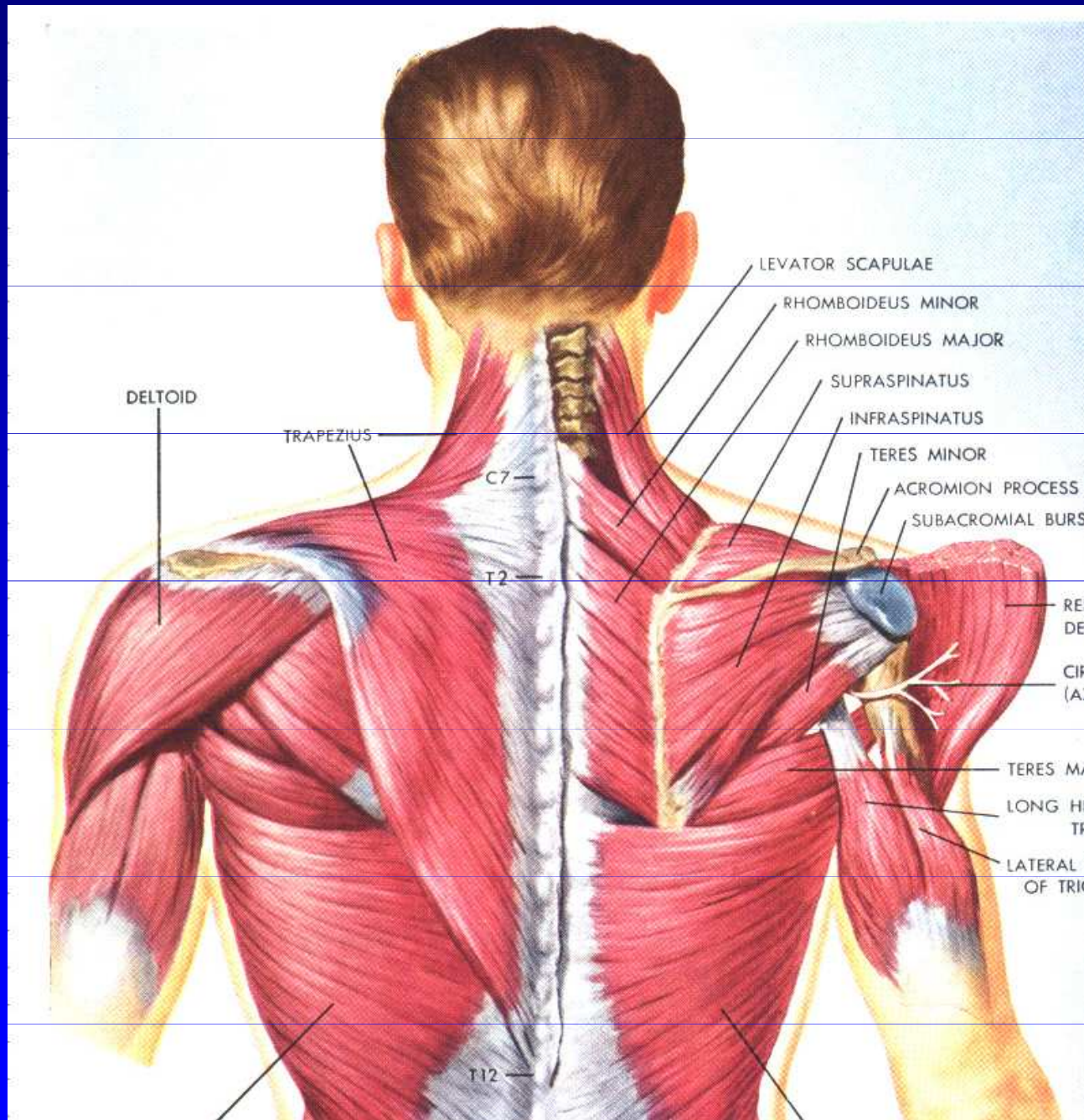
First 30 ° of abduction

Pressure of the humeral head
into glenoid cavity

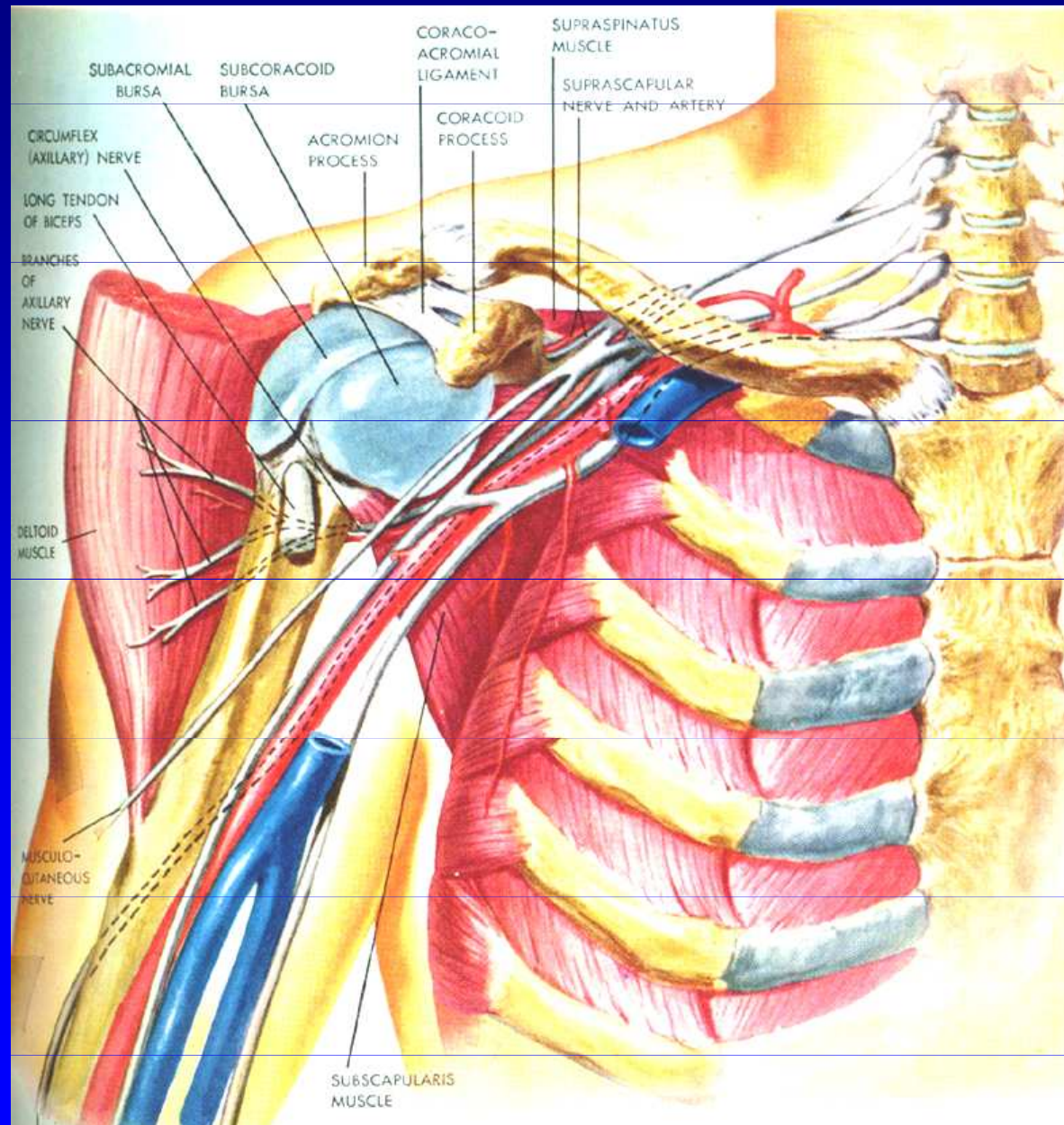
Depressor of the humeral
head



Anatomy of the shoulder



Anatomy of the shoulder



Rupture of rotator cuff

Partial rupture:

Severe pain

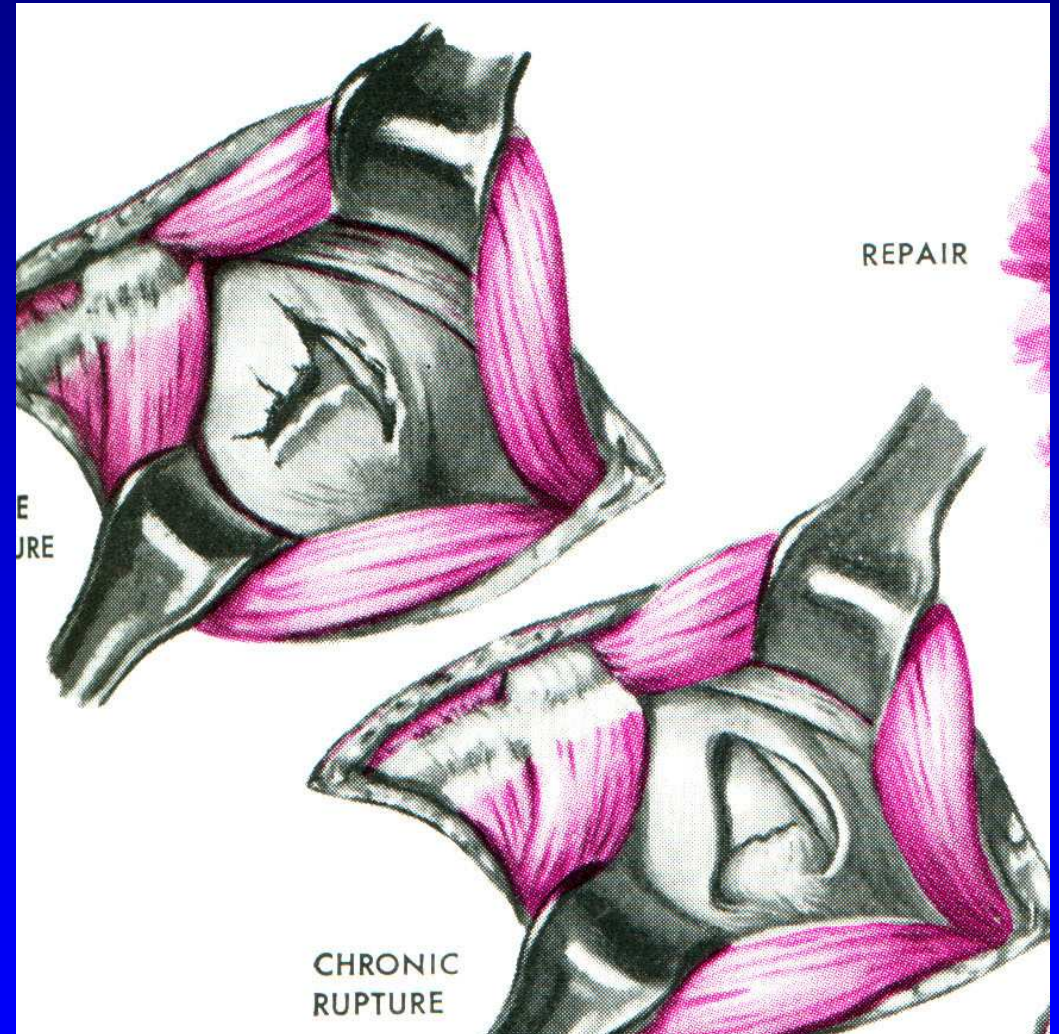
Painful arc

Painful abduction

Keeps the arm in position
of adjusted abduction

Ultrasonography

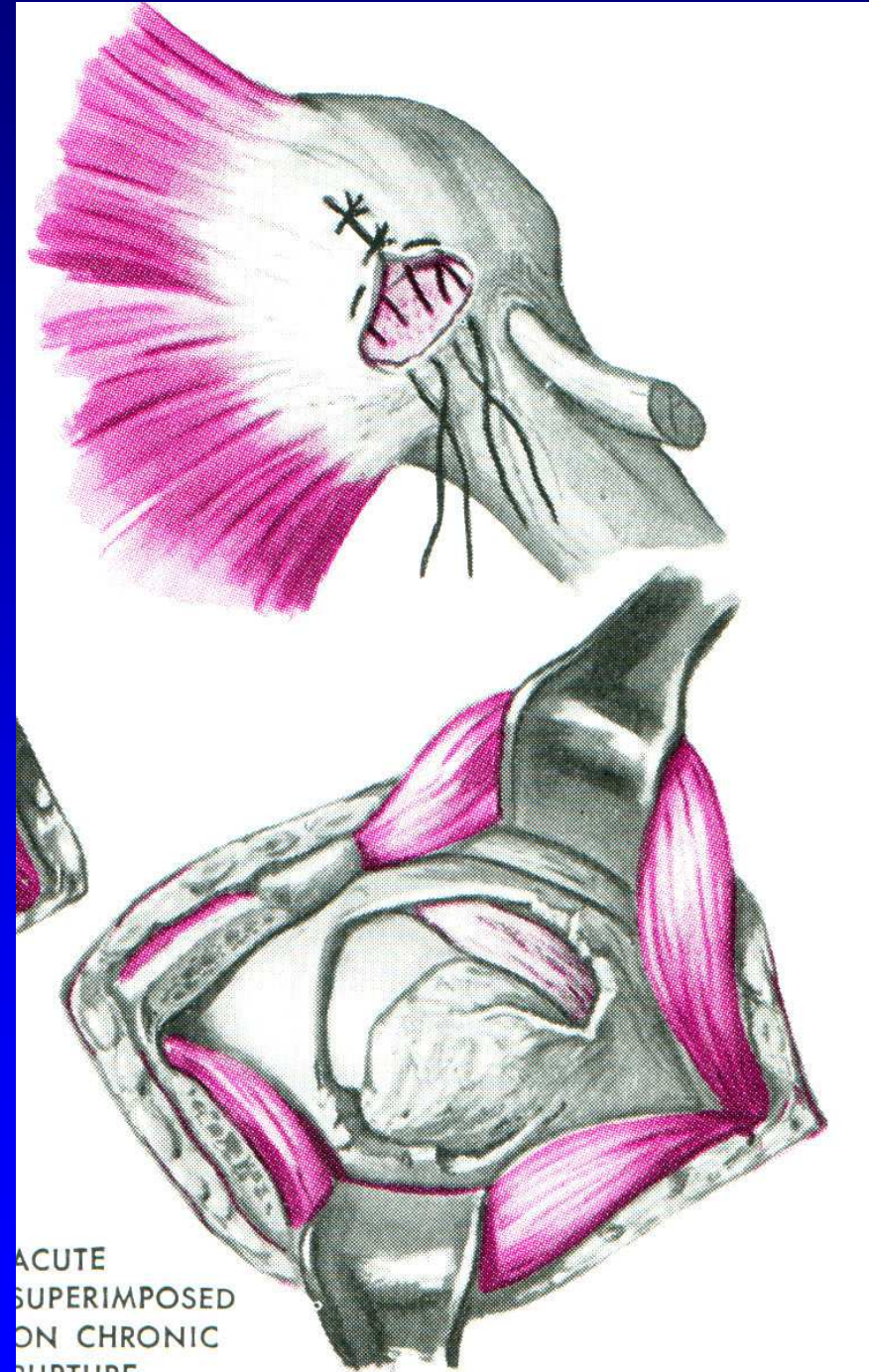
Management: conservative



Rupture of rotator cuff

Complete rupture:
No active abduction
Lifting of the shoulder

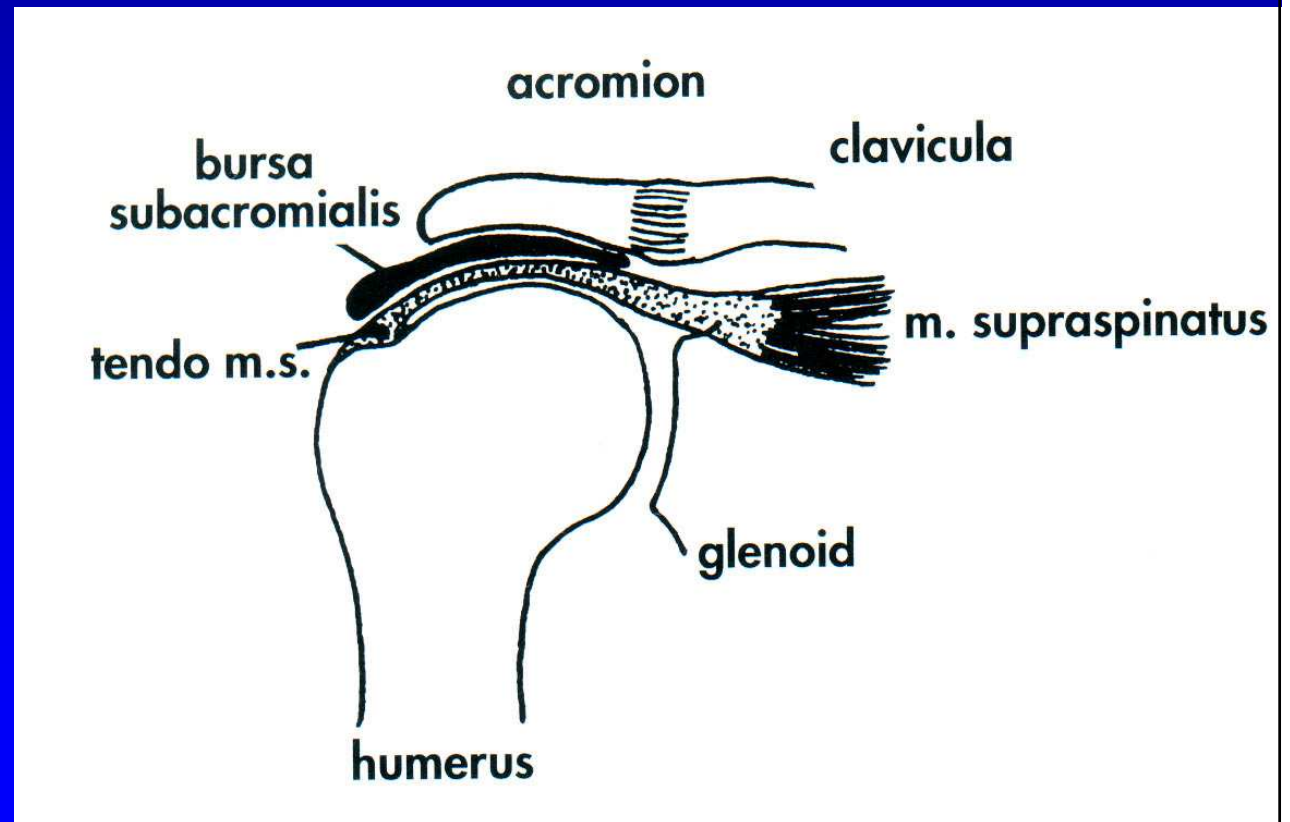
Management:
suture: ASK, open
attachment to greater
tuberosity



Impingement syndrom

Greater tuberosity impinges
to distal surface
of acromion and
coracoacromial ligament

Narrowing of subacromial
space



Impingement syndrom

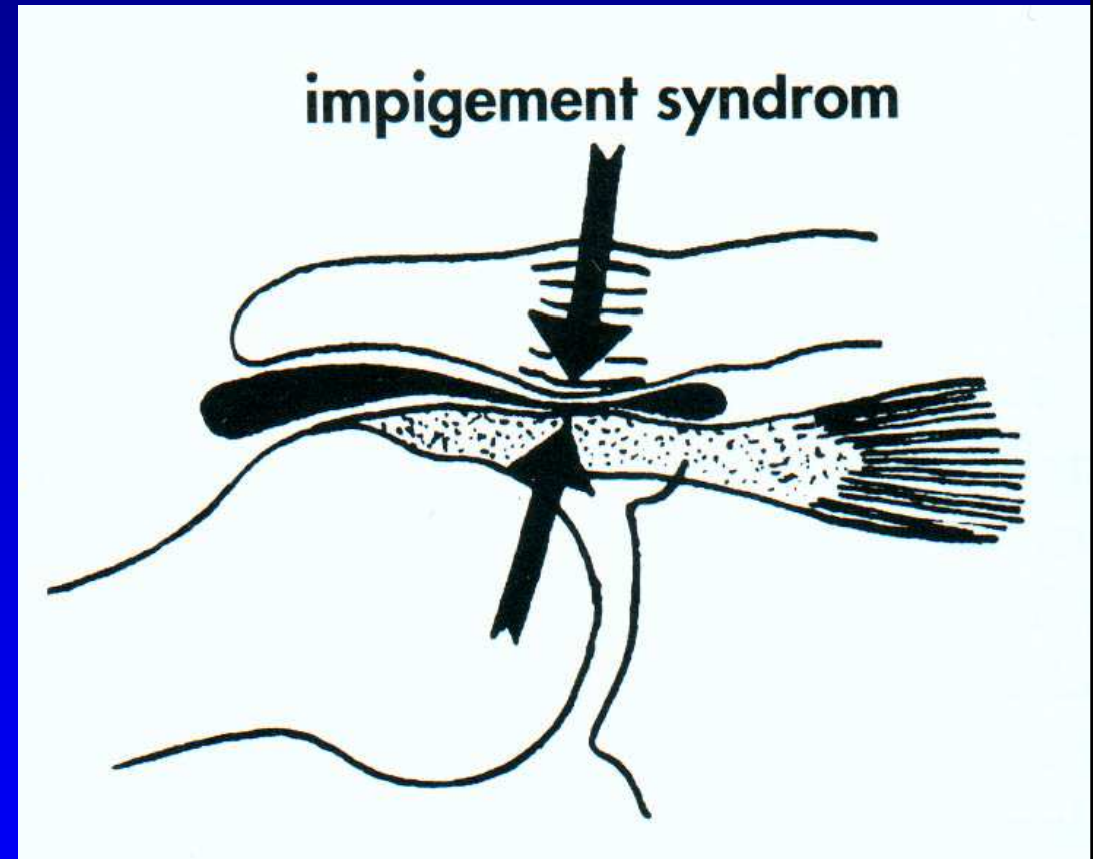
The cause:

Spure of acromion

Change of contours
of acromion

Distal osteophytes of acromio
- clavicular joint

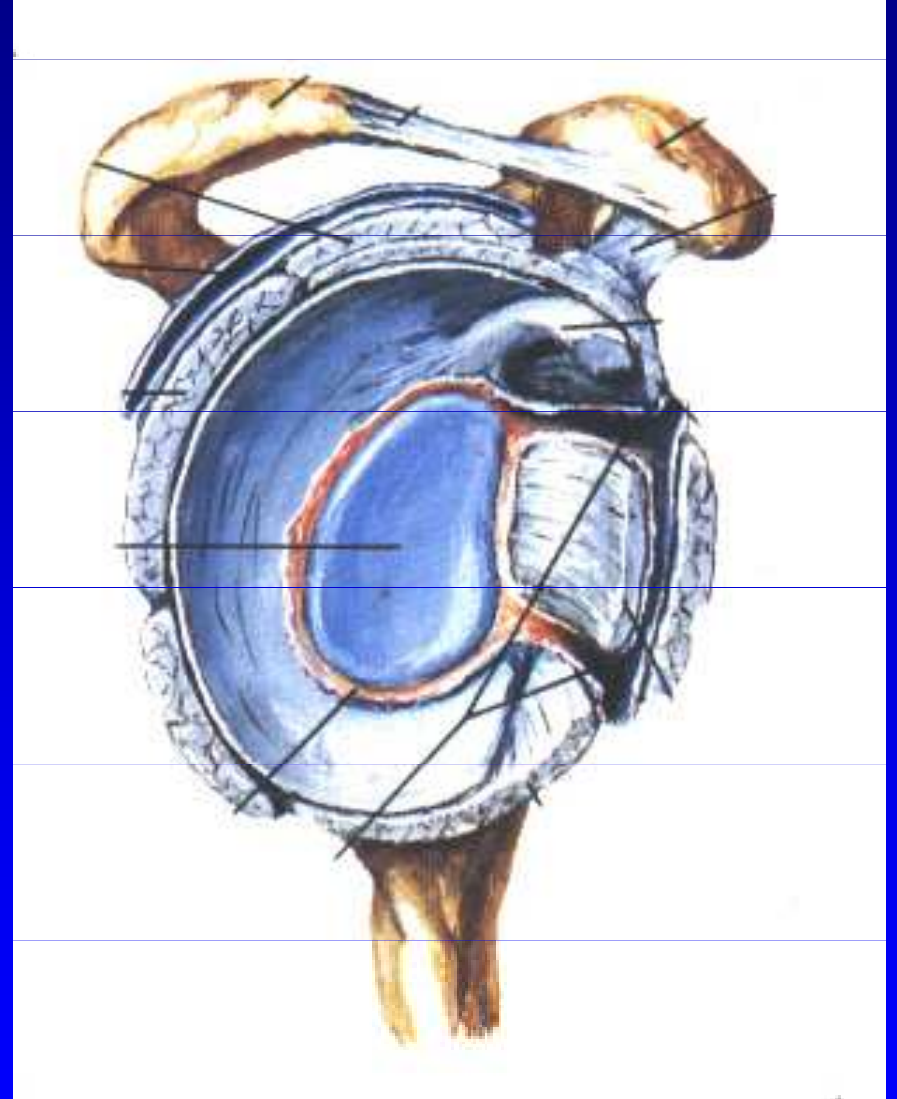
Prominence of gr. tuberosity



Impingement syndrom

Stages:

1. Swelling, hemorrhage of supraspinatus
2. Fibrosis, tendinitis, bursitis
degenerative changes of cuff
3. Rupture of rotator cuff and long biceps tendon



Impingement syndrom

Symptoms:

Painful arc

Impingement sign

Impingement test

Jobe test

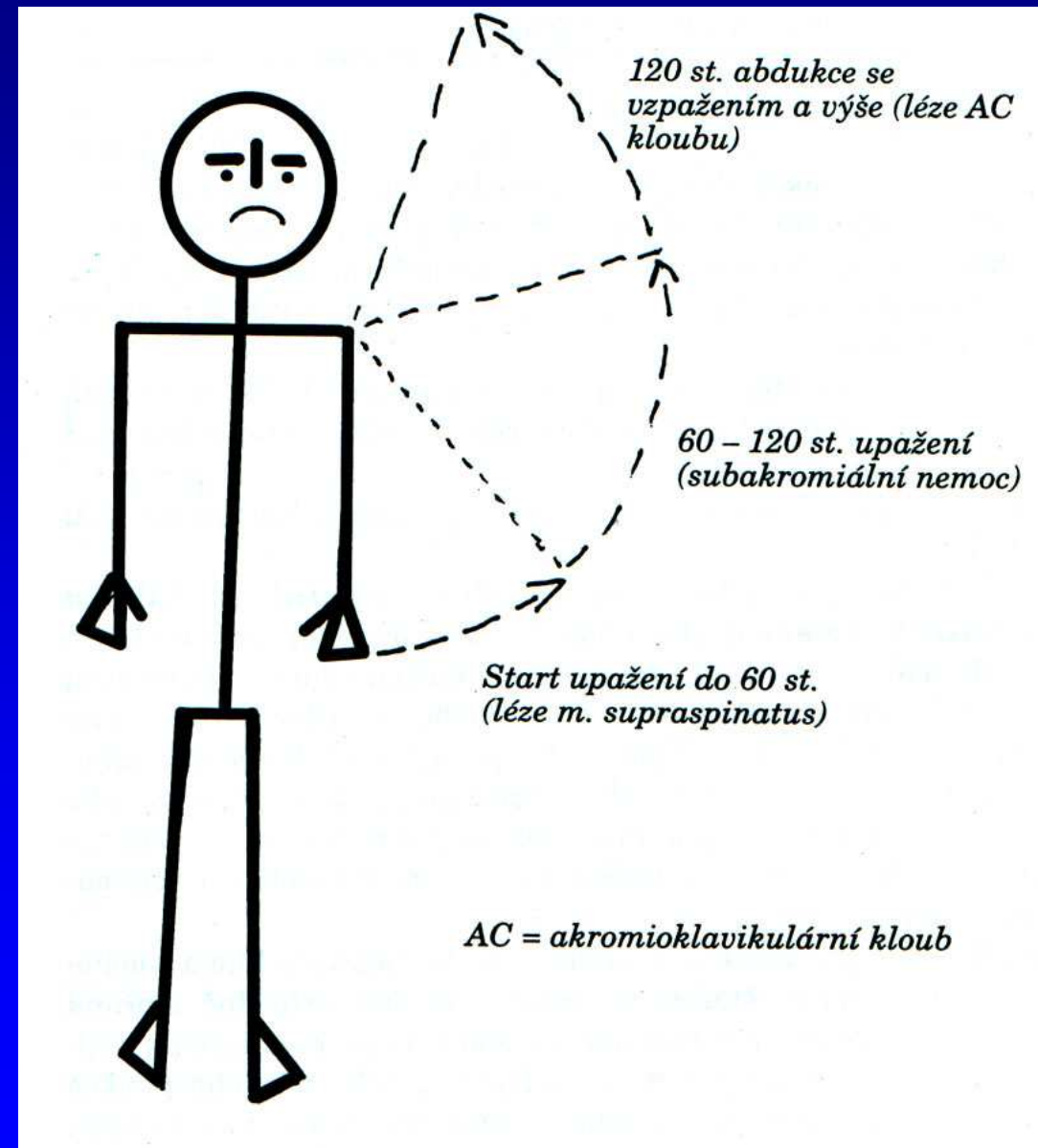
X-ray:

Narrowed subacromial space

Y view- outlet view

Arthrography

Ultrasonography



Impingement syndrom

Therapy:

1. stage: conservative

Rest, NSAID,

Physiotherapy,

Local corticosteroids

2. stage: the same

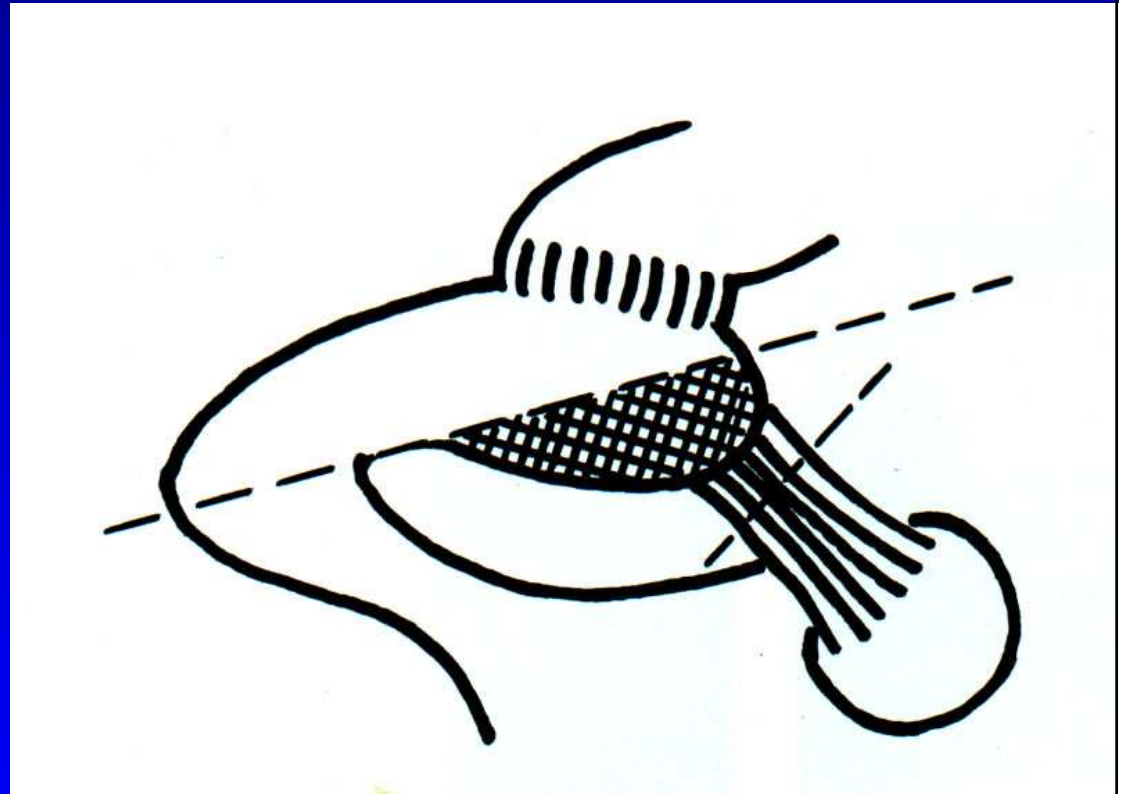
+ bursectomy, arthroscopy

3. stage: ASK or surgery

Subacromial decompression

Neer- acromioplasty

ASK



Frozen shoulder- capsulitis adhesiva

Progressive limitation
of movements

Pain

No motivation for movement

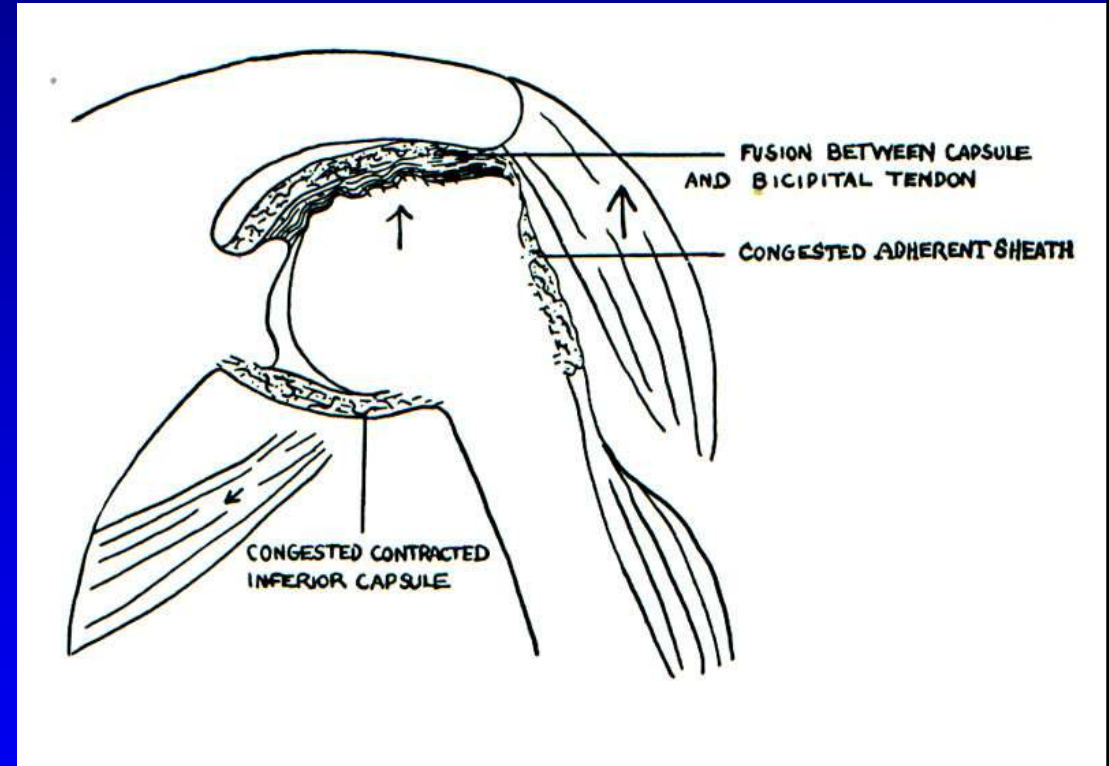
Shrinkage of capsule

Adhesions in distal recessus

Tightening of soft tissue

Muscle spasm

Low capacity of joint space



The cause

All conditions limiting
joint movements:

Impingement syndrom

Arthrosis of AC joint

Posttraumatic conditions

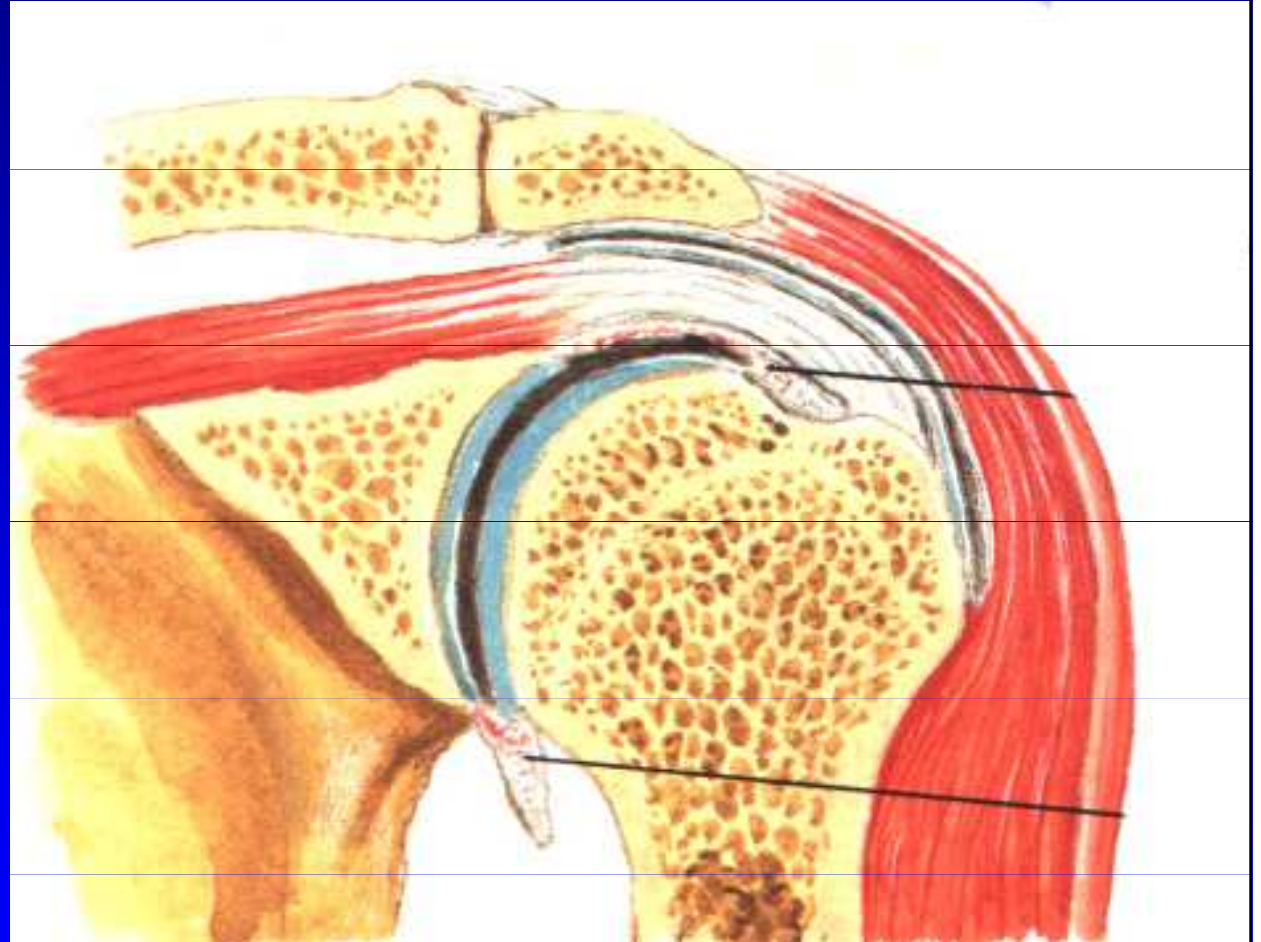
Inflammations

Thoracic outlet syndrom

Tumors of the lungs

Disorders of pleura

Cardiac disorders



Frozen shoulder

Management:

Long lasting period

Heat

Passive movements

Positioning

Active movements

Physiotherapy

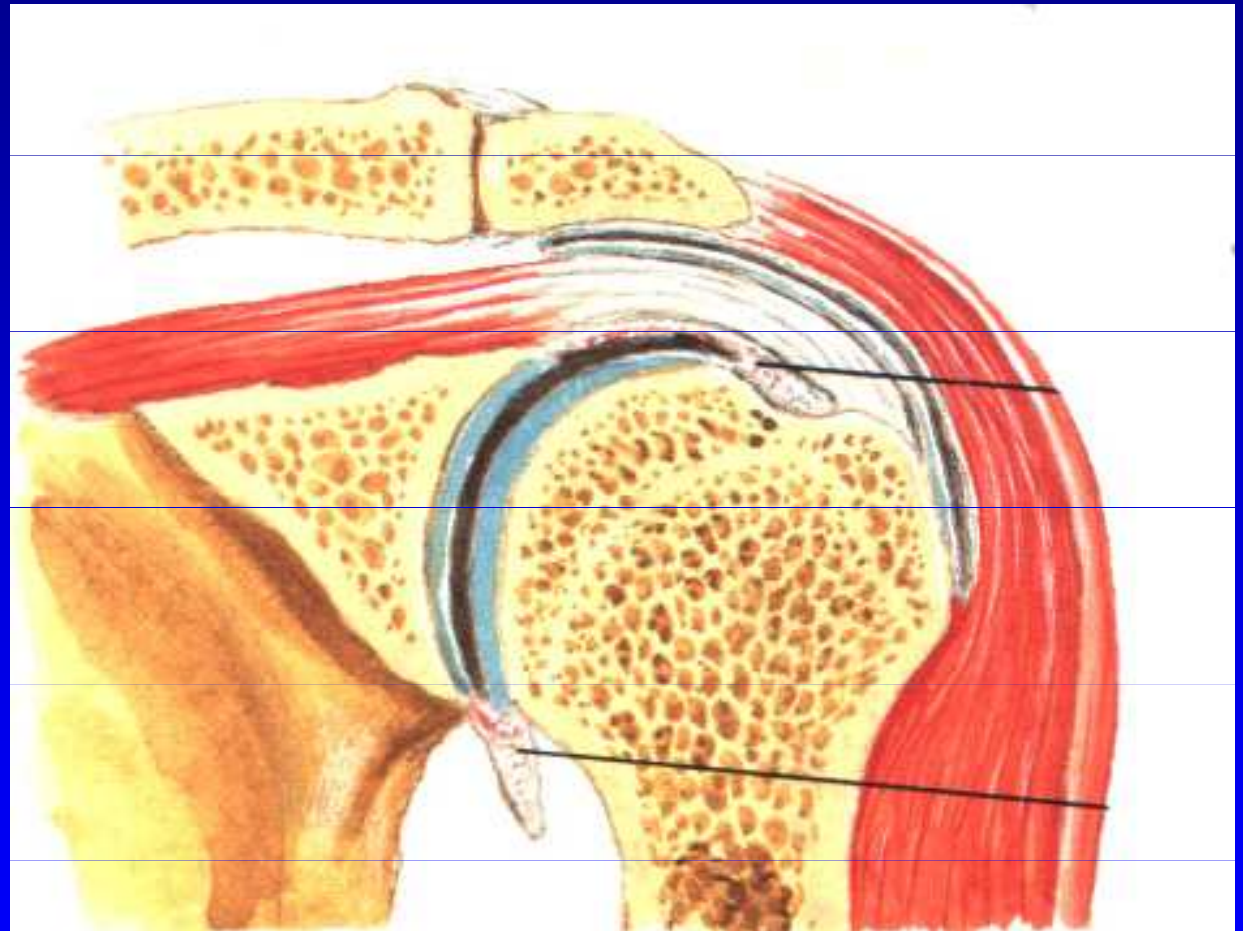
NSAID

Local corticosteroids

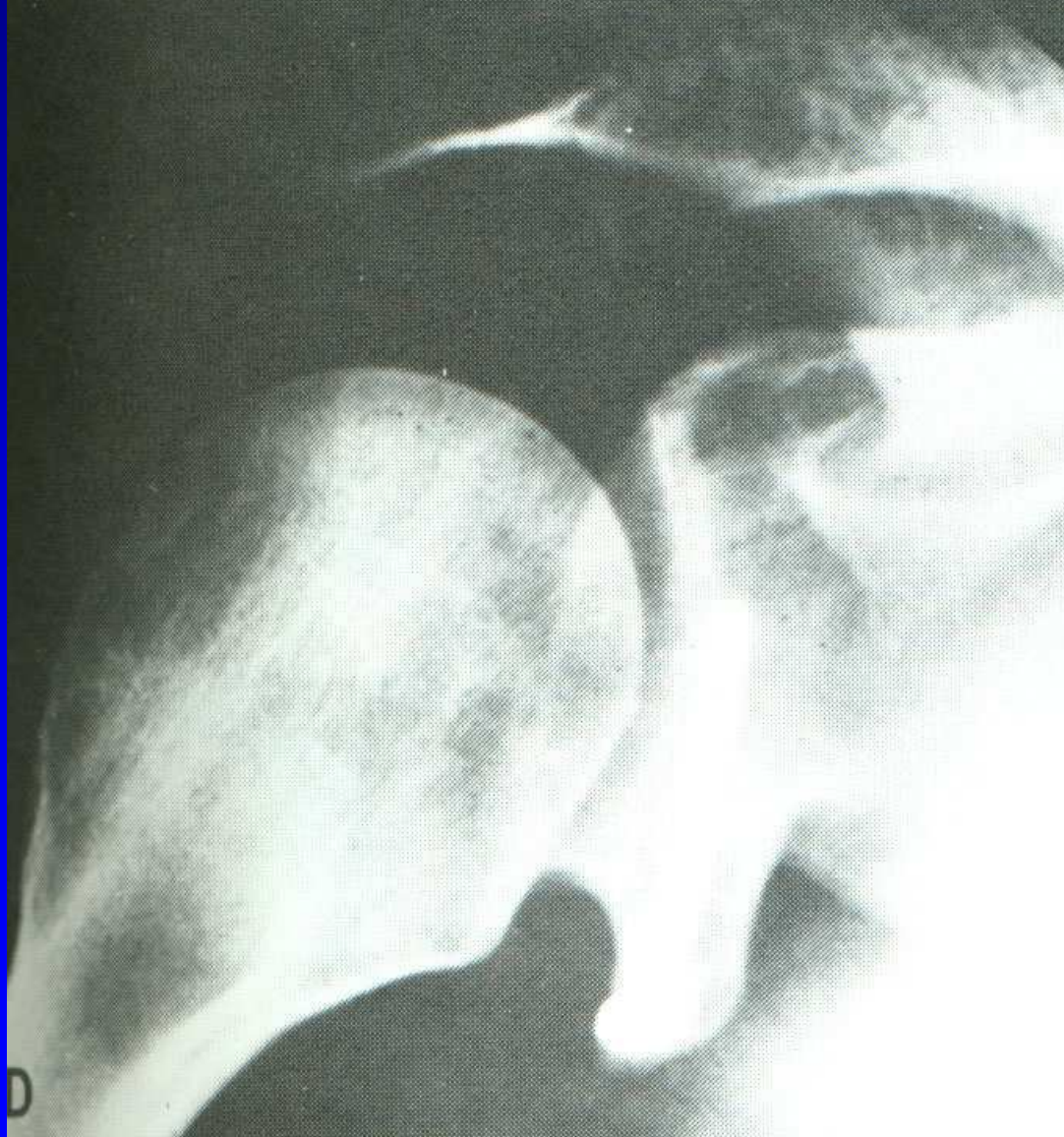
ASK- decompression

Redressement force

Removal of adhesions



Glenohumeralis osteoarthritis - omarthrosis



Disorders of acromioclavicular joint

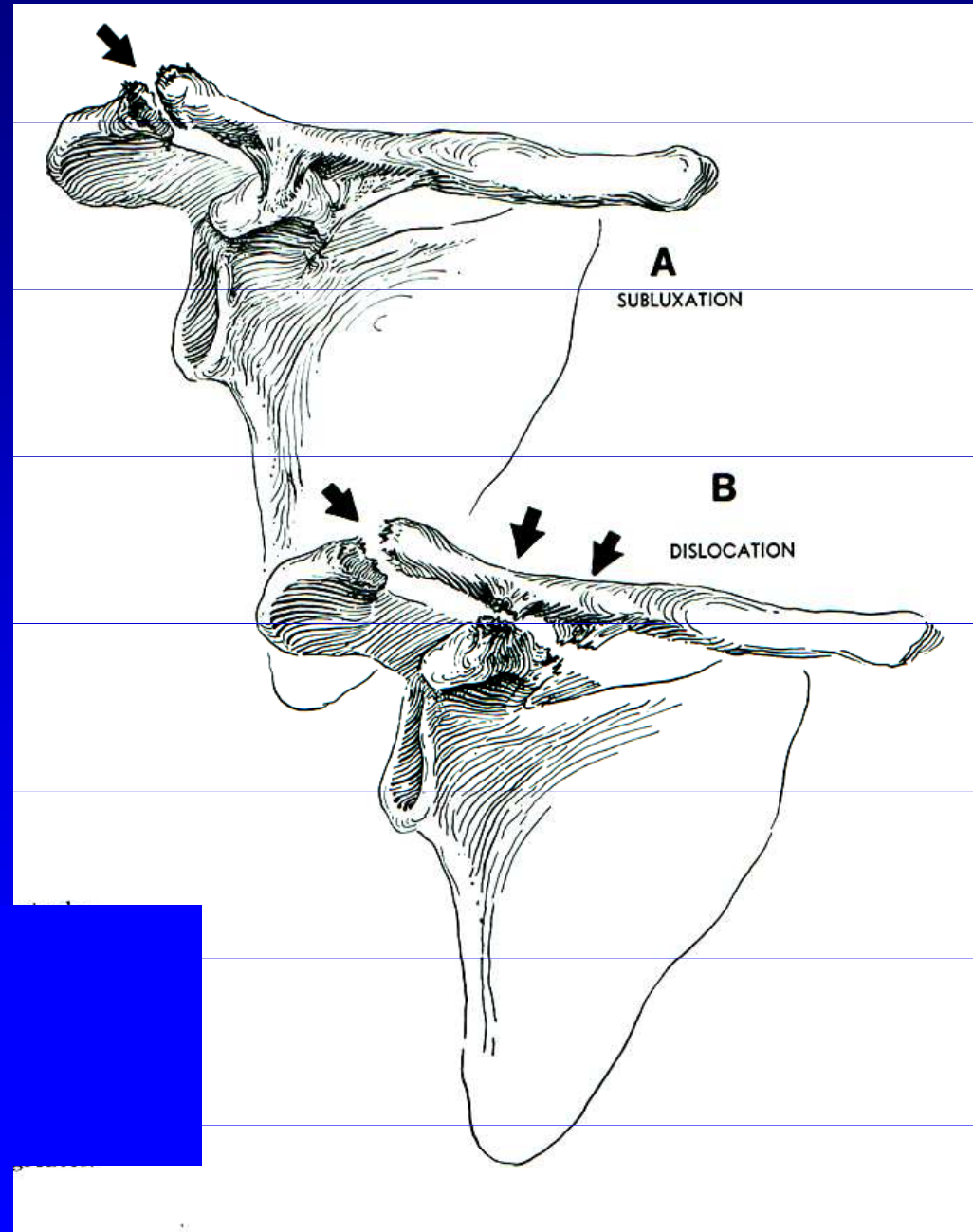
Synovitis

O.A.

Sprain

Subluxation

Dislocations



Disorders of sternoclavicular joint

Synovitis

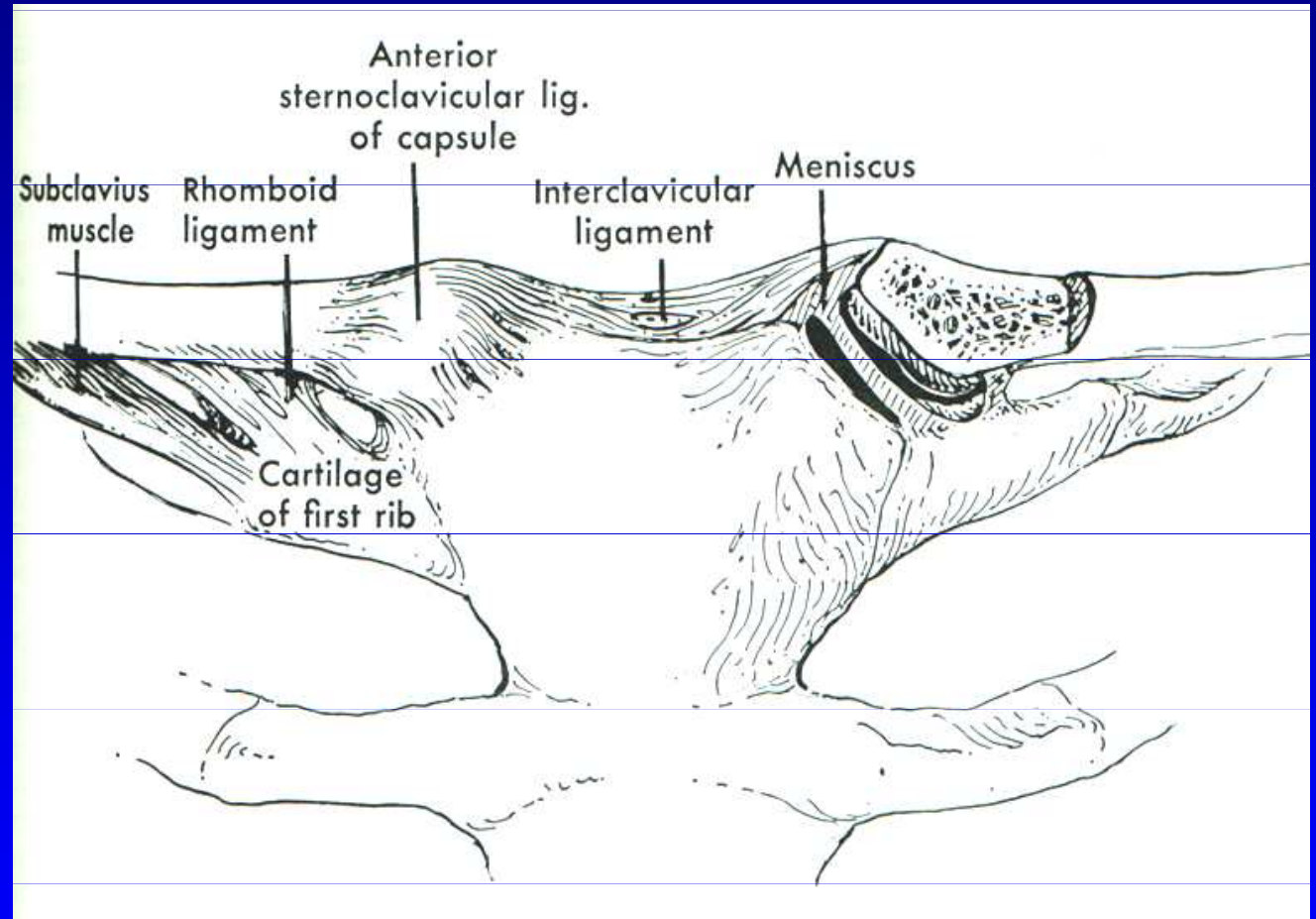
O.A.

Sprain

Subluxation

Dislocations

Chronic subluxation



Referred pain to the shoulder

Cervical spine

Thoracic outlet syndrom

Cardiac diseases

Lung and pleura disorders

Herpes zoster neuralgia