

Rheumatoid diseases

Exercise therapy

Rheumatoid diseases

Systemic autoimmune and inflammatory diseases

- immune system attacks healthy cells in the body
- causing inflammation (painful swelling)
- mainly attacks the joints, usually many joints at once.

Rheumatoid arthritis

- Juvenile arthritis
- Systemic lupus erythematoses
- Sclerodermia
- Sjogren syndrom

Vasculitis

- Polymyalgia rheumatica

Spondylarthritis

- Ankylosing spondylitis
- Psoriatic arthritis

Other arthritis

- Crystal arthritis
- Gout
- Chondrocalcinosis (calciumpyrophosphates)

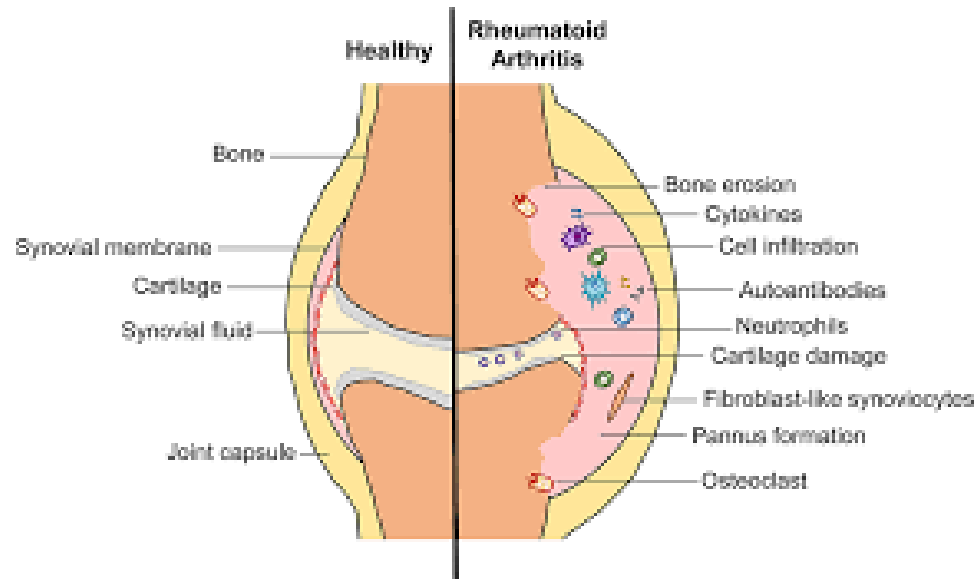
Arthritis in connection with infection

- Lyme's boreliosis
- Septic arthritis

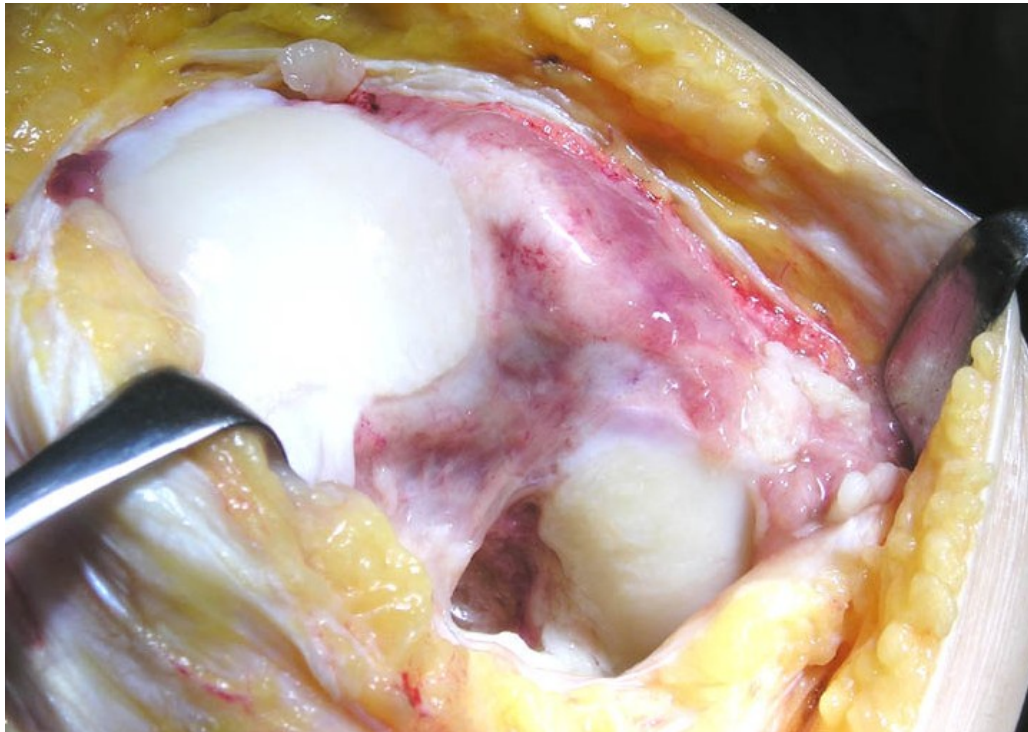
Rheumatoid arthritis

Chronic autoimmune disease

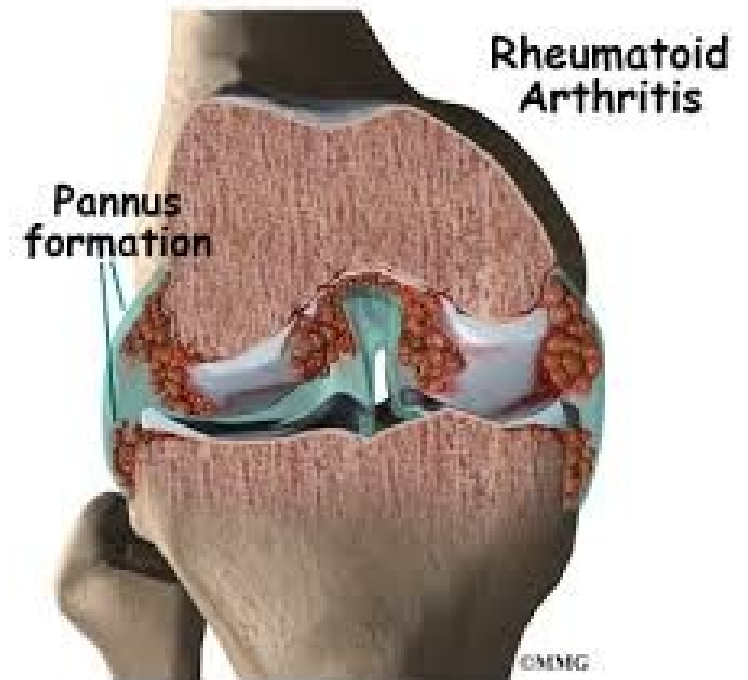
- Chronic polyarthritis
- Bone erosions
- Destruction of joints
- Disability- low physical activity
- Extraarticular symptoms
- Comorbidities, higher mortality
- 1% of population
- Female 4 times more affected
- Onset in 4. and 5. decade



Basic feature: hypervascularisation tissue – pannus formation
in a joint
leading to damage of hyaline cartilage, decalcination
and bone erosions



Pannus formation





Progression of RA

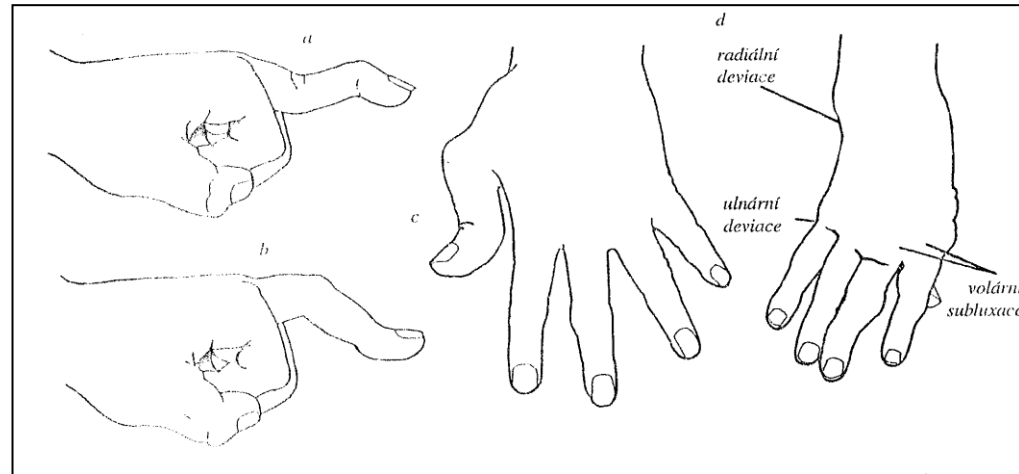
RHEUMATOID ARTHRITIS SYMPTOMS



Localisation of RA

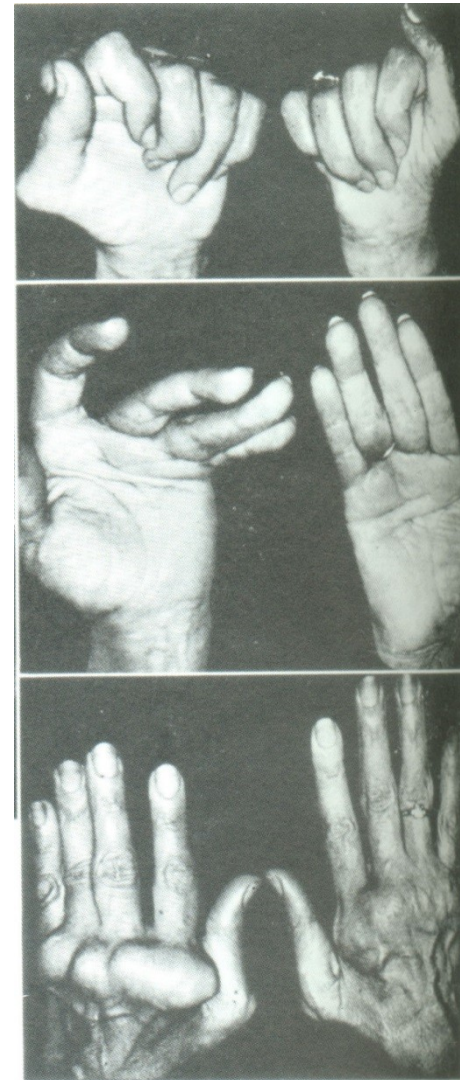
Hand

- Oedema
- Rheumatoid nodes
- Synovitis, synovial hyperplasia
- Ulnar deviations of fingers
- Z deformity of the thumb
- Swan neck deformity
- Button hole deformity
- Volar subluxation of the wrist joint



Deformities in the hand

Swan neck deformity
Z deformity of the thumb
Ulnar deviation of fingers
Synovitis of DIP
Digiti telescopici
Button hole deformity

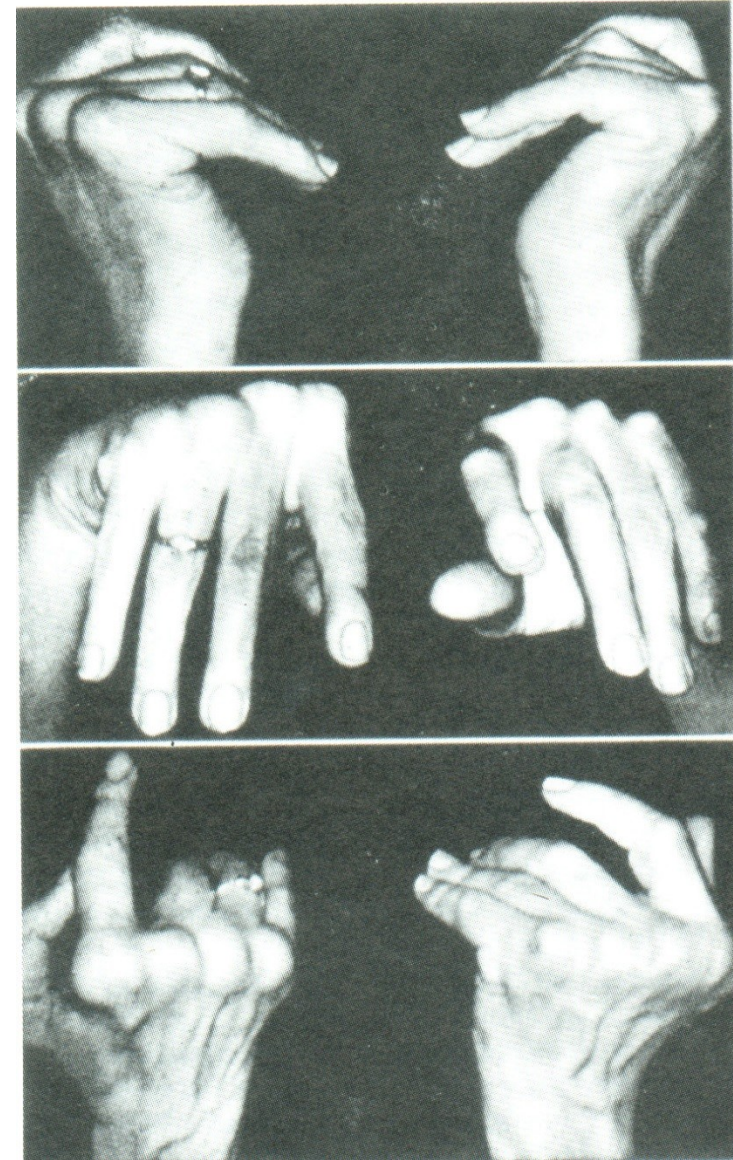


Hand in RA

Radial deviation of the wrist joint

Volar subluxation of the wrist

Dorsal prominence of the head of ulna



X ray



X ray





X ray



Therapy of rheumatoid arthritis

Complex

- pharmacological: NSAID, glukocorticoids, DMARDs
- Physical therapy : to maintain ROM
- social program – job, rent
- surgery : to maintain biological joint replacement

Management

The aim: to achieve long lasting remission or
at least low level of activity of the disease

NSAID- Cox 1 a Cox 2

DMARD- disease modifying antirheumatic drugs

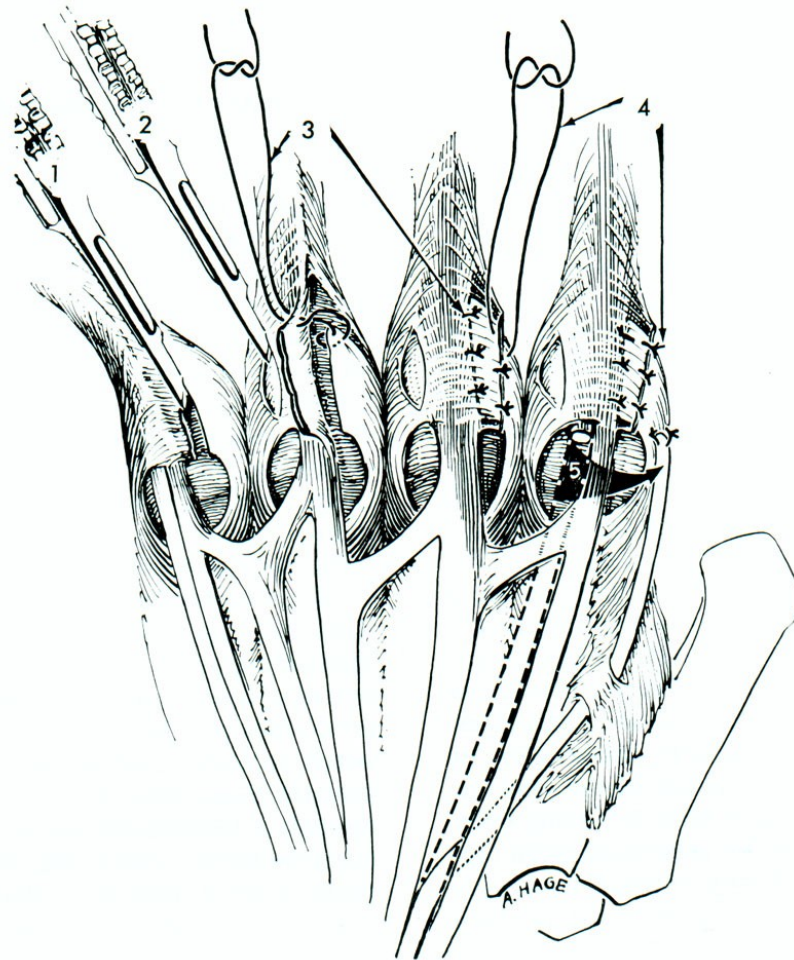
- syntetic: metotrexat, leflunomid, sulfasalazin, hydroxychlorochin
- biologic: infliximab, etanercept, adalimumab, golimumab
abatacept, tocilizumab

Glukocorticoids: hydrocortizon, prednison, dexametason, betametazon,
methylprednisolon, triamcinolon

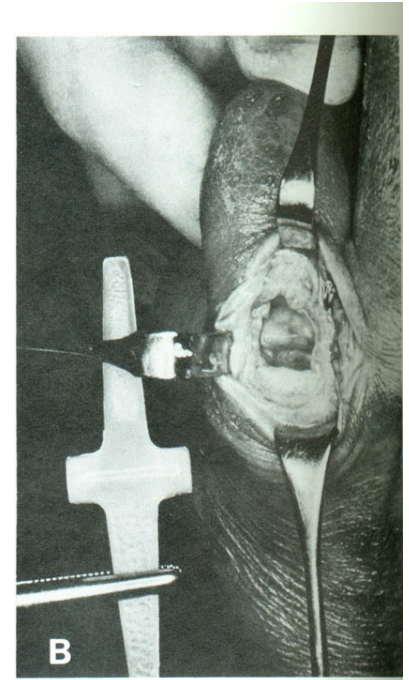
Surgery

- Synovectomy
- Suture of tendons
- Arthrodesis- fusion
- Atlantoaxial fusion
- Osteotomy
- Joint replacement

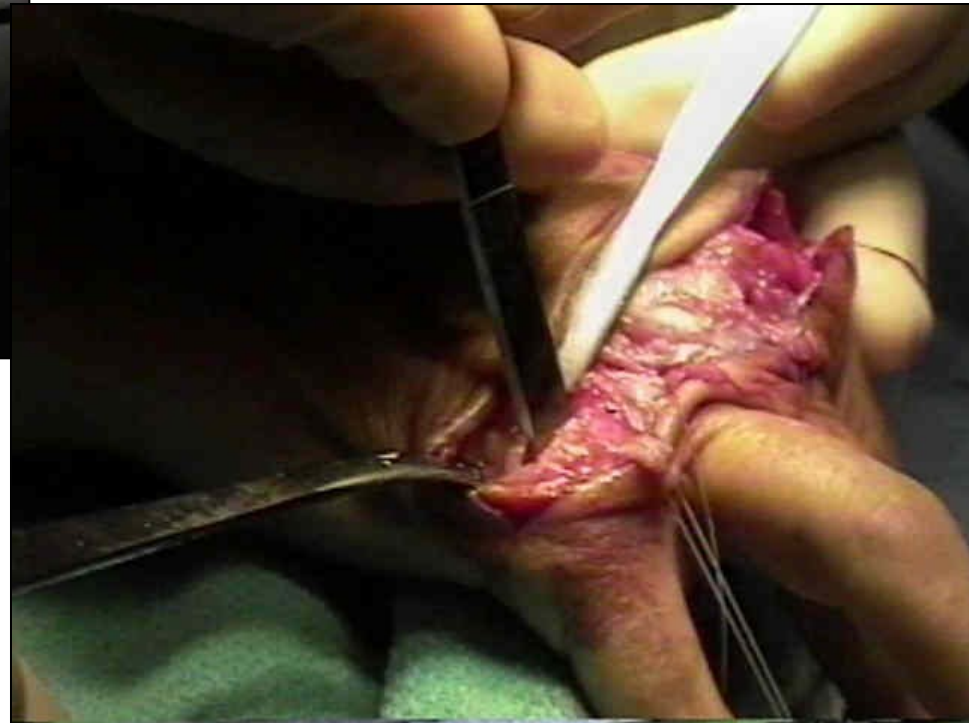
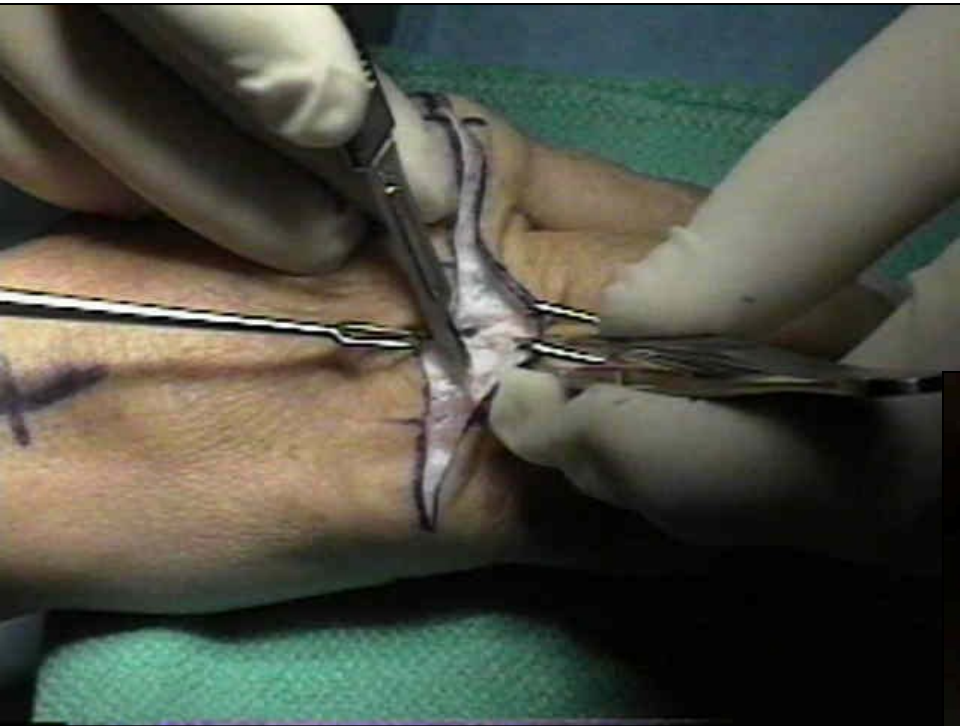
Synovectomy of MP joints and capsular plasty



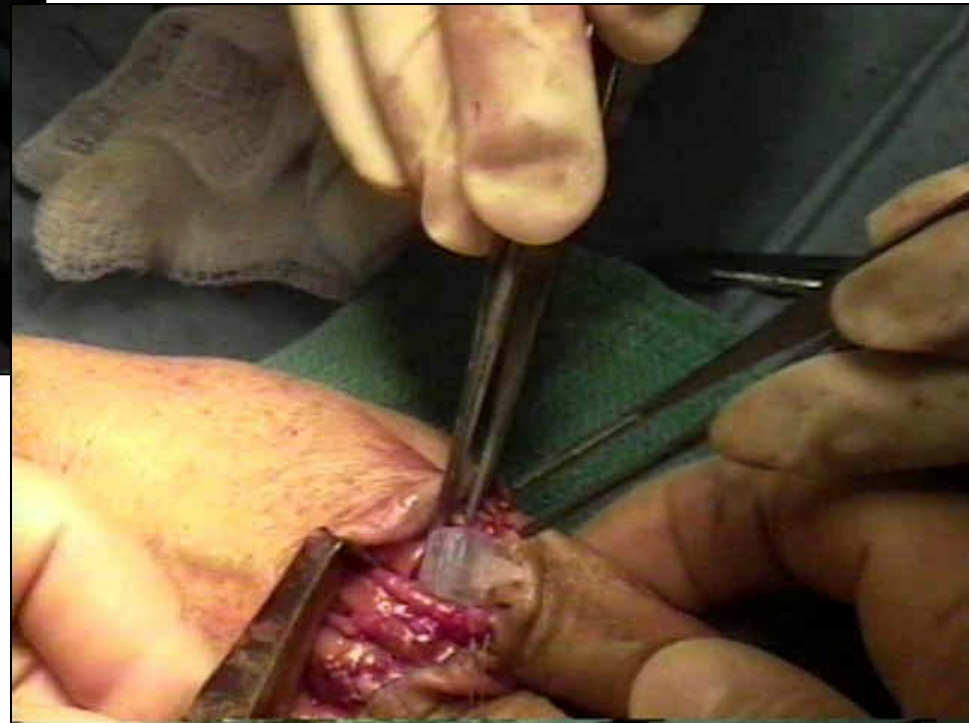
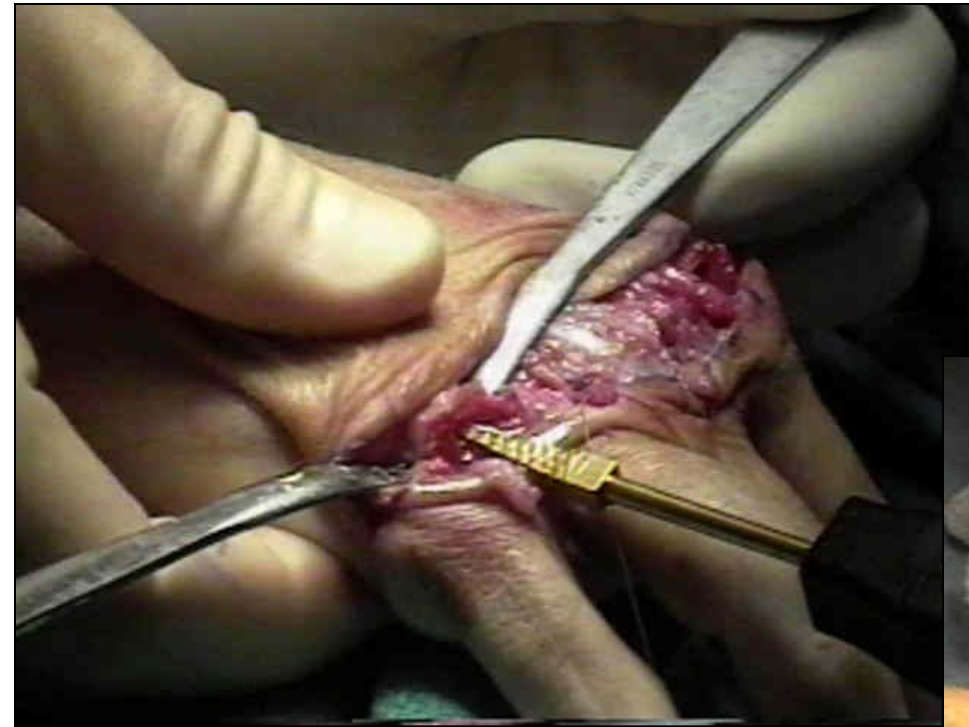
Silastik - replacement



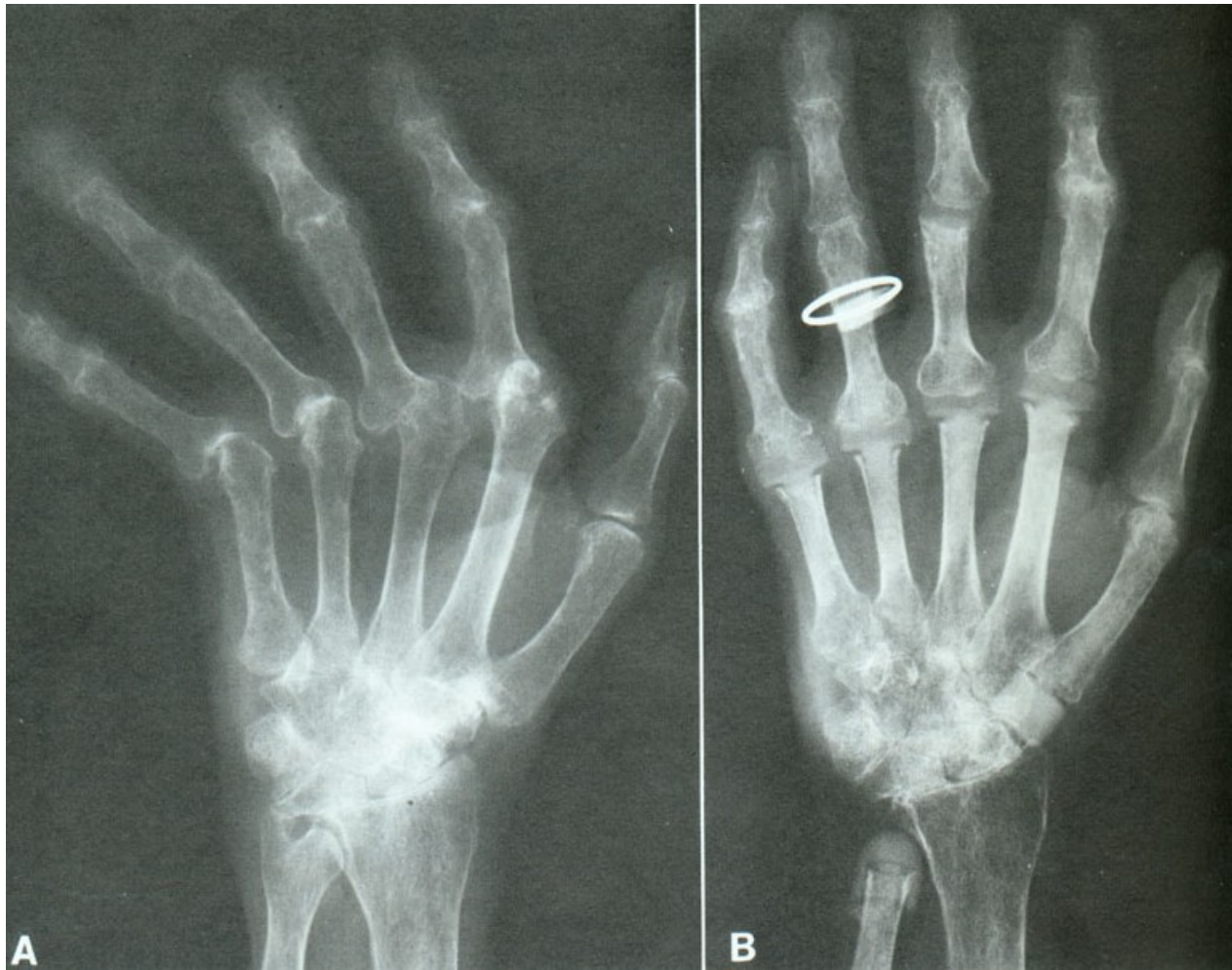
Silastik - replacement



Silastik – replacement



Silastic joints



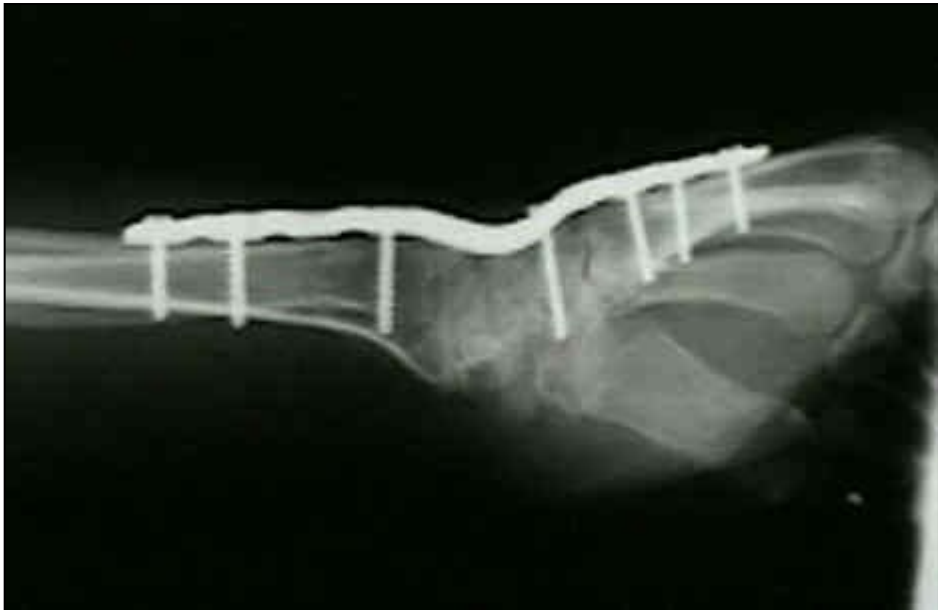
A

B

Preop

postop.

Wrist fusion



10-15 st. dorsiflexion

5-10 st. ulnar deviation



Rheumatoid arthritis

Synovialitis:

Elbow

Shoulder

IV joints C1-C2- axial instability

Hips

Knee joints

Ankle joints

Small joints of the foot

Tenosynovialitis



Psoriatic arthritis

In 20% of psoriatic patients

Seronegative arthritis associated with psoriasis

Peripheral joints

(arthritis DIP, telescoping fingers, oligoarthritis
hips, knee, shoulder)

Axial skeleton- spondylarthritis

(sacroileitis, spondylitis,
severe destructions)

Entesitis (Achillis tendon, plantar aponeurosis,
pelvis)

Dactylitis (Wurstfinger)

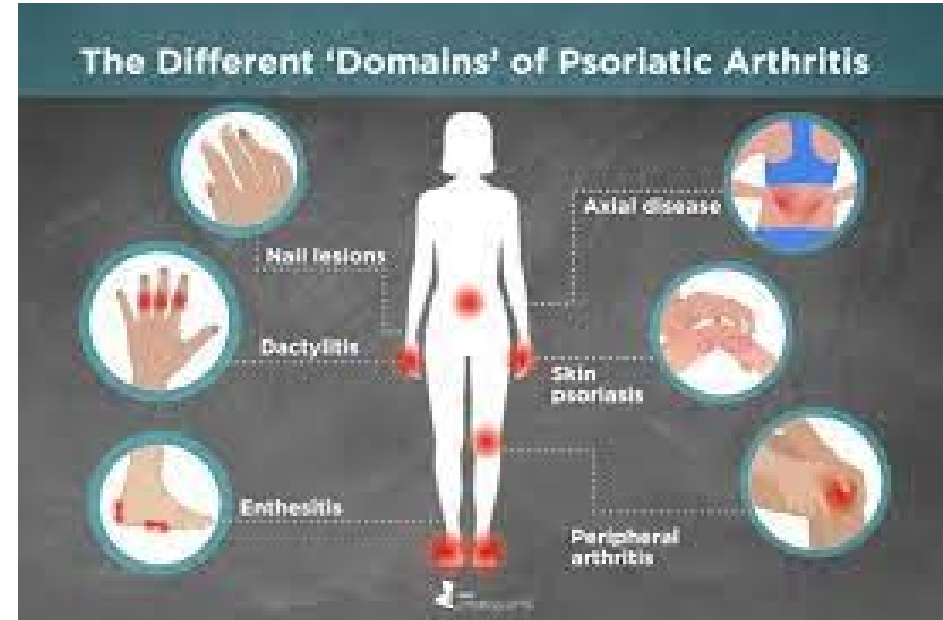


(a)

(b)

Localisation

Peripheral joints
arthritis DIP, telescoping fingers, oligoarthritis
hips, knee, shoulder
Axial skeleton- spondylarthritis
sacroileitis, spondylitis, severe destructions
Entesitis - Achillis tendon, plantar aponeurosis,
pelvis
Dactylitis - Wurstfinger



Management of psoriatic arthritis

NSAID

Glukocorticoids

DMARDs – syntetic (metotrexat, sulfasalazin, leflunomid,
cyklosporin)
biologic- infliximab, etanercept, adalimumab aj.

Surgery- replacement, synovectomy, fusion

Ankylosing spondylitis Bechtěrev disease

Chronic affection involving SI joints, vertebral column,
less peripheral joints

Sacroileitis, entesitis

Back pain

Other locations: uveitis, skin, lung, eye

HLA B27 antigen positive increases the risk of AS 50 times

0,5 % of population

Female: male 3:1

Symptoms: back pain, gluteal region, entesitis of ligaments and tendons
rhisomelic form (hips, shoulders)
peripheral arthritis- knee, dactylitis

Ancylosing spondylitis

Onset in SI joints

Progress into lumbar, thoracic, cervical spine

Onset- 20-40 years

Back pain, heel pain, effusion in knee joints.

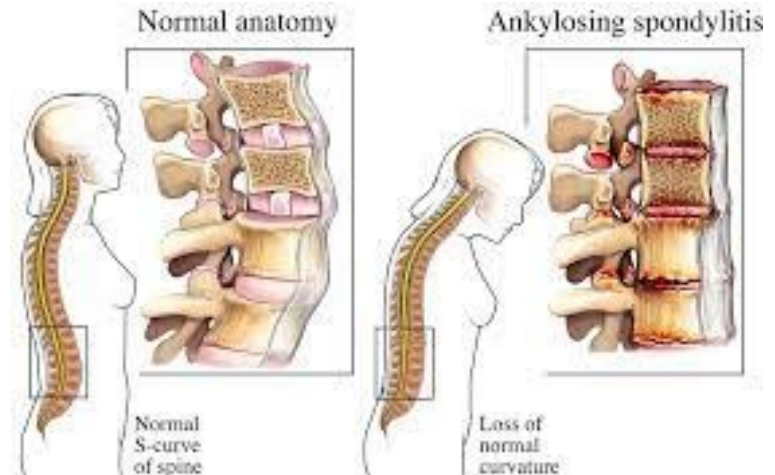
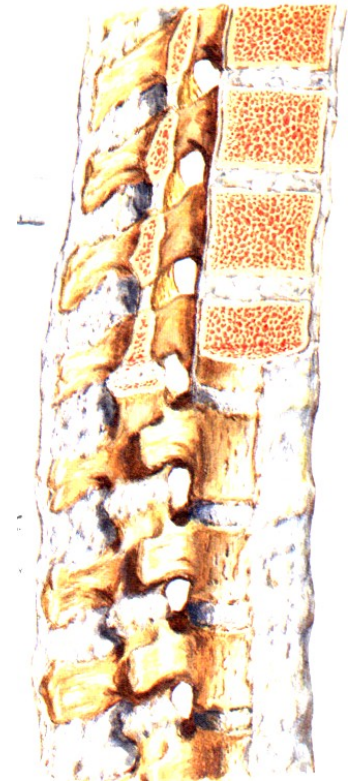
Progressive limitation of movements in the spine

Increased thoracic kyphosis, diaphragm breathing

Ancylosis of intervertebral joints

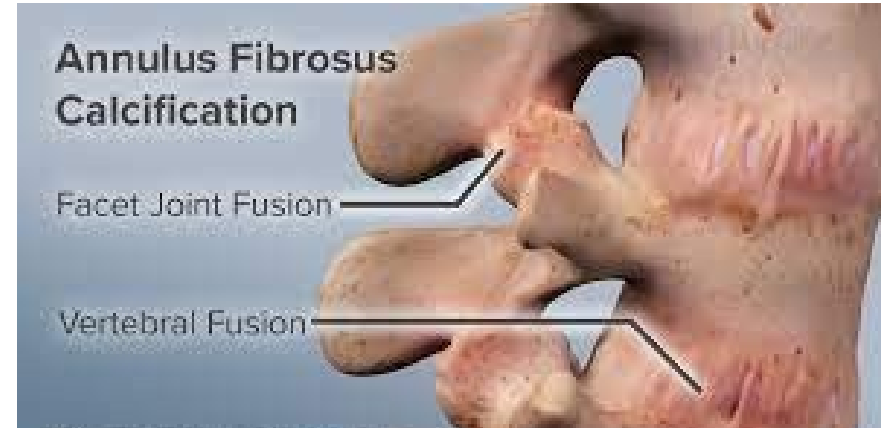
Ancylosis of costovertebral joints

Ossification of disc, ligaments



Ancyllosing spondylitis

- Onset in SI joints
- Progress into lumbar, thoracic, cervical spine
- Onset- 20-40 years
- Back pain, heel pain, effusion in knee joints.
- Progressive limitation of movements in the spine
- Increased thoracic kyphosis, diaphragma breathing
- Ancylosis of intervertebral joints
- Ancylosis of costovertebral joints
- Ossification of disc, ligaments



Ancylousing spondylitis

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Clinical examination

Restricted movements in the spine

Schober, Thomayer, bending

Expirium- inspirium less than 4 cm

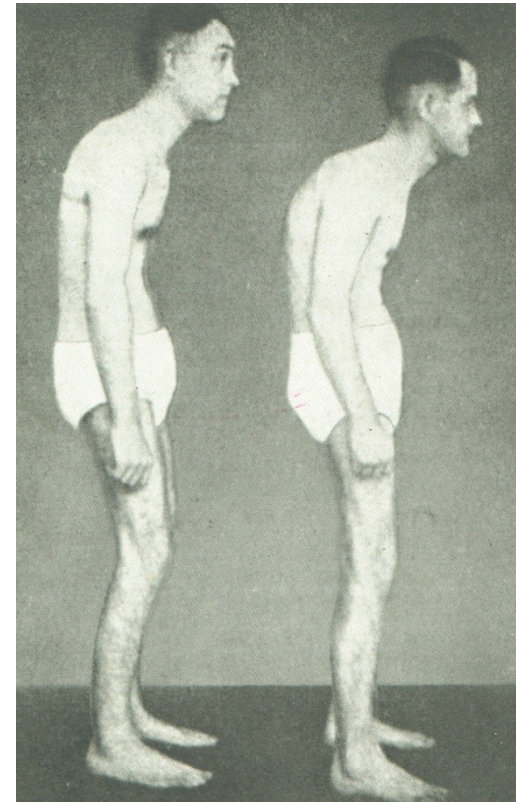
Limited rotation in cervical spine

Hyperkyphosis

Fleche

Entesitis

daktylitis



Clinical examination

Restricted movements in the spine

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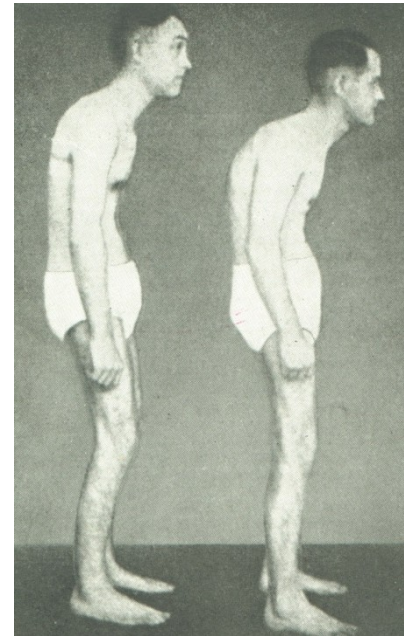
Limited rotation in cervical spine

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X ray

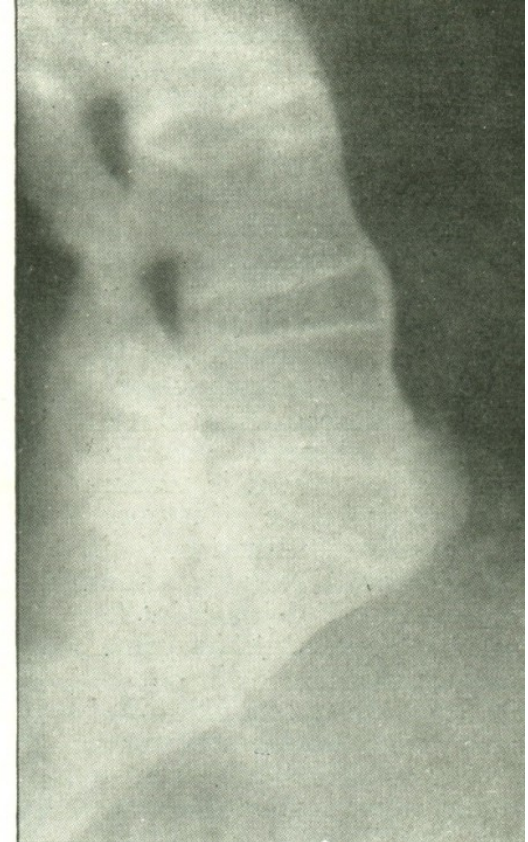
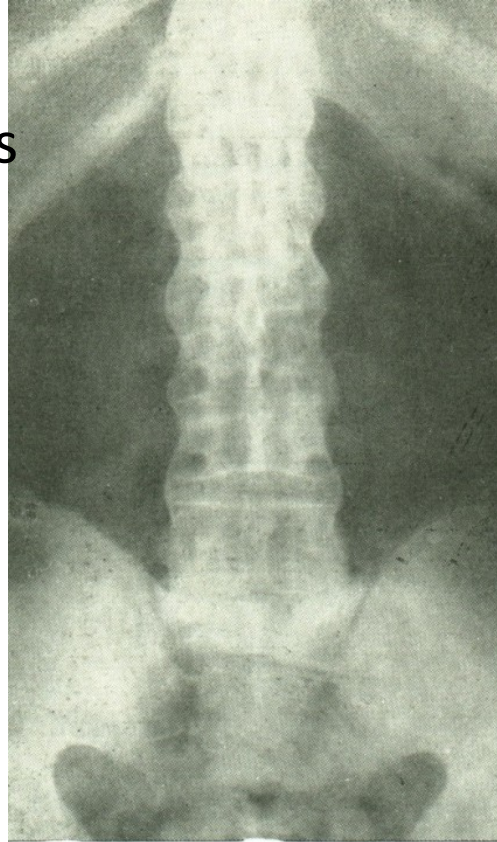
Sacroilitis

Rectangular shape of vertebrae

Syndesmophytes

Fusion of apophyseal joints

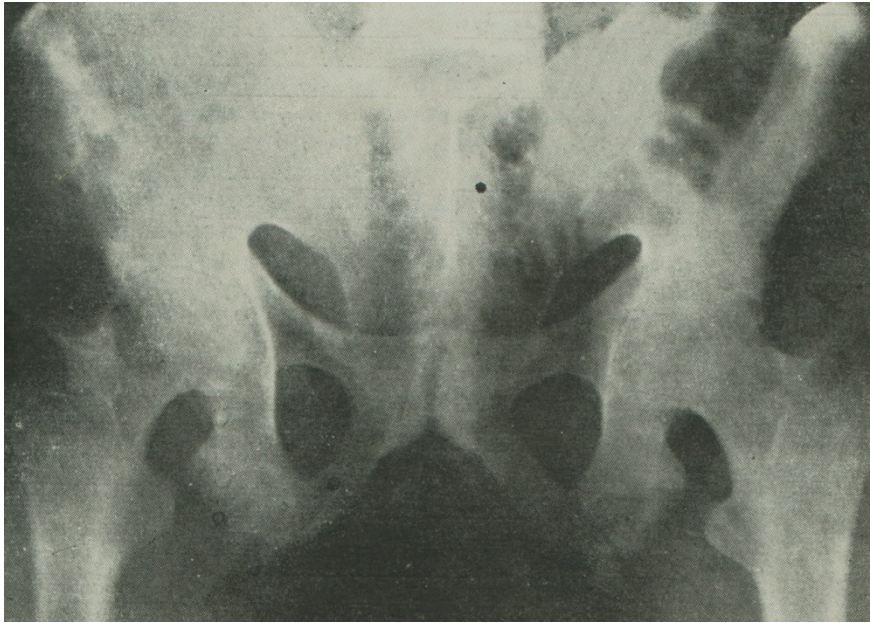
Bamboo rod



Bamboo rod



hyperkyphosis



Ancylosis
Risomelic form



Rosary sign

Management

NSAID

Glucocorticoids

DMARDs syntetic
biologic

Physical therapy

Surgery: replacement
surgery in spine

