

# RHEUMATOID ARTHRITIS

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# RHEUMATOID ARTHRITIS

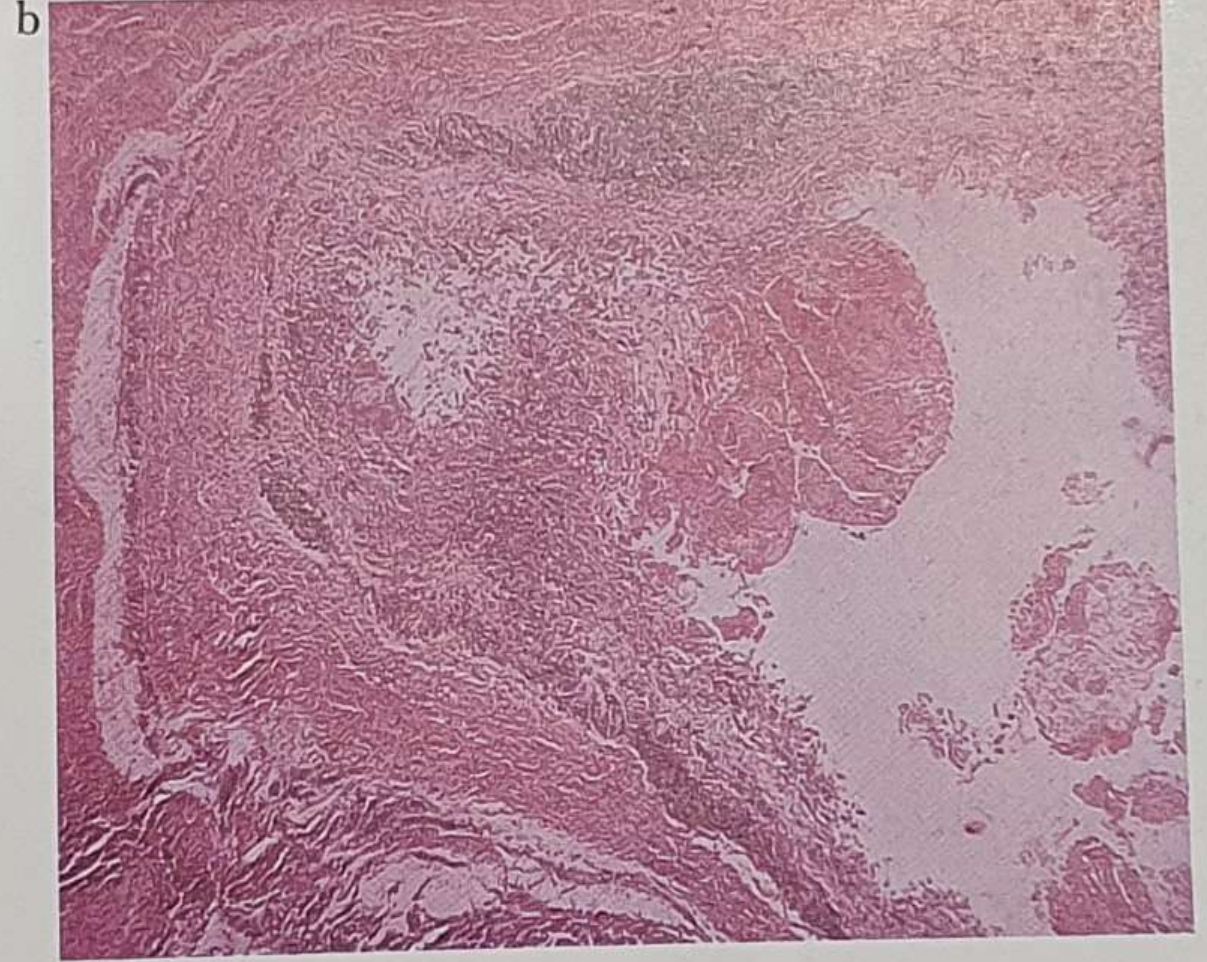
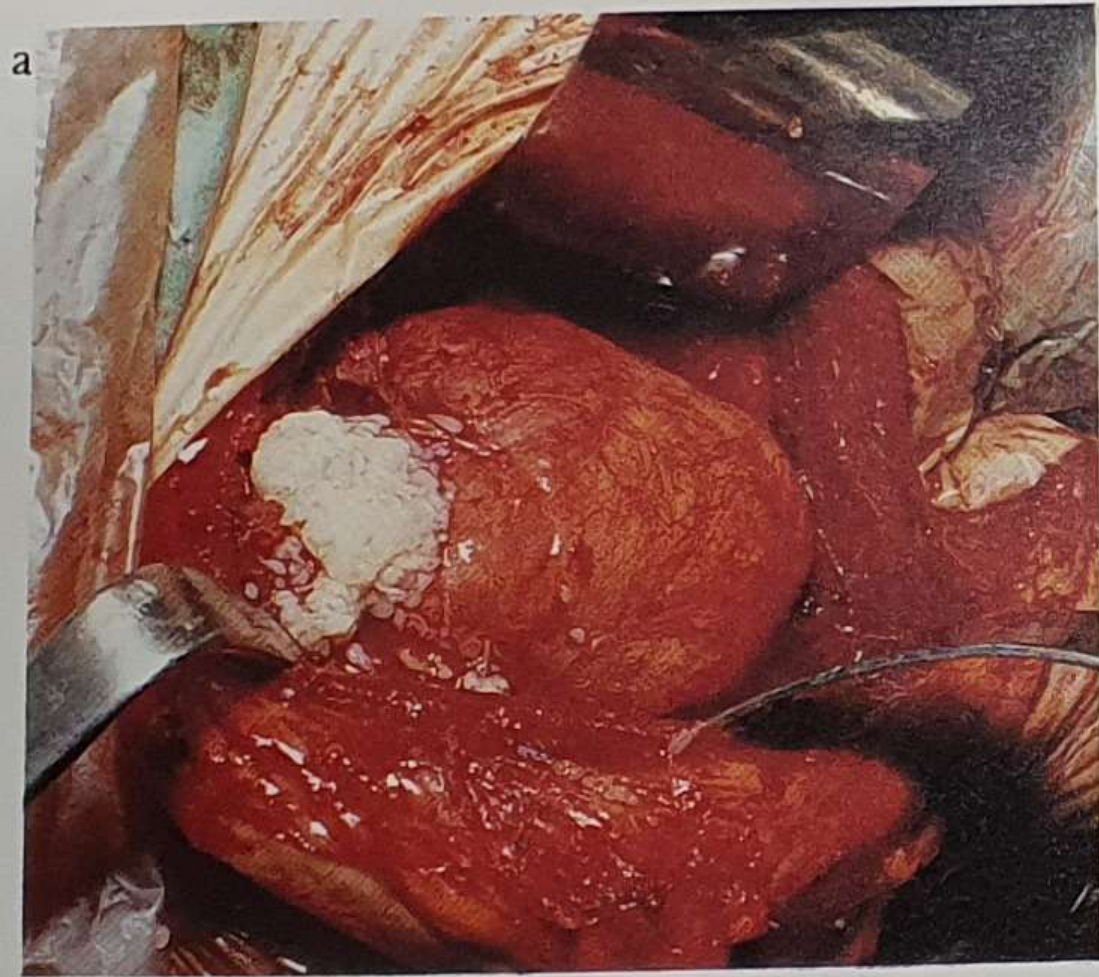
- Commonest cause of chronic inflammatory joint disease characterised by
  - symmetrical polyarthralgia of small joints of hands and feet
  - morning stiffness
  - involvement more than three major joints
  - raised E S R
  - positive rheumatoid factor in serum (anti-IgG globulins)

# RHEUMATOID ARTHRITIS

- RA affects 3% of population affecting women three times more
- Etiology is unknown
- Auto immune disorder where antibodies are produced against own IgG
- Genetic susceptibility resides in the HLA-DR region of chromosome 6
- Auto anti bodies appear in 60-80% patients
- False negative tests in 20% patients
- Usually disease followed by some triggering episode

# RHEUMATOID ARTHRITIS-PATHOLOGY

- Condition is wide spread but burnt of the attack falls on synovium
- Characteristic feature is chronic inflammatory synovitis
- Rheumatoid nodule on extensor surface of hands is pathognomonic

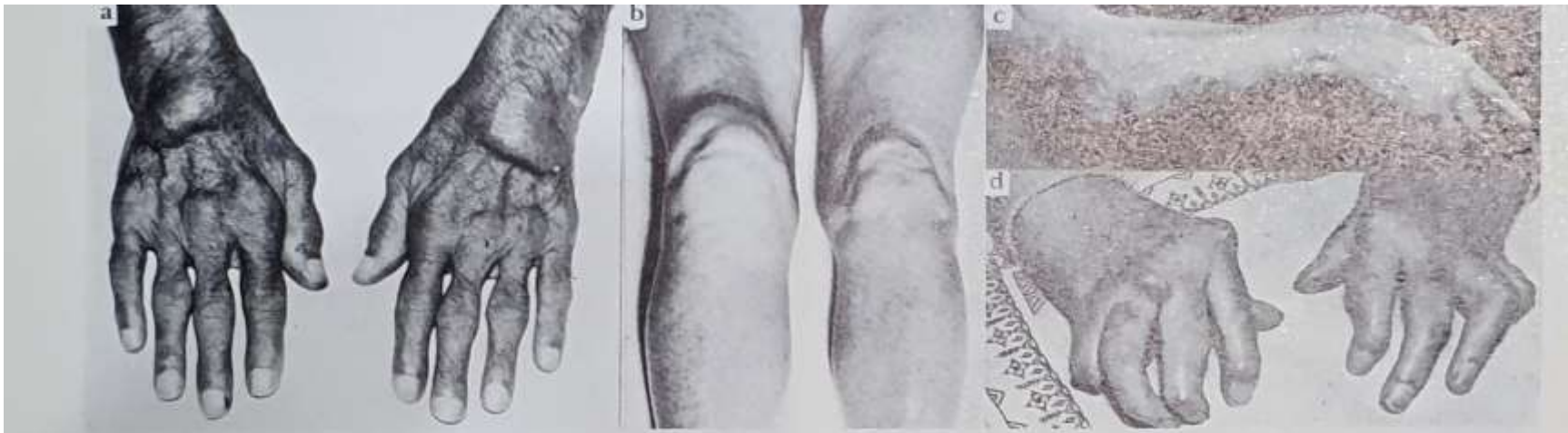


**3.2 Rheumatoid synovitis** (a) The macroscopic appearance of rheumatoid synovitis with fibrinoid material oozing through a rent in the capsule. (b) Histology shows proliferating synovium with round-cell infiltration and fibrinoid particles in the joint cavity. ( $\times 120$ ).

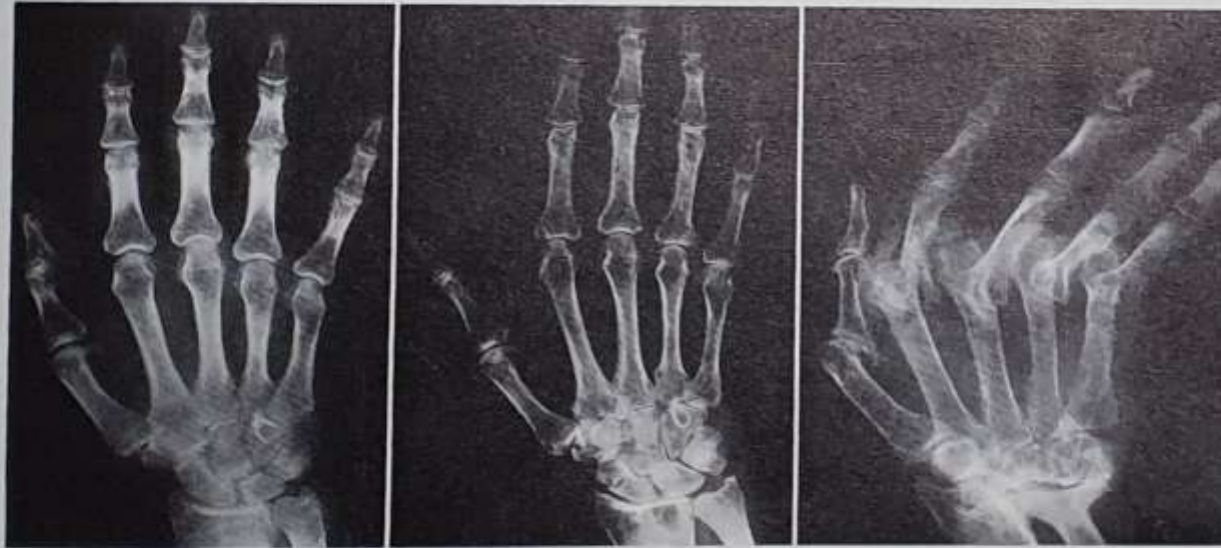
# RHEUMATOID ARTHRITIS-PATHOLOGY

## JOINTS AND TENDONS

- STAGE -1: SINOVITIS
  - vascular congestion
  - proliferation of synoviocytes
  - infiltration of polymorphs, lymphocytes and plasma cells
  - capsular thickening
  - villous formation of synovium
  - effusion and tenderness of joints and tendon sheath
  - reversible if treated early



**3.3 Rheumatoid arthritis – clinical features** Spindling of the fingers and synovitis of the wrists. (b) Sometimes rheumatoid arthritis starts with monarticular synovitis. (c) Rheumatic nodules. (d) Typical late deformities.



**3.4 Rheumatoid arthritis – sequence of changes** The progress of disease is well shown in this patient's x-rays. First there was only soft-tissue swelling and periarticular osteoporosis; later juxta-articular erosions appeared; ultimately the joints became unstable and deformed, with four of the metacarpophalangeal joints dislocated.





# RHEUMATOID ARTHRITIS-PATHOLOGY

- STAGE-2: DISTRUCTION
- persistent inflammation and effusion
- erosion of cartilage
- proteolysis
- pannus formation
- joint erosion and Osteoclastic resorption
- tenosynovitis of tendon sheaths collagen invasion and partial or complete rupture

# RHEUMATOID ARTHRITIS- PATHOLOGY

- STEGE -3 : DEFORMITY
- combination of articular destruction, capsular stretching, tendon rupture leads to persistent instability and joint deformity
- gradually inflammation subsides leaving behind deformed joint

# RHEUMATOID ARTHRITIS- PATHOLOGY

- EXTRA ARTICULAR MANIFESTATIONS

- rheumatoid nodules over bony prominences
- lymphadenopathy
- splenomegaly
- muscular weakness
- neuropathies
- visceral disease

# RHEUMATOID ARTHRITIS- CLINICAL FEATURES

- Polysynovitis mainly small joints of hands and feet
- Stiffness of joints early morning lasting more than one hour
- Muscular pains
- Loss of weight
  
- Later on rheumatoid deformities; ulnar deviation of fingers, radial and volar displacement of wrists, valgus knees clawed toes limiting day to day activities
  
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# RHEUMATOID ARTHRITIS CLINICAL FEATURES

- EXTRA ARTICULAR MANIFESTATIONS
  - nodules
  - muscle wasting
  - scleritis
  - nerve entrapment syndrome
  - skin atrophy with ulceration
  - sensory neuropathies
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# RHEUMATOID ARTHRITIS- RADIOLOGY

- X-rays      synovitis
- periarticular osteoporosis
- bony erosions
- narrowing of articular space
  
- ADVANCED      destruction and deformities
- subluxation of atlantoaxial joint etc.

# RHEUMATOID ARTHRITIS- SEROLOGY

- Normocytic hypochromic anaemia
- Abnormal erythropoiesis
- Raised E S R
- Raised C Reactive protein
- Positive Rheumatoid factor in 80%
- Anti-CCP positive

# RHEUMATOID ARTHRITIS- CRITERIA

- 1- morning stiffness lasting one hour
  - 2- arthritis of more than three major joints
  - 3 - arthritis of hand joints
  - 4 -symmetric arthritis
  - 5 – rheumatoid nodules
  - 6 – serum rheumatoid factor
  - 7- radiological changes
- 1 -4 present more than 6 weeks
- In false negative cases diagnosis us made clinically considering other criteria



# RHEUMATOID ARTHRITIS – DIFFERENTIAL DIAGNOSIS

- Psoriatic arthritis
- Juvenile chronic arthritis (Still's disease)
- Systemic lupus erythematosus
- Reiter's disease
- Sarcoidosis
- Polymyalgia rheumatica

# RHEUMATOID ARTHRITIS- TREATMENT

THERE IS NO CURE FOR RA

Management is based on four injunctions

Stop synovitis

Prevent deformity

Reconstruct

Rehabilitate

# RHEUMATOID ARTHRITIS- TREATMENT

- Multidisciplinary approach needed from the beginning including
- Physician
- Orthopaedic surgeon
- Physiotherapist
- Occupational therapist
- Orthotist
- and social workers

# RHUMATOID ARTHRITIS-TREATMENT

- NSAIDS used in all cases along with PPIs
- Oldest drug Aspirin in high doses now not used by many
- Diclofenac, indomethacin, aceclofenac are commonly used
- Disease- Modifying Drugs like HCQS, Leflunomide, Penicillamine, Gold and immunosuppressive drugs like Methotrexate are commonly used separately or in combination
- Systemic Corticosteroids are also used in tapering doses

# RHEUMATOID ARTHRITIS TREATMENT

- Intra synovial injections of corticosteroids are helpful in reliving of joint inflammation immediately
- Deformity prevention splintage during night is considered in addition day
- Physiotherapy helps in preserving joint functioning

# RHEUMATOID ARTHRITIS- TREATMENT

- RECONSTRUCT

- Synovectomy

- Arthrodesis

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- Osteotomy

- Arthroplasty

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