RHEUMATIC DISORDERS

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RHEUMATIC DISORDERS

These are group of conditions which cause chronic pain,swelling and tendernessof jonts and tendon sheaths which include the following:-

1-rheumatoid arthritis.

2-anklosing spondylitis.

3-seronegative spondarthritis.

4-juvenile chronic arthritis (still's diseases).

5-the systemic connective tissue disease.

6-fibromylagia.

RHEUMATOID ARTHRITIS(RA)

RA is the commonest cause of chronic inflammatory joint disease,the most typical features are a symmetrical polyarthritis and tenosynovitis,morning stiffness,elevation of ESR and presence of Rheumatoid factors in the serum.This diseases affect 1-3% of the population,female 3-4 times more than male and start in the fourth or fifth decade.

CAUSE

The cause is still unknown but the following factors are important in the evolution of RA:-

1-genetic susceptibilty:RA is more common in the first degree relatives of the patients than in the population.

2-an immunological reaction :there's an abnormal immunological reaction with production antibodies(IgG and IgM)against the body's IgG and this may be due to abnormal immune response to a viral infection(foreign antigen focused on synovial tissue.the HLADR4 IS positive in 70% of patients.

3-there's an inflammatory reactions in the joints and the tendon sheaths .

4-Rheumatoid factor:B-cell activation leads to the production of anti-IgG autoantibodiesw which are detected in the blood and synovium as"Rheumatoid factors".

5-chronic synovitis and joint destruction.

PATHOLOGY

There are three stages of RA:-

Stage 1:synovitis

There's a proliferation and inflammation of synovial membrane with vascular congestion and infiltration of polymorphs,lymphocyte and plasma cells,although its painful and swollen but the joints and tendons are intact(reversible stage).

Stage 2:destruction

Persistent inflammation causes tissue destruction,articular cartilage is eroded and tendon fibres may rupture.

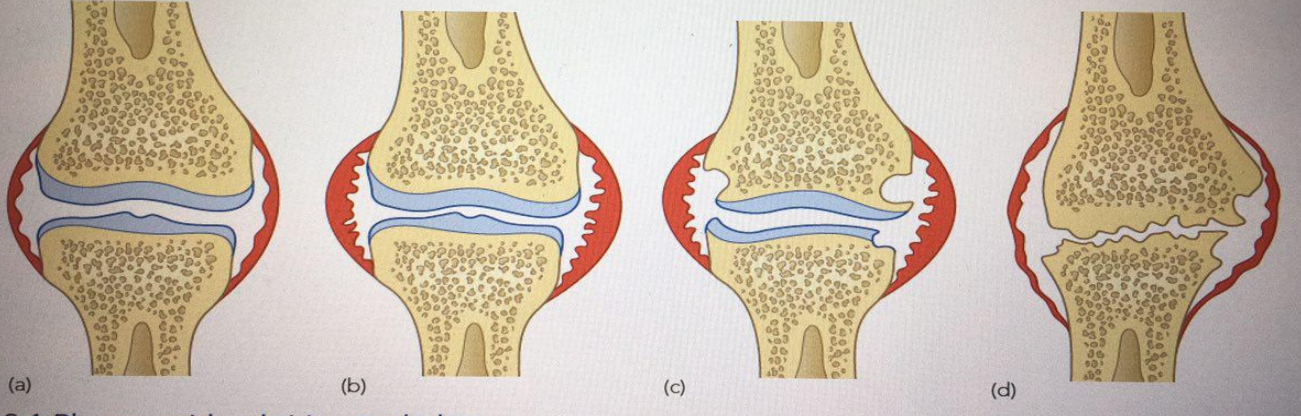
Stage 3:deformity

The combination of articular destruction,capsular stretching and tendon rupture leads to progressive instability and deformity.

Extra-articular features

The most common one is rheumatoid nodule(asmall granuloma occur under the skin),other systemic features are lymphoadenopathy,vasculitis,muscle weakness and visceral diseases affecting lung,kidney,heart,brainand GIT.

PATHOLOGY OF RA



3.1 Rheumatoid arthritis – pathology (a) The normal joint. (b) Stage 1 – synovitis and joint swelling. (c) Stage 2 – early joint destruction with periarticular erosions. (d) Stage 3 – advanced joint destruction and deformity.

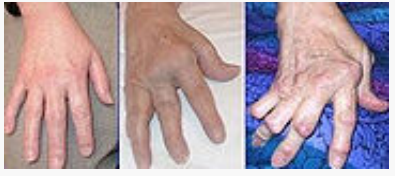
copious amounts of fibrinoid material, produces ... remember that the condition occasionally begin

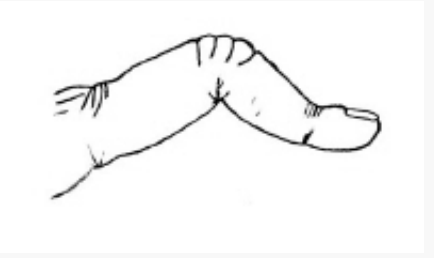
Clinical features

The course of RA is insedious and symmetrical polyarthritis affecting mainly hands and feet with early morning stiffness and a general lack of wellbeing.

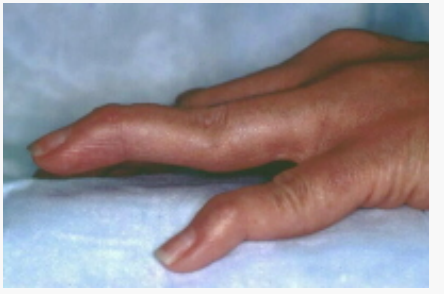
Stage -1(synovitis):there's swelling,warmth,tenderness and spindling of the proximal finger joints and wrists with tendon sheaths around these joints.Later on RA spread to elbow,shoulder,knee,ankle and feet.

Stage-2(destruction):joints movements are limited and isolated tendon ruptures appear.Subcutaneous rheumatoid nodules may



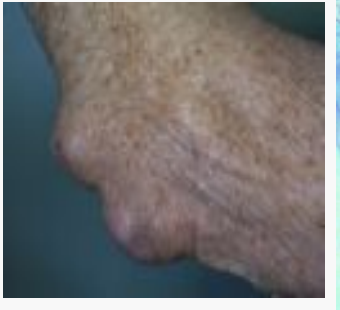


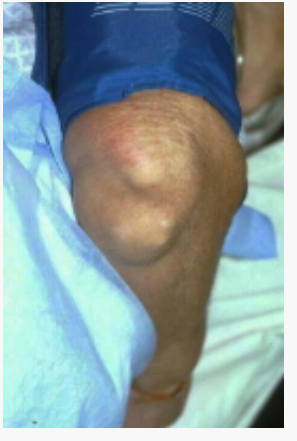
Buttonhole deformity



Swan neck deformity

Ulnar deviation





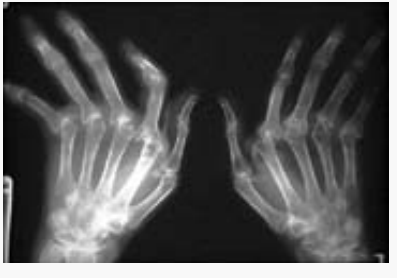
Rheumatoid nodules

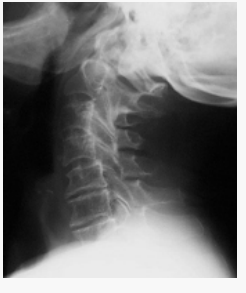
X-rays

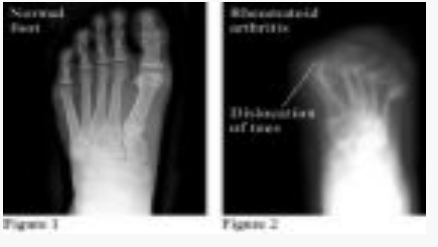
Stage-1 *x-ray show only soft tissue swelling and periarticular osteoporosis.*

Stage-2 *there's narrowing of joint space and marginal bony erosions around the wrist and proximal joints of the hands and feet.*

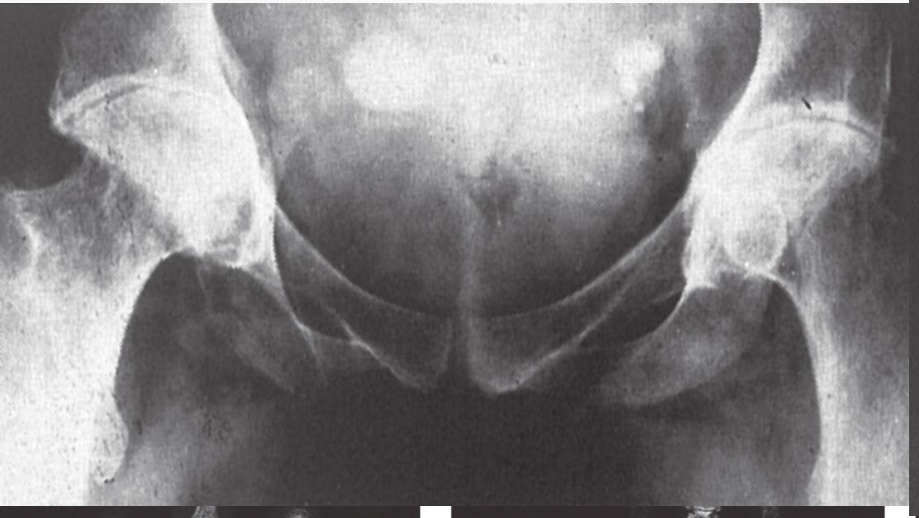
Stage-3 *articular destruction and joint deformity are seen.*

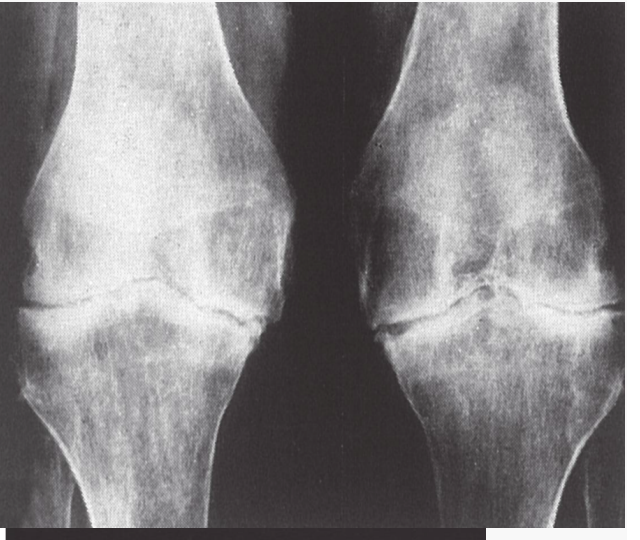


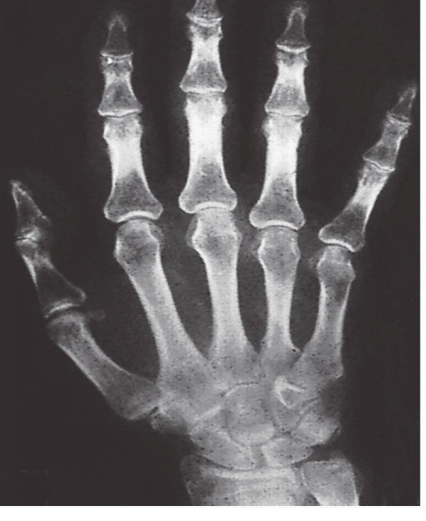


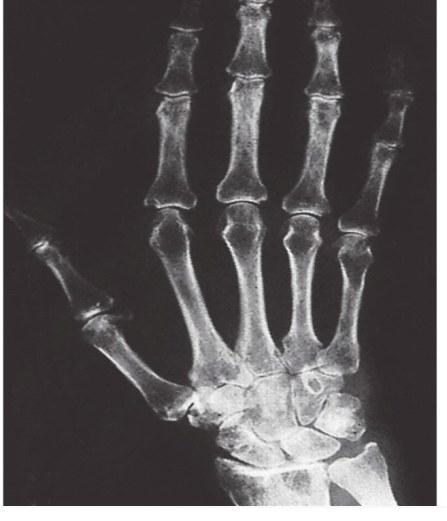


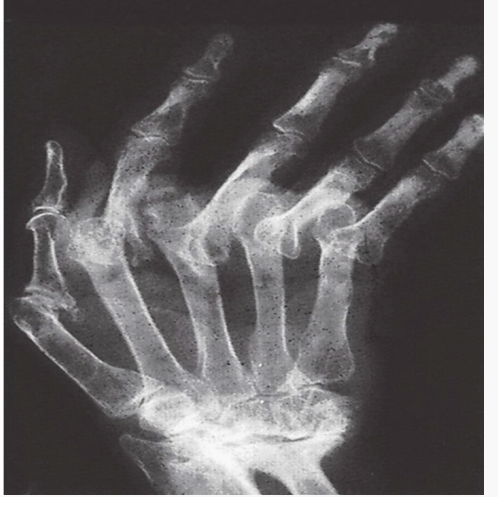
X-RAY OF RA











Investigations

In active stage there's increase in ESR and CRP.serological tests for rheumatoid factor(RF) are positive in 80% and antinuclear factor (ANF) in 30%, and positive anti CCP.

Diagnosis

The usual criteria for dignosis of RA are(1)bilateral,symmetrical polyarthritis(2)involving the proximal joints of the hands and feet(3)present for at least 6 weeks.

If, in addition there are subcutaneous nodules or periarticular erosions on x-ray, the diagnosis is certain.

DDX

1-Seronegative polyarthritis.

2-ankylosing spondylitis.

3-Reiter's disease.

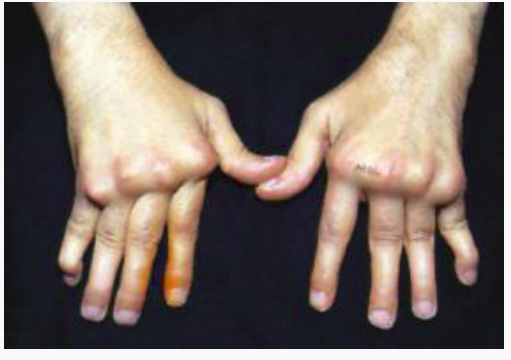
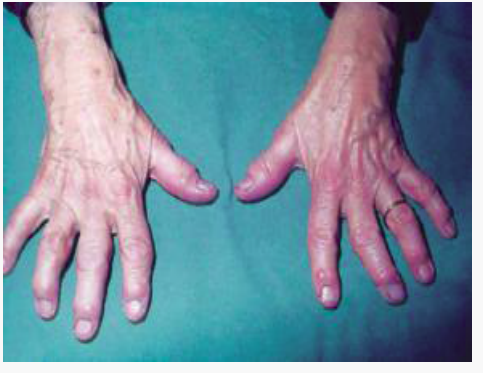
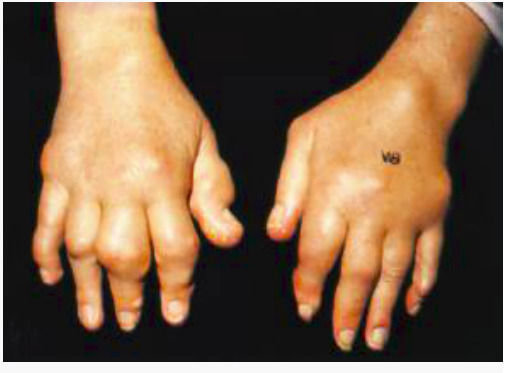
4-Polyarticular osteoarthritis.

5-Polyarticular gout.

6-polymylagia rheumatica.

7-sarcoidosis.

RA *OA* *GOUT*

Rheumatoid arthritis – differential diagnosis All three patients presented with painful swollen fingers. In (a) mainly the proximal joints were affected (rheumatoid arthritis); in (b) the distal joints were the worst (Heberden's osteoarthritis); in (c) there were asymmetrical nodular swellings around the joints (gouty tophi).

Treatment

. There is no cure for RA. A multi-disciplinary approach is needed from the beginning: ideally the therapeutic team should include a rheumatologist, orthopaedic surgeon, physiotherapist, occupational

.therapist, orthotist and social worker

. A poor prognosis is associated with female sex, multiple

joint involvement, younger age, high ESR and CRP,

POSITIVE RF(rheumatoid factor) and anticyclic citrullinated peptide antibody(CCP), and the presence

1. Principles of medical management

Treatment is aimed at controlling inflammation as rapidly as possible.

1-*Corticosteroids are used for* their rapid action (initially an oral dose of 30 mg of prednisolone or 120 mg of methylprednisolone intramuscularly). The dose should be rapidly tapered off to prevent significant side-effects.

2-In addition, *disease-modifying antirheumatic drugs (DMARDs) should be started at this time;* the first choice is now methotrexate at doses of 10–25 mg/week. This may be used initially alone or in combination with sulfasalazine and hydroxychloroquine. Leflunomide can also be considered if methotrexate is not tolerated. Gold and penicillamine are now rarely used.

***3-NSAIDs may be needed to control pain and* stiffness. If there is no satisfactory response to DMARDs, it is wise to progress**

2-Physiotherapy and occupational therapy

Muscle tone and joint mobility are maintained by a balanced programme of exercise, and general advice on coping with the activities of daily living.

Preventative splinting and orthotic devices may be helpful; however, it is important to encourage activity.

3-Surgical management

Operative treatment may be indicated at any stage
of the disease if conservative measures alone are not effective.

A- Early on this consists mainly of softtissue procedures (***synovectomy, tendon repair or replacement and joint stabilization***).

B- late rheumatoid disease, severe joint

C-During the phase of progressive erosive arthritis(1-5years):

The combination of muscle weakness,joint instability and tendon rupture maylead to progressive deformity so the patient need longterm treatment with one of the "second-line"drugs such as gold,penicillamine or methotrexate.

Preventive splintage and orthotic devices may delay the march of events,if obove methods fail to restore and maintain function, operative treatment is indicated like synovectomy,tendon repair or replacement and joint stabilization) and osteotomy in some cases.

Complications

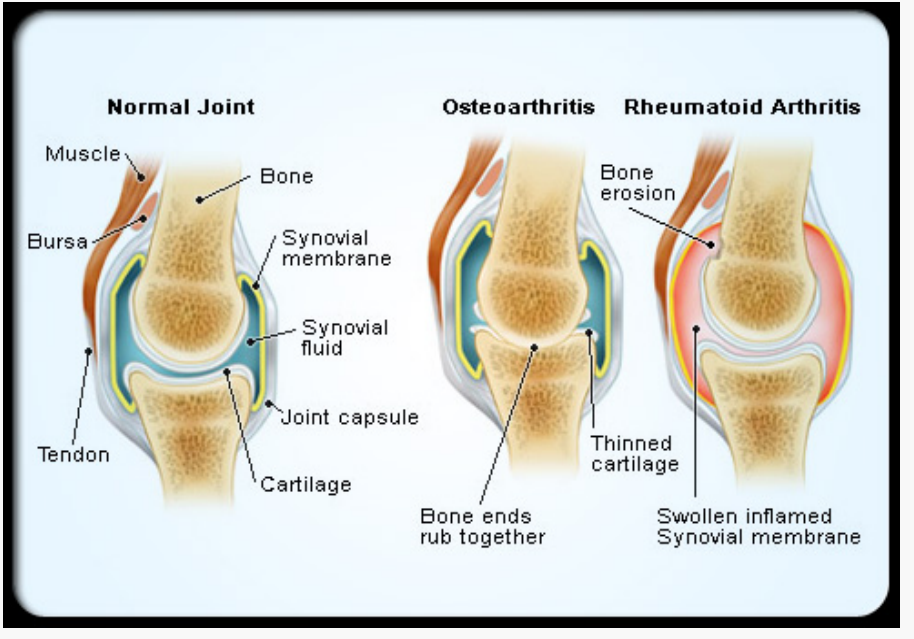
1-infection:

Patients with RA and even those on steroid therapy are susceptible to infection with of septic arthritis.

2-Tendon rupture:

Nodular ifiltration may lead to tendon rupture mainly at wrist which lead to fixed rheumatoid deformities.

3-Joint rupture:



Comparison between RA and OA

"A good surgeon must have an eagle's eye, a lion's heart, a lady's hand."