

CHRONIC ARTHRITIS

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Chronic Polyarthritis: Selected Causes

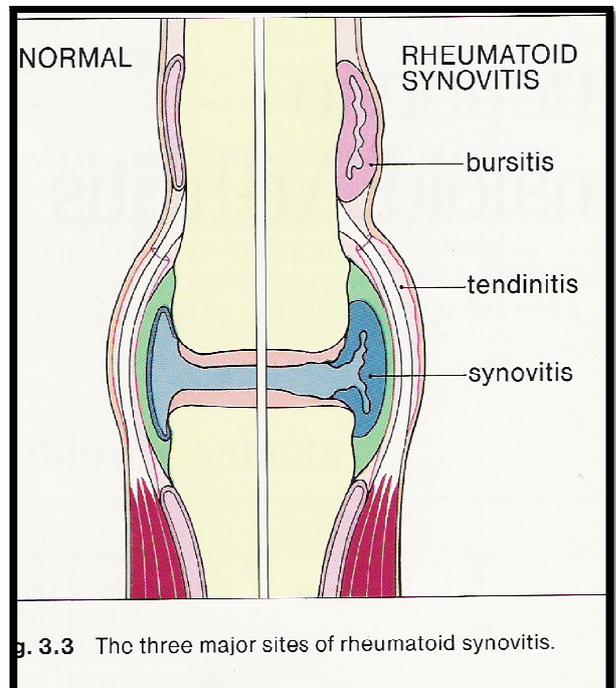
- ✓ Rheumatoid and juvenile chronic arthritis
- ✓ Other connective tissue diseases
- ✓ Spondyloarthropathies
- ✓ Chronic crystal arthritis
- ✓ Hypertrophic osteoarthropathy
- ✓ Hyperthyroidism
- ✓ Metabolic and infiltrative bone and joint diseases

Rheumatoid Arthritis

- Unknown etiology
 - ✓ Genetics
 - ✓ Environmental
 - ✓ Possible infectious component
- Autoimmune disorder

THE CHARACTERISTICS OF RA

- ✓ Systemic chronic inflammatory disease
- ✓ Mainly affects synovial joints
- ✓ Variable expression
- ✓ Prevalence about 3%
- ✓ Worldwide distribution
- ✓ Female:male ratio 3:1
- ✓ Peak age of onset: 25-50 years



THE PATHOLOGY OF RA

- Serositis
 - Synovitis (hypertrophy -> erosion of the cartilage)
 - Joints
 - Tendon sheaths
 - Bursae
- Nodules
- Vasculitis

ACR 1987 Classification Criteria for Rheumatoid Arthritis

>> بمدیکم علی هالشی اللی طلع فی تاریخ میلادی؟؟

yaaa leba 8alb elrheumatology wa ahloo : heart:

Patients must have 4 of 7 Criteria:

- ✓ Morning stiffness lasting at least 1 hour*
- ✓ Swelling in 3 or more joints *
- ✓ Swelling in hand joints *
- ✓ Symmetric joint swelling *
- ✓ Erosions or decalcification on X-ray of hand (or periarticular osteoporosis)
- ✓ Rheumatoid nodules
- ✓ Abnormal serum rheumatoid factor

➤ *MUST BE PRESENT AT LEAST 6 WEEKS*

JOINT INVOLVEMENT ON PRESENTATION OF RA

| Polyarticular | 75% | Monoarticular | 25% |
|--------------------------------|-----|---------------|-----|
| Small joints of hands and feet | 60% | Knee | 50% |
| Large joints | 30% | Shoulder } | |
| | | Wrist } | |
| Large and Small joints | 10% | Hip } | 50% |
| | | Ankle } | |
| | | Elbow } | |

Some of the articular features seen in the Rheumatoid hand :

- WRIST:
 - ✓ Synovitis
 - ✓ Prominent ulnar styloid
 - ✓ Subluxation and collapse of carpus
 - ✓ Radial deviation

- PIPs:
 - ✓ Synovitis and synovial cysts
 - ✓ Fixed flexion or extension deformities (Swan neck or boutonniere deformities)

- MCPs:
 - ✓ Synovitis
 - ✓ Ulnar deviation
 - ✓ Subluxation of joints
 - ✓ Subluxation of extensor tendons

- THUMBS:
 - ✓ Synovitis of MCP, CMC or IP joint
 - ✓ 'Z' deformity
 - ✓ Instability of IP joint

Signs and Symptoms of RA

- Joint inflammation
 - ✓ Tender, warm swollen joints
 - ✓ Symmetrical pattern
- Pain and stiffness
- Symptoms in other parts of the body
 - ✓ Nodules
 - ✓ Anemia
- Fatigue, occasional fever, malaise

Extra-articular manifestations :

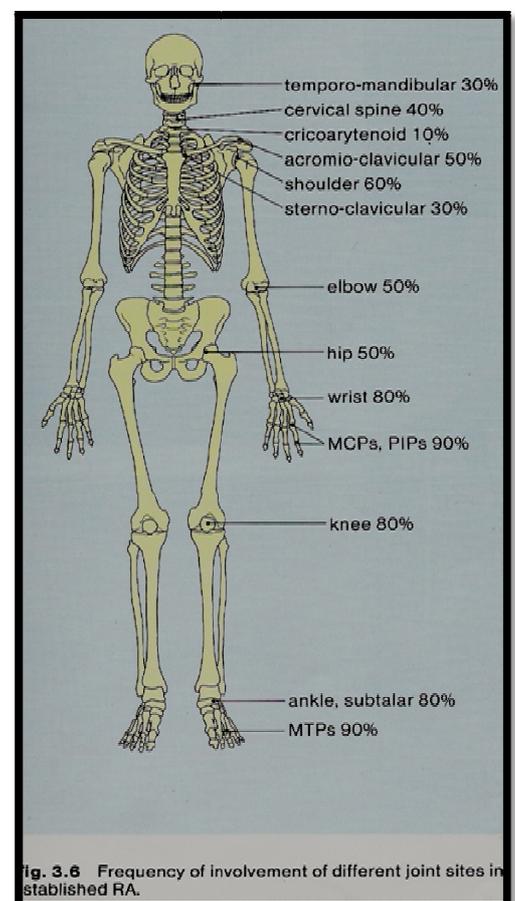
- General :
 - ✓ fever, lymphadenopathy, weight loss, fatigue
- Dermatologic :
 - ✓ palmar erythema, nodules, vasculitis
- Ocular :
 - ✓ episcleritis/scleritis, scleromalacia perforans, choroid and retinal nodules
- Cardiac
 - ✓ pericarditis, myocarditis, coronary vasculitis, nodules on valves
- Neuromuscular
 - ✓ entrapment neuropathy, peripheral neuropathy, mononeuritis multiplex
- Hematologic
 - ✓ Felty's syndrome (splenomegaly + thrombocytopenia)
- Pulmonary
 - ✓ pleuritis, nodules, interstitial lung disease, bronchiolitis obliterans, arteritis, effusions
- Others
 - ✓ Sjogren's syndrome, amyloidosis

Investigations

- ✓ Hematology : CBC , ↑ESR
- ✓ Biochemistry : LFT , Renal profile
- ✓ Serology : RF (IgM –mostly- attacks the IgG → IgM anti-IgG Ab)
- ✓ Radiography : Joints , Spines ,Chest

Treatment Approaches

- ✓ Lifestyle modifications
- ✓ Rest
- ✓ Physical and occupational therapy
- ✓ Medications
- ✓ Surgery (if there is severe deformities)



Drug Treatment :

1st Line: Non-steroidal Anti-Inflammatory Drugs (NSAIDs)

- Traditional NSAIDs (Aspirin, Ibuprofen, Ketoprofen, Naproxen)
- COX-2 Inhibitors (Celecoxib, etoricoxib)

2nd Line Drugs : Disease-modifying antirheumatic drugs (DMARDs)

- Gold – oral, injectable
- Hydroxychloroquine
- Sulfasalazine
- Penicillamine
- Methotrexate
- Azathioprine
- Cyclophosphamide

Biologic Response Modifiers :

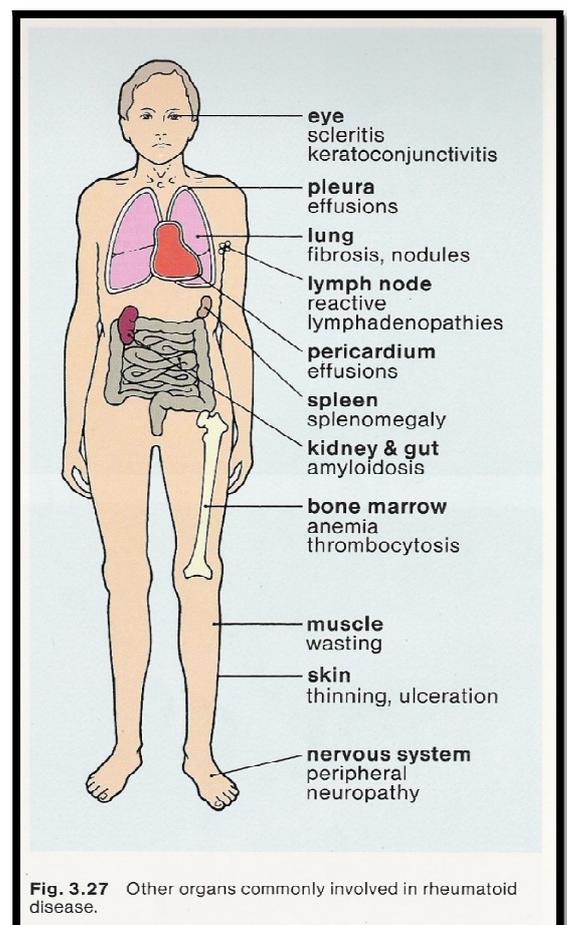
- Etanercept
- Infliximab
- Adalimumab

Corticosteroids :

- Systemic
 - -bridge therap
 - -short courses to treat flares

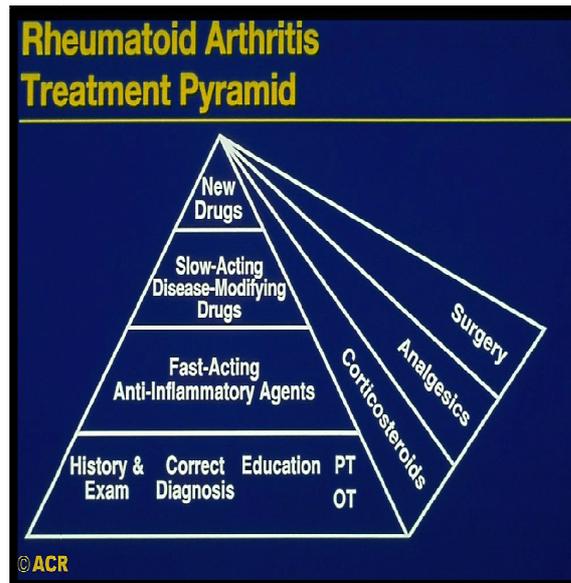
(If used long term , consider prophylaxis for Osteoporosis)

- Intra-articular



Treatment Goals

- ✓ Relieve pain
- ✓ Reduce inflammation
- ✓ Prevent/slow joint damage
- ✓ Improve functioning and quality of life



SERONEGATIVE SPONDARTHROSIS

- + *Ankylosing spondylitis*
- + *Psoriasis*
- + *Reactive arthritis*
- + *Reiters disease*
- + *Ulcerative colitis*
- + *Crohn's disease*
- + *(Whipple's disease)*

Characteristics of Seronegative Spondarthritides :

- ✓ Absence of rheumatoid factor
- ✓ Involvement of sacro-iliac and spinal joints
- ✓ Peripheral arthritis (predominantly lower limb)
- ✓ Enthesopathy
- ✓ Familial clustering
- ✓ Increased incidence of HLA-B27
- ✓ Common spectrum of extra-articular features (predominantly mucocutaneous)

HLA-B27: Disease Associations

| Disease | Association |
|----------------------------|-------------|
| Ankylosing Spondylitis | > 90% |
| Reiter's Syndrome | 80% |
| Reactive Arthritis | 85% |
| Inflammatory Bowel Disease | 50% |
| Psoriatic Arthritis | |
| With Spondylitis | 50% |
| With Peripheral Arthritis | 15% |
| Whipple's Disease | 30% |

REACTIVE ARTHRITIS (ReA)

- ✓ Seronegative arthritis following enteric or urogenital infections .

Etiologic Organisms in Reactive Arthritis :

- ✓ Chlamydia trachomatis
- ✓ Shigella dysenteriae
- ✓ Salmonella enteritidis
- ✓ Campylobacter jejuni
- ✓ Salmonella typhimurium
- ✓ Yersinia enterocolitica
- ✓ Shigella flexneri (Most Often been implicated, both in Sporadic & Epidemic Cases)
- ✓ Clostridia difficile

Clinical Manifestations of Reactive Arthritis :

(Patients may have one, more than one or all of these manifestations)

Arthritic :

Asymmetric, Oligoarticular, Lower Extremity Predilection, Enthesitis, Sacroiliitis

Genitourinary:

Nonspecific Urethritis, Cervicitis, Cystitis, Hematuria, Hydronephrosis

Skin:

Keratoderma Blenorrhagica, Balanitis Circinata, Ulceration on tongue

Ocular:

Conjunctivitis, Acute Anterior Uveitis

Cardiac:

Aortitis, Aortic Insufficiency, Heart Block

FEATURES OF REITERS DISEASE

- ✓ Urethritis
- ✓ Conjunctivitis
- ✓ Arthritis
- ✓ Enthesopathy (Enthes- means the site of tendon/ligament insertion into bone)
- ✓ Sacroiliitis
- ✓ Keratoderma blenorrhagica
- ✓ Mouth ulcers
- ✓ Circinate balanitis
- ✓ Cervicitis
- ✓ Iritis

LABORATORY & RADIOGRAPHIC FINDINGS :

- ✓ ESR : usually Elevated during the acute phase
- ✓ CBC : Mild Anemia
- ✓ Synovial Fluid : Nonspecifically Inflammatory
- ✓ Serology
- ✓ Radiography :
 - JuxtaArticular Osteoporosis
 - Erosive changes , Syndesmophytes
 - Spurs at the insertion of the plantar fascia

TREATMENT :

Initial Therapy

1. NSAID
2. Antibiotics if infection confirmed .
3. Intra-Articular corticosteroid injections(Exclude septic arthritis)

Chronic Therapy For Erosive And Deforming Disease

1. METHOTREXATE
2. AZATHIOPRINE
3. SULFASALAZINE

PATTERNS OF PSORIATIC ARTHROPATHY

- ✓ Distal interphalangeal joint disease with associated nail lesions.
- ✓ Seronegative polyarthritis often variable and assymetrical, may develop transient 'sausage digits'.
- ✓ Deforming arthritis ('arthritis mutilans')
- ✓ Spondylitis



ANKYLOSING SPONDYLITIS

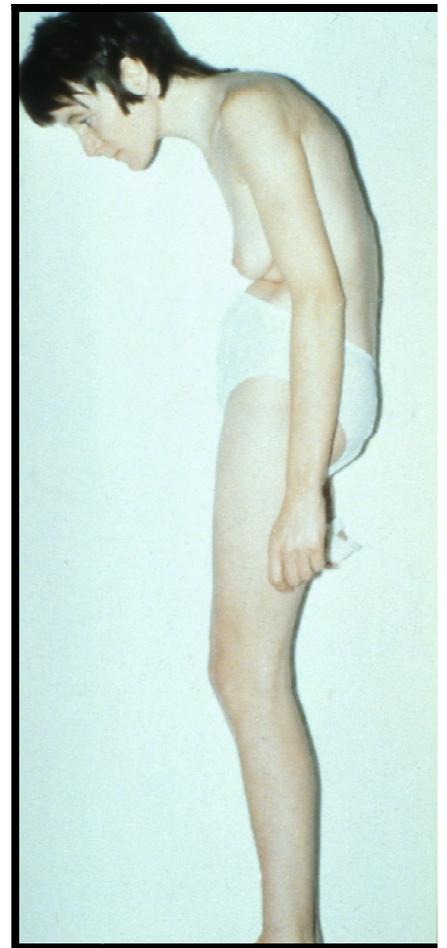
Characteristics of Back Pain

- ✓ Onset : before age 40, insidious
- ✓ Duration : longer than 3 months
- ✓ Associated with : morning stiffness
- ✓ Decreased with : exercise
- ✓ Progressive limitation of motion in cervical, thoracic and/or lumbar spine over time.

Wright-Schober test :

< 4cm increasing in distance between a point at lumbosacral joint and one 10cm above, when going from standing to maximum forward flexion)

- Radiographic : syndesmophytes (bamboo spine)



Osteoarthritis

Clinical :

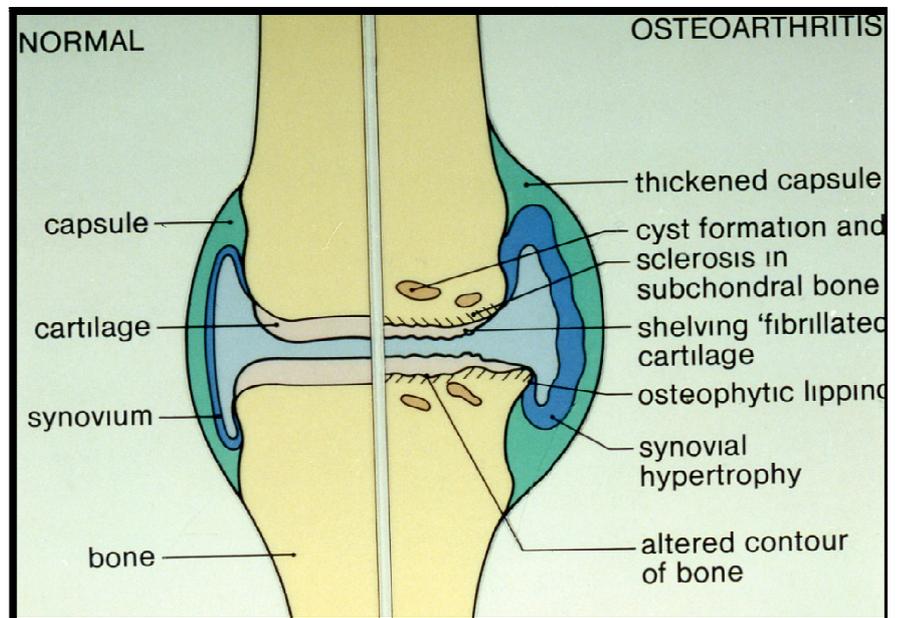
- ✓ Age > 50
- ✓ Morning stiffness < 30 minutes
- ✓ Crepitus
- ✓ No inflammation
- ✓ Bony enlargement or tenderness

Laboratory :

- ✓ ESR < 40 mm / Hr
- ✓ RF titer < 1:40
- ✓ Noninflammatory synovial fluid

Radiographic :

- ✓ Osteophytes
- ✓ Joint space narrowing
- ✓ Subchondral cysts and sclerosis
- ✓ Mal-alignment (altered bone contour)
- ✓ Soft-tissue swelling
- ✓ Periarticular calcification



Secondary Osteoarthritis : Causes

- ✓ Congenital or developmental diseases
- ✓ Trauma
- ✓ Inflammatory joint disease
- ✓ Endocrinopathies
- ✓ Metabolic diseases
- ✓ Neuropathic disorders
- ✓ Avascular necrosis
- ✓ Paget's disease

COMMON QS

All the following can cause mouth ulcer EXCEPT:

- a. Reiter's disease
- b. Behcet disease
- c. SLE
- d. Rheumatoid arthritis
- e. Steven Johnson syndrome

The following are associated with Reiter's syndrome EXCEPT:

- a. plantar fasciitis
- b. conjunctivitis
- c. non specific urethritis
- d. kerato blenohrgia
- e. mostly affect small joints in the hand

Which of the following disease are associated with mouth ulcer:

- a. SLE (T)
- b. Reiter's disease (T)
- c. psoriasis (F)

Radiographic changes of osteoarthritis include:

- a. joint space narrowing (T)
- b. periartthritis osteoprosis (F)
- c. calcification of joint cartilage (T)
- d. bone cysts (T)
- e. syndesmophytes (F)

Ankylosing spondilitis:

- a. more common in female than male (F)
- b. associated with HLA-B27 (T)
- c. associated with backache and stiffness (T)
- d. there is sacroilitis (T)
- e. may there is aortic regurgitation (T)

Systemic onset Juvenile chronic arthritis :

- a. there is splenomegally (T)
- b. there is intermittent fever (swinging) (T)
- c. affect mostly children at 1-5 years of age (F)
- d. cause erythematous skin rash (F)
- e. does not respond to aspirin (F)

The clinical features of rheumatoid arthritis include:

- a. migratory polyarthritis (F)
- b. symmetrical polyarthritis (T)
- c. cervical arthritis (T)
- d. Temporomandibular joint involvement (T)
- e. prolonged early morning stiffness (T)

Oropharyngeal ulcer is a possible presentation of all of the following, EXCEPT:

- a. SLE
- b. Steven Johnson syndrome
- c. Reiter's syndrome
- d. felty's syndrome
- e. behcet disease

Typical features of active Rheumatoid arthritis بصراحة ما بلغت هالسؤال وأجوبته: << \$,include:

- a. fever and weight loss (T)
- b. monocytic anemia (F)
- c. uveitis (F)
- d. thrombocytopenia (F)
- e. generalized lymphadenopathy (T)

Recognized feature of rheumatoid arthritis include:

- a. Boutonier deformity (T)
- b. calcaneal spur (F)
- c. +ve rheumatoid factor (T)
- d. swan-neck deformity (T)
- e. Z-deformity of thumb (T)

Extra articular manifestations of rheumatoid arthritis include:

- a. cutaneous ulceration ?
- b. pericardial and pleural effusion (T)
- c. amyloidosis (T)
- d. peripheral neuropathy (T)
- e. hypertension ?

The clinical features of ankylosing spondylitis include:

- a. aortic regurgitation (T)
- b. back pain (T)
- c. seropositive rheumatoid factor (F)
- d. amyloidosis (F)
- e. pulmonary fibrosis (T)

One of the following is a recognized feature of osteoarthritis:

- a. Bouchard's & Heberden's nodes
- b. ulnar deviation of the fingers >> in RA
- c. bilateral sarcoililis >> in AS
- d. Atlantoaxial sublaxation
- e. Pencil-incup deformity of the joint

Reiter's syndrome may have the following, EXCEPT:

- a. may follow campylobacter infection
- b. associated with planter fasciitis
- c. associated with keratoderma blenorrhagica
- d. circinate balanitis
- e. mostly small joints affection

Positive test for rheumatoid factor occurs in

- a. rheumatoid arthritis (T)
- b. SLE (T)
- c. ankylosing spondalitis (F)
- d. chronic gout (F)

**THERE IS NOTHING EITHER *GOOD* OR *BAD*,
BUT THINKING MAKES IT SO ,,, !**

SHAKESPEARE