

# CHRONIC ARTHRITIS

Dr/ Hussein Al-Arfaj

## Chronic Polyarthritis: Selected Causes

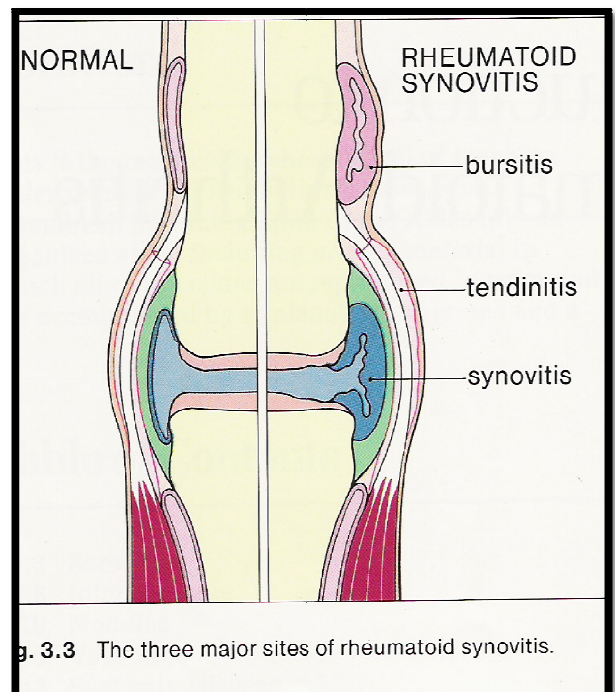
- ✓ Rheumatoid and juvenile chronic arthritis
- ✓ Other connective tissue diseases
- ✓ Spondyloarthropathies
- ✓ Chronic crystal arthritis
- ✓ Hypertrophic osteoarthropathy
- ✓ Hyperthyroidism
- ✓ Metabolic and infiltrative bone and joint diseases

## 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 الی 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 :

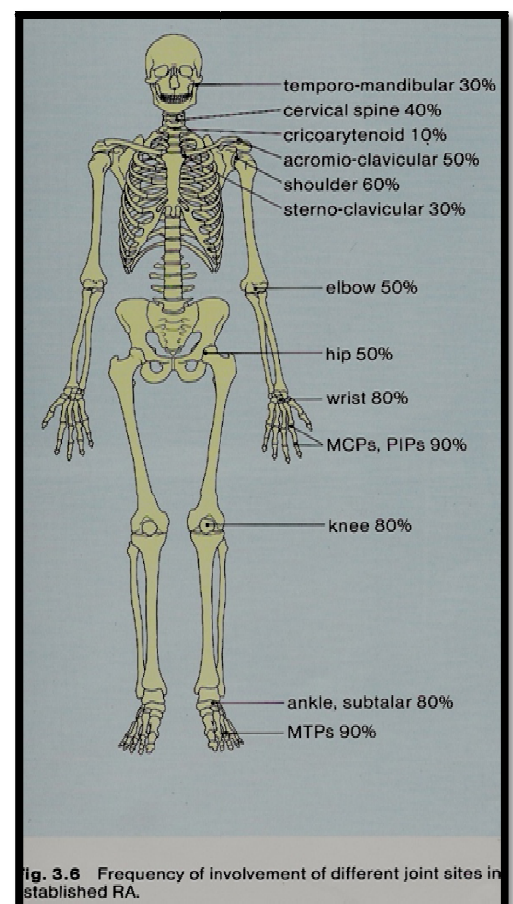
- General :
  - ✓ fever, lymphadenopathy, weight loss, fatigue
- Dermatologic :
  - ✓ palmar erythema, nodules, vasculitis
- Ocular :
  - ✓ episcleritis/scleritis, scleromalacia perforans, choroid and retinal nodules
- Cardiac
  - ✓ pericarditis, myocarditis, coronary vasculitis, nodules on valves
- 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 :

### *1<sup>st</sup> Line: Non-steroidal Anti-Inflammatory Drugs (NSAIDs)*

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

### *2<sup>nd</sup> Line Drugs : Disease-modifying antirheumatic drugs (DMARDs)*

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

### *Biologic Response Modifiers :*

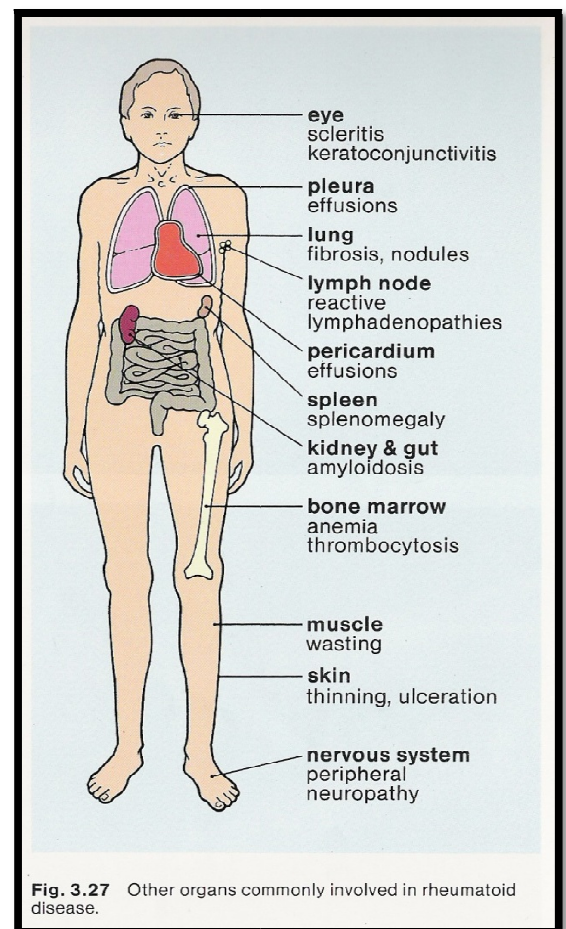
- Etanercept
- Infliximab
- Adalimumab

### *Corticosteroids :*

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

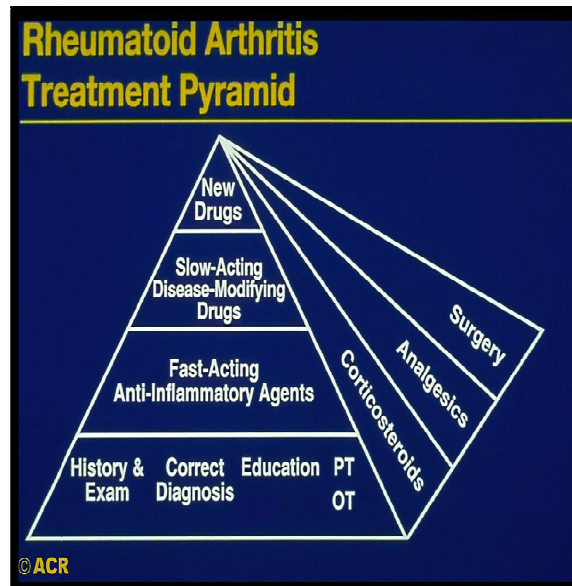
*( If used long term , consider prophylaxis for Osteoporosis)*

- Intra-articular



## Treatment Goals

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



## SERONEGATIVE SPONDARTHRTIS

- + *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

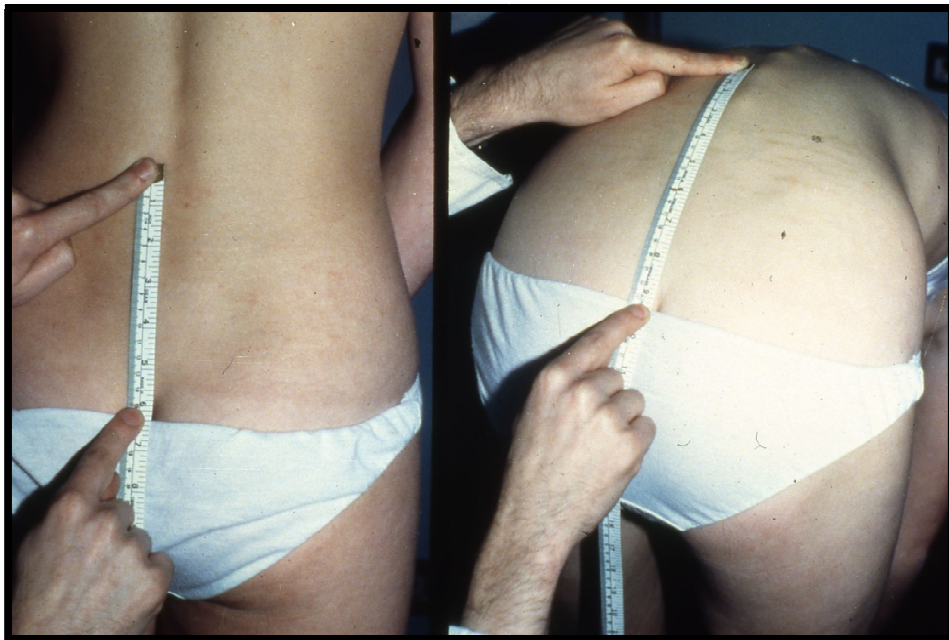
## Characteristics of Back Pain

- ✓ 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 :

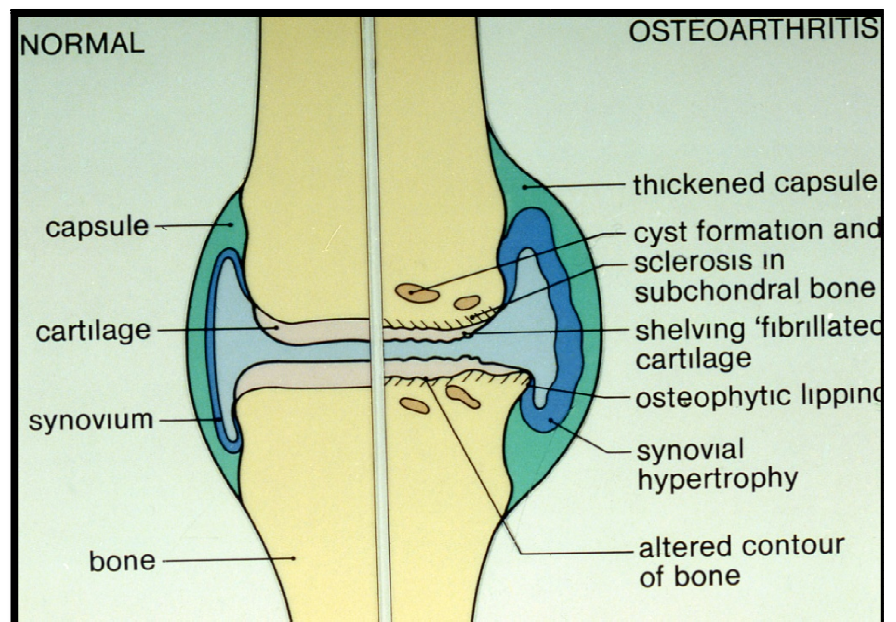
- ✓ Age > 50
- ✓ Morning stiffness < 30 minutes
- ✓ Crepitus
- ✓ No inflammation
- ✓ Bony enlargement or tenderness

## 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. periarthrits 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. Boutonniere 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 sacroiliitis >> in AS
- d. Atlantoaxial subluxation
- e. Pencil-in-cup deformity of the joint

Reiter's syndrome may have the following, EXCEPT:

- a. may follow campylobacter infection
- b. associated with planter fascitis
- 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 spondylitis ( F)
- d. chronic gout (F)

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

SHAKESPEARE