



Rheumatoid Arthritis

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Arthritis

“arthro” = joint

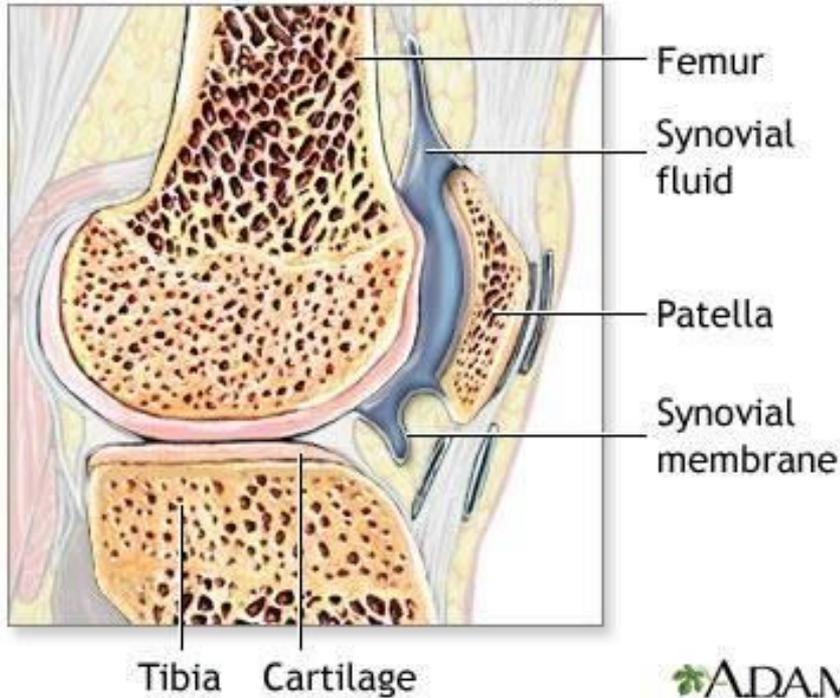
“itis” = inflammation

“Arthritis can affect babies and children, as well as people in the prime of their lives”

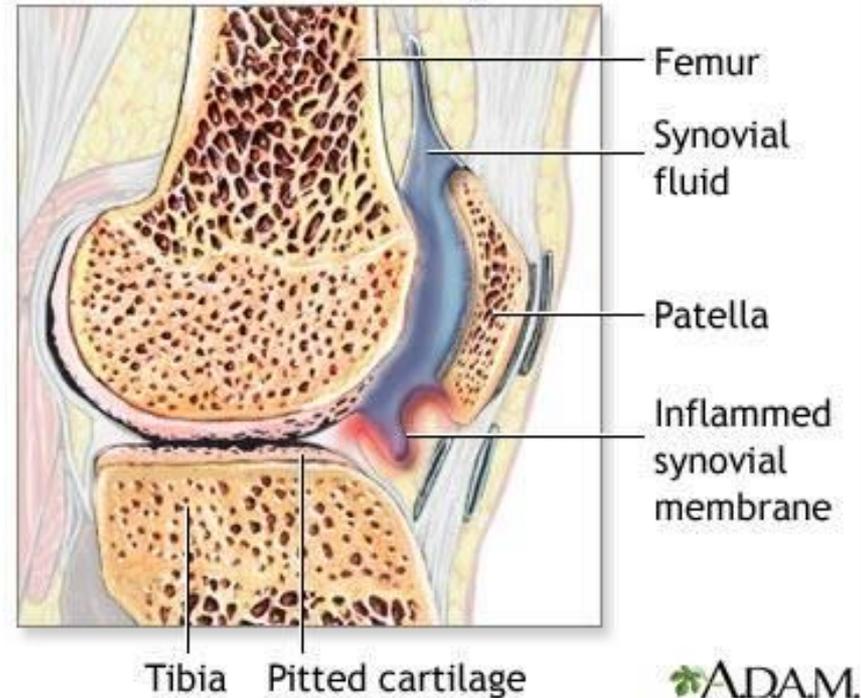
- Rheumatoid arthritis is an autoimmune disease in which the normal immune response is directed against an individual's own tissue, including the joints, tendons, and bones, resulting in inflammation and destruction of these tissues.
- Commonest inflammatory joint disease seen in clinical practice affecting approx 1% of population.
- Characterized by persistent inflammatory synovitis leading to cartilage damage, bone erosions, joint deformity and disability.

Anatomy of the Joint

Cut-section view of normal knee joint



Cut-section view of knee joint Inflamed



Articular/hyaline cartilage

- acts as a shock absorber
- allows for friction-free movement
- not innervated!

Synovial membrane/synovium

- secretes synovial fluid
- nourishes cartilage
- cushions the bones

Overview

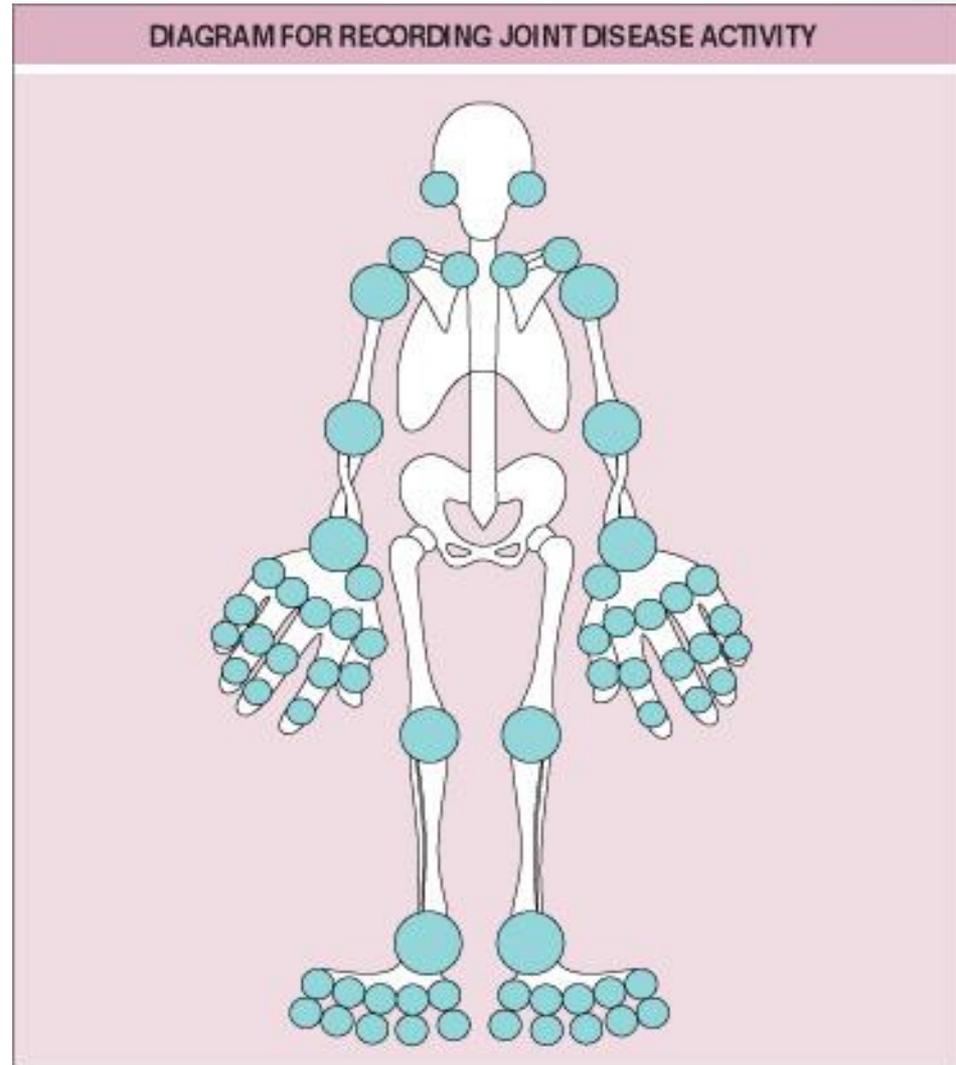
- Age: Any age, commonly 3rd to 6th decade
- Female: male 3:1
- pattern of joint involvement could be:-
 - 1) Polyarticular : most common
 - 2) Oligoarticular
 - 3) Monoarticular
- Morning joint stiffness > 1 hour and easing with physical activity is characteristic.
- Small joints of hand and feet are typically involved.

Clinical Manifestations

- Articular
- Extra-articular

Articular manifestation

- Pain and swelling in affected joint aggravated by movement is the most common symptom.
- Morning stiffness ≥ 1 hr
- Joints involved -→



Relative incidence of joint involvement in RA

- MCP and PIP joints of hands & MTP of feet 90%
- Knees, ankles & wrists- 80%
- Shoulders- 60%
- Elbows- 50%
- TM, Acromio - clavicular & SC joints- 30%

PIP Swelling

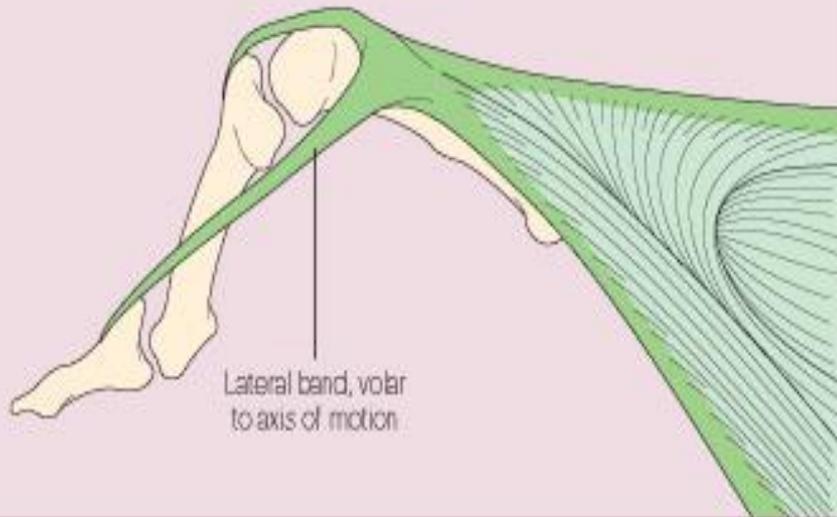


Ulnar Deviation, MCP Swelling, Left Wrist Swelling

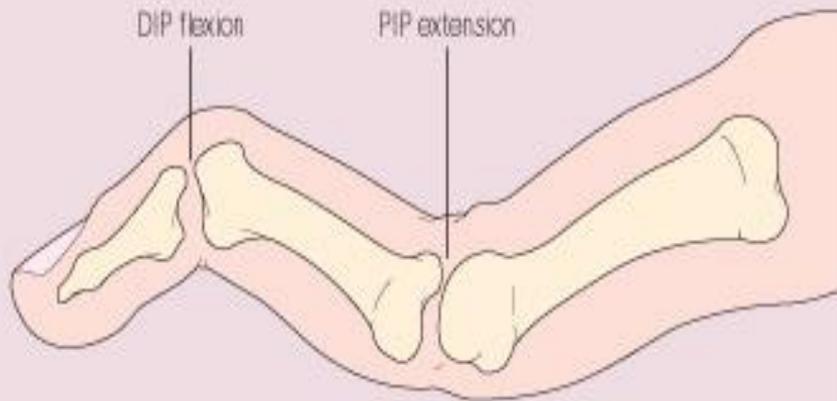


BOUTONNIERE AND SWAN-NECK DEFORMITIES

Boutonnière deformity



Swan-neck deformity





Extra-articular manifestations

- Present in 30-40%
- May occur prior to arthritis
- Patients that are more likely to get are:
 - High titres of RF/ anti-CCP
 - HLA DR4+
 - Male
 - Early onset disability
 - History of smoking

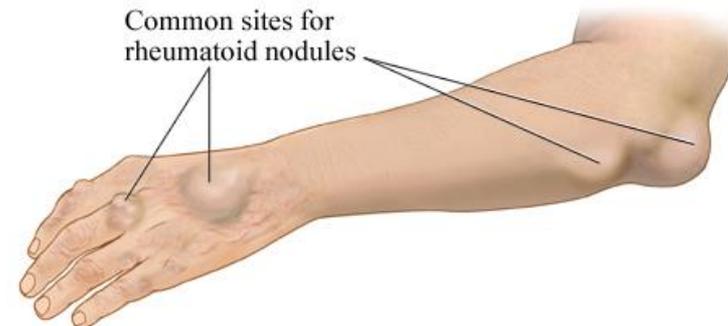
Extraarticular Involvement

- **Constitutional symptoms** (most common)
- **Rheumatoid nodules**(30%)
- **Hematological-**
 - normocytic normochromic anemia
 - leucocytosis /leucopenia
 - thrombocytosis
- ***Felty's syndrome-***
 - Chronic nodular Rheumatoid Arthritis
 - Splenomegaly
 - Neutropenia

- **Respiratory**- pleural effusion, pneumonitis , pleuro-pulmonary nodules, ILD
- **CVS**-asymptomatic pericarditis , pericardial effusion, cardiomyopathy
- **Rheumatoid vasculitis**- mononeuritis multiplex, cutaneous ulceration, digital gangrene, visceral infarction
- **CNS**- peripheral neuropathy, cord-compression from atlantoaxial/midcervical spine subluxation, entrapment neuropathies
- **EYE**- kerato-conjunctivitis sicca, episcleritis, scleritis

Rheumatoid nodule

- These are small subcutaneous nodules present at the extensor surfaces of hand, wrist, elbow and back in rheumatoid arthritis patients.
- Characteristics feature of rheumatoid arthritis
- A marker of disease activity
- Can be present even if other features of rheumatoid Arthritis are absent



Laboratory investigations in RA

- CBC- TLC, DLC, Hb, ESR & GBP
- Acute phase reactants
- Rheumatoid Factor (RF)
- Anti- CCP antibodies

Rheumatoid Factor (RF)

- Antibodies that recognize Fc portion of IgG
- Can be IgM , IgG , IgA
- 85% of patients with RA over the first 2 years become RF+
- A negative RF may be repeated 4-6 monthly for the first two year of disease, since some patients may take 18-24 months to become seropositive.
- **PROGNOSTIC VALUE-** Patients with high titres of RF, in general, tend to have **POOR PROGNOSIS, MORE EXTRA ARTICULAR MANIFESTATION.**

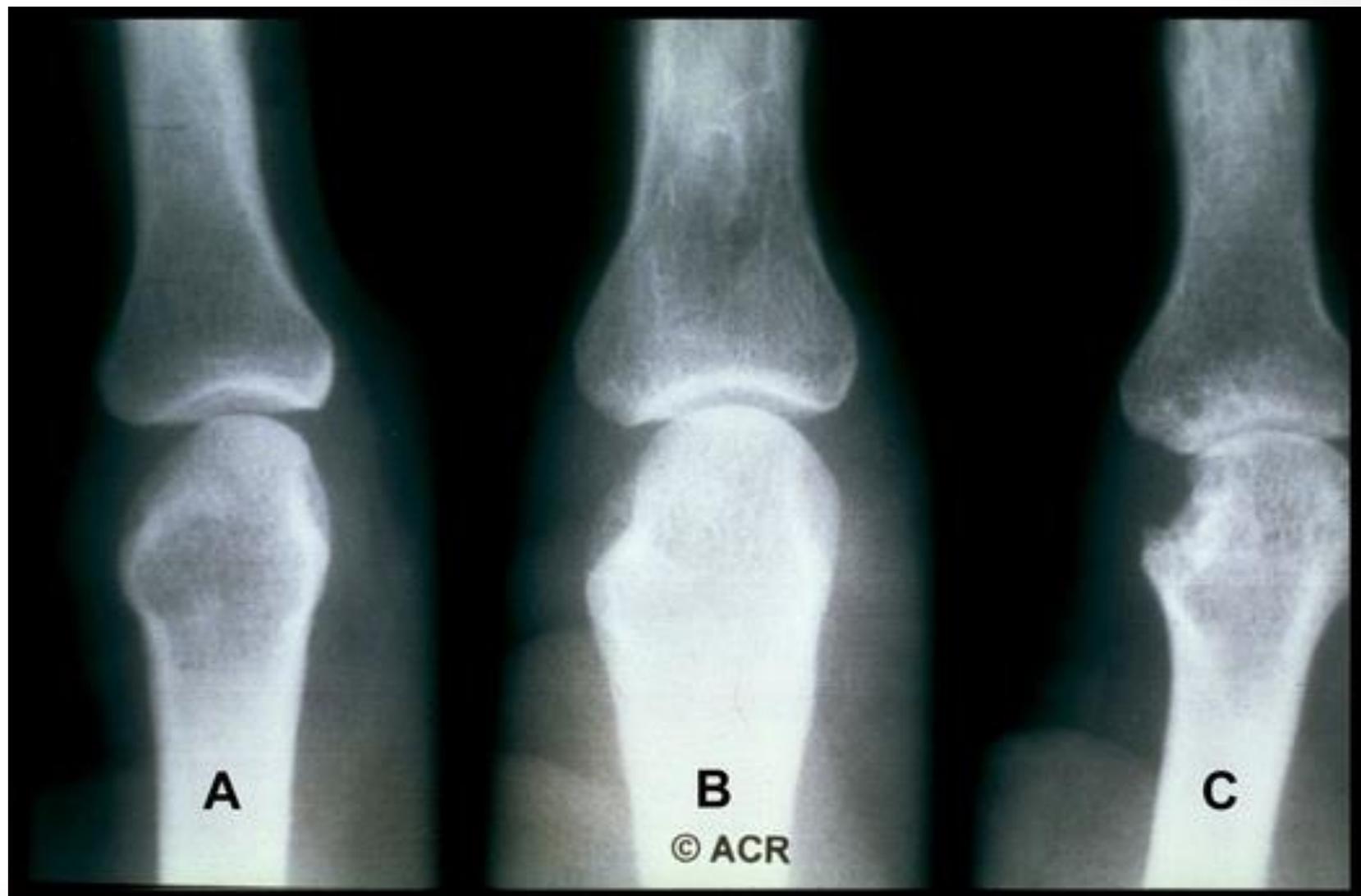
Anti-CCP

- IgG against synovial membrane peptides damaged via inflammation
- Sensitivity (65%) & Specificity (95%)
- **Both diagnostic & prognostic value**
- Predictive of Erosive Disease
 - Disease severity
 - Radiologic progression
 - Poor functional outcomes

Radiographic Features

- Peri-articular osteopenia
- Uniform symmetric joint space narrowing
- Marginal subchondral erosions
- Joint Subluxations
- Joint destruction
- Collapse

- **Ultrasound** detects early soft tissue lesions.
- **MRI** has greatest sensitivity to detect synovitis and marrow changes.

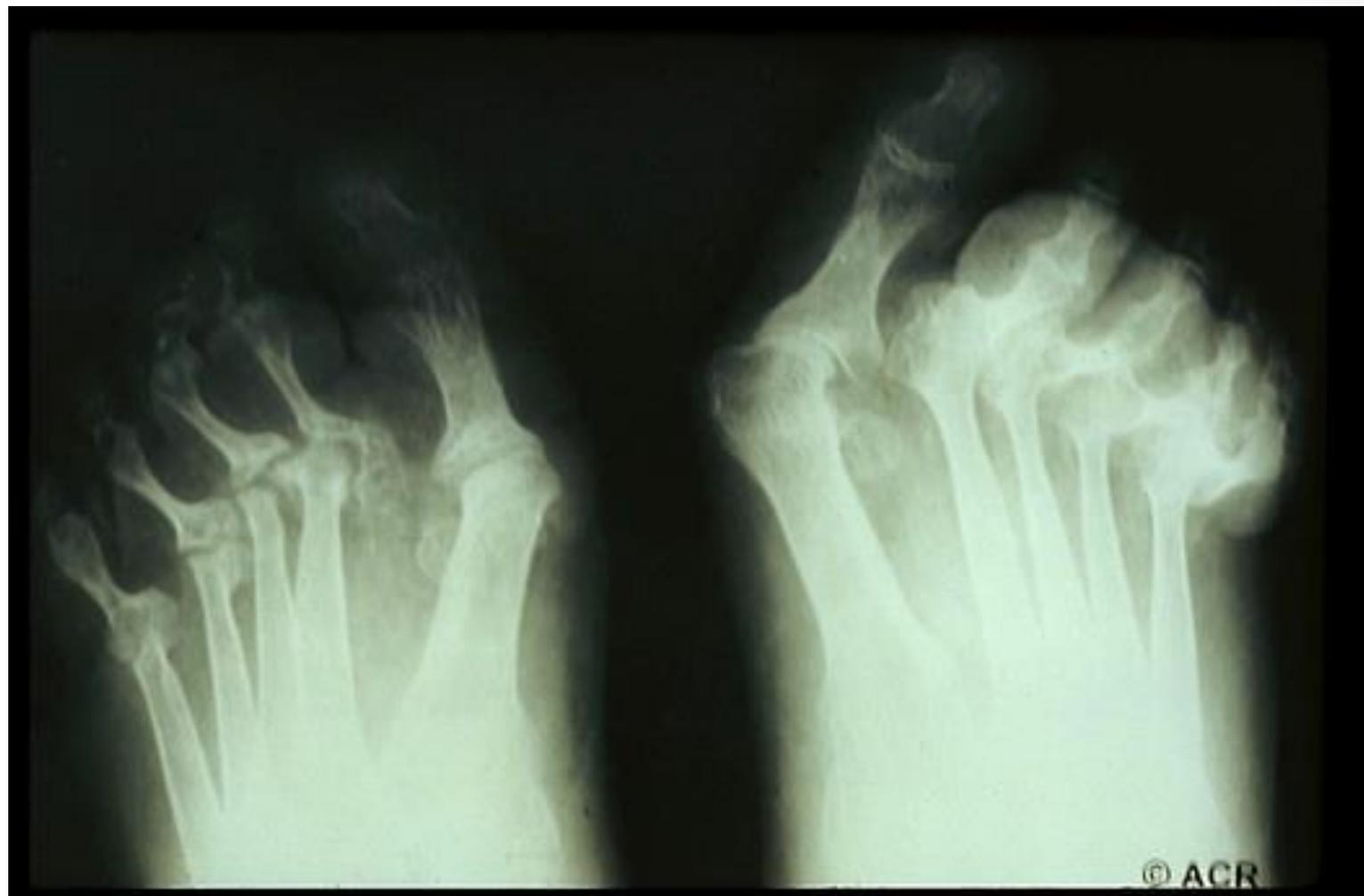


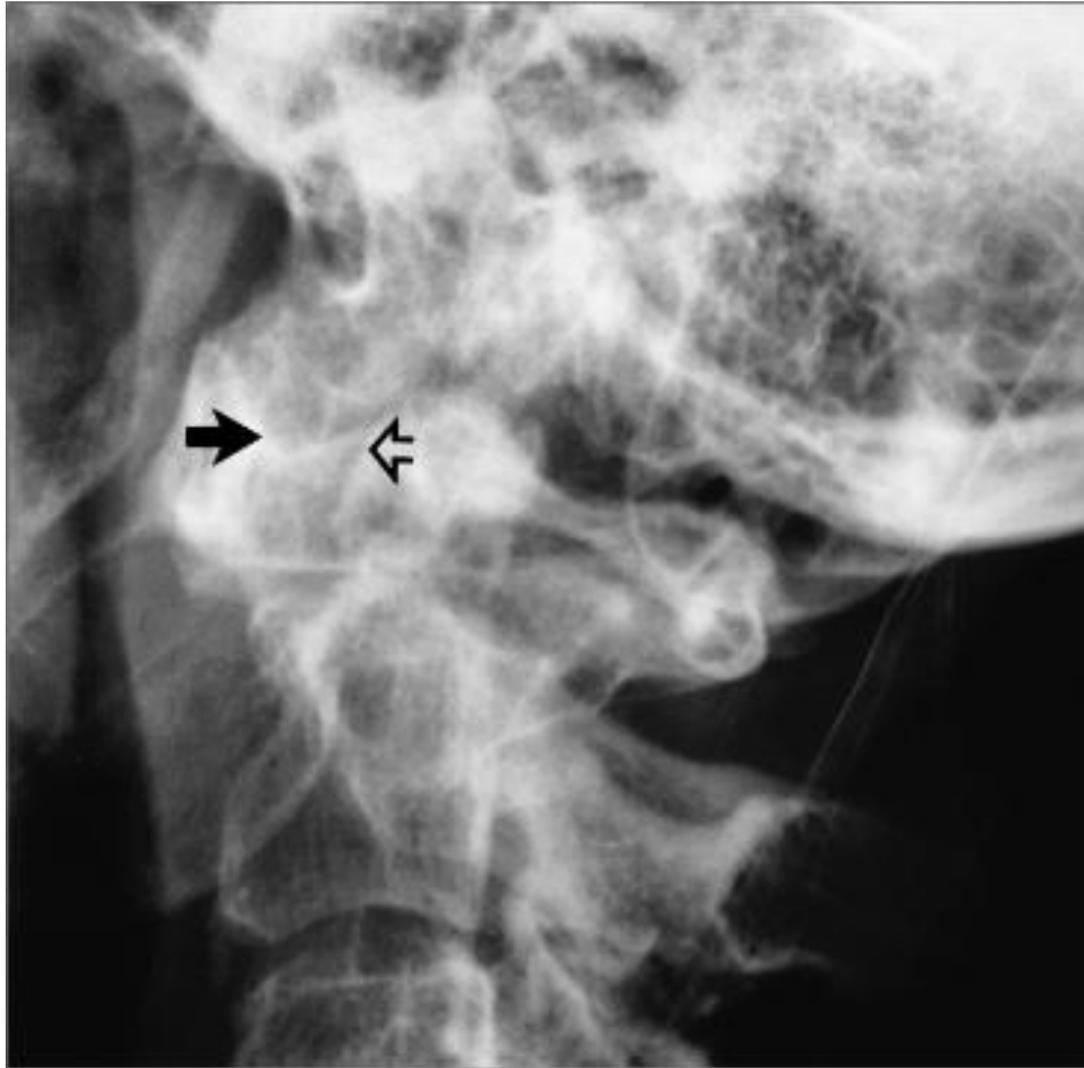
A

B

C

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Diagnostic Criterias

ACR Diagnostic Criteria (1987)

- Description
 - Morning stiffness
 - Arthritis of 3 or more joints
 - Arthritis of hand joints
 - Symmetric arthritis
 - Rheumatoid nodules
 - Serum rheumatoid factor
 - Radiographic changes
- A person shall be said to have rheumatoid arthritis if he or she has satisfied 4 of 7 criteria, with criteria 1-4 present for at least 6 weeks.

2010 ACR/EULAR Classification Criteria

- a score of $\geq 6/10$ is needed for classification of a patient as having definite RA
- **A. Joint involvement** **SCORE**
- 1 large joint 0
- 2–10 large joints 1
- 1–3 small joints (with or without involvement of large joints) 2
- 4–10 small joints (with or without involvement of large joints) 3
- >10 joints (at least 1 small joint)^{††} 5

- **B. Serology** (at least 1 test result is needed for classification)
- Negative RF *and* negative ACPA 0
- Low-positive RF *or* low-positive ACPA 2
- High-positive RF *or* high-positive ACP 3

- **C. Acute-phase reactants** (at least 1 test result is needed for classification)
- Normal CRP *and* normal ESR 0
- Abnormal CRP *or* normal ESR 1

- **D. Duration of symptoms**
- <6 weeks 0
- ≥ 6 weeks 1

Differential Diagnosis

- **Viral polyarthrititis** — A number of viral infections may cause an acute viral polyarthrititis.
- ●Viral infections such as rubella [[12](#)], parvovirus B19 [[13](#)], and hepatitis B virus (HBV) can cause an acute polyarthrititis syndrome that may be mistaken for the inflammatory polyarthrititis of RA. However, the syndrome is usually short-lived, lasting only from a few days to several weeks, and rarely beyond six weeks.
- **Systemic rheumatic diseases** — Early RA may be difficult to distinguish from the arthritis of systemic lupus erythematosus (SLE), Sjögren's syndrome, dermatomyositis (DM), or overlap syndromes such as mixed connective tissue disease. In contrast with RA, these disorders are generally characterized by the presence of other systemic features, such as rashes, dry mouth and dry eyes, myositis, or nephritis, and by various autoantibodies not seen in RA.

- **Osteoarthritis** — Osteoarthritis (OA) can be confused with RA in the middle aged or older patient when the small joints of the hands are involved.
- ●OA of the fingers typically affects the distal interphalangeal joints and is frequently associated with Heberden's nodes in this area. In contrast, RA typically affects the MCP and proximal interphalangeal (PIP) joints and is not associated with Heberden's nodes.
- ●The carpometacarpal joint of the thumb is typically involved in OA.
- ●Swelling of the joints is hard and bony in OA. In contrast, soft, warm, boggy, and tender joints are typical of RA.
- ●Stiffness of the joint is a very common feature of RA but is relatively uncommon in OA. Furthermore, the stiffness of RA is characteristically worse after resting the joint (eg, morning stiffness), while the stiffness of OA, if present, is typically worse after any effort and is often described as evening stiffness. Morning stiffness in OA, when present, is usually transient or lasts no more than a few minutes, unlike the more sustained stiffness typical of RA.
- ●Radiographs also help distinguish RA from OA. OA is characterized by narrowing of the joint space due to cartilage loss and osteophytes due to bone remodeling, but not erosions or cysts.

- **Psoriatic arthritis** — Psoriatic arthritis can be difficult to distinguish from RA because a symmetric polyarthritis can be observed in both disorders [29]. We generally make the diagnosis of psoriatic arthritis in such patients who also have psoriasis and are seronegative for RF and anti-CCP. However, we diagnose RA in those with a symmetric polyarthritis who are seropositive for at least one of these antibodies, since skin psoriasis is so common.

- Miasmatic Diagnosis : Psorosyphilitic (Autoimmune)

Homoeopathic Management

Polycrest Remedies

- Arsenicum album
- Aurum metallicum
- Calcareo carbonica
- Calcareo flurionica
- Calcareo phosphorica
- Causticum
- Cimicifuga racemosa
- Dulcamara
- Ignatia amara

- Kalium carbonicum
- Kalium phosphoricum
- Lachesis mutus
- Lycopodium clavatum
- Medorrhinum
- Natrum muriaticum
- Natrum sulphuricum
- Nux vomica
- opium

- Phos
- Psorinum
- Pulsatilla
- Sepia officinalis
- silicea
- Staphysagria
- sulphur
- Thuja occidentalis
- Tuberculinum bovinum
- Zincum metallicum .

Specific/ Acute Remedies

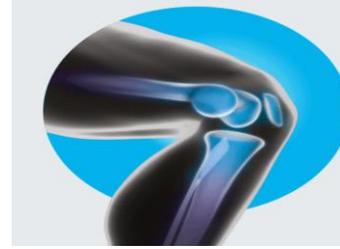
- Arnica montana
- APIS
- BELL
- Bellis perennis
- Berberis vulgaris
- Byronia alba
- Caulophyllum
- Formica rufa
- lith-c
- Kalmia latifolia
- Ledum palustre
- Magnesia phosphorica
- Rhodendron chrysanthum
- Rhus toxicodendron
- Ruta graveolens
- stront-c
- urt-u
- Viola odorata

- **GENERALS - INFLAMMATION - Joints; of**

- abrot. **ACON.** am-be. am-c. am-caust. am-m. am-p. *Ang.* ant-c. *Ant-t.* **APIS** aran. aran-ix. arb. arg-met. arist-cl. *Arn.* ars. asar. *Aur.* aur-m-n. bar-c. **BELL.** *Benz-ac.* berb. bora-o. brass-n-o. **BRY.** *Calc.* calc-hp. calc-p. carc. caul. *Caust.* cham. chin. chinin-s. cemic. clem. *Colch.* coloc. conch. cortico. cortiso. crot-h. cycl. *Dulc.* elat. eup-per. euphr. ferr. *Ferr-p.* fl-ac. form. *Form-ac.* gamb. *Gaul.* germ-met. gins. gnaph. graph. *Guaj.* hed. hep. hyper. ichth. ign. *Iod.* kali-ar. kali-bi. *Kali-c.* *Kali-i.* kali-m. kali-p. kali-s. *Kalm.* *Kreos.* *Lac-ac.* lac-c. lach. **LED.** lil-t. *Lith-be.* lith-c. lith-sal. *Lyc.* lyss. mand. *Mang.* meny. *Merc.* mez. morg. *Nat-m.* *Nat-s.* nat-sil. nit-ac. nux-v. ph-ac. phos. *Phyt.* podo. *Psor.* *Puls.* pyrog. rad-br. ran-b. *Rhod.* *Rhus-t.* *Ruta* sabad. sabin. sal-ac. sang. *Sars.* *Sep.* **SIL.** solid. spong. *Stel.* stict. stront-c. sul-i. sul-ter. *Sulph.* syph. tarax. thuj. tub. uncar-tom. urt-u. valer. ven-m. verat. verat-v. viol-t. visc.

- **Joints - ARTHRITIS, inflammation**
- **ACON.** act-sp. *Ang.* **APIS** *Arn. Aur.* **BELL. BRY.**
Calc. Caust. Ferr-p. Guaj. hyper. Iod. **KALI-C.** *Kali-i.*
Kalm. Kreos. Lac-ac. Iach. **LED.** lith-c. *Lyc. Mang.*
meny. Merc. Nat-m. Nat-s. Phyt. Psor. Puls. Rhod.
RHUS-T. *Ruta sabin. Sars. Sep.* **SIL.** *Sulph. verat-v.*
-

Bryonia



- Plant Kingdom
- S/A : Serous Membrane – Rheumatoid inflammation, Effusion
- Mucous Membrane- Arrested secretions
- Muscular system- Inflammation
- A/F: Anger, Taking cold in Summer, Suppression of skin eruptions
- Rheumatic diathesis.
- The limbs and **joints swell , become red, and very sensitive to touch or motion.**
- Weariness , Heaviness and Stiffness of all joints.
- **Stitching pains from slightest motion.**
- Agg – Slight Motion, night , Hot weather
- Amel- Pressure , lie on painful part, warmth of bed, after perspiration.

Rhus tox



- Plant Kingdom
- S/A : Skin- Vesicular eruptions
- Mucous membrane- Inflammation
- Sero- Fibrous Tissue (Tendons, Fasciae)- Rheumatoid Inflammation.
- A/F : Sprain, Overlifting, Damp weather, getting wet when heated, Cold Air
- **Great Rigidity , Stiffness,** ←
- Pain experienced on first motion , **better by continued motion.**
- **Hot painful swelling of joints,** soreness of condyles of bones.
- Ankles swollen after too long sitting. **Tearing pains in tendons, ligaments and fasciae.**
- **Agg- during rest, wet weather, cold,**
- **Amel- Warm, Change in position.**

- **Actea Spicata**
- Rheumatism of small joints (wrist , finger joints) . Wrist swollen , red. Pains are violent , tingling , tearing drawing character < touch, movement.

- **Actea racemose**
- Rheumatic pain in muscles. A/F sewing, typewriting, piano playing. Belly of muscles feel bruised, especially large muscles. Pains sever , shooting, stitching , shock-like , changes the location, from hip to hip, ovary to ovary. Rheumatic dysmenorrhoea.

- **Apis**
- Oedematous. Synovitis. Knee joint swollen, shiny sensitive , sore with stinging pain. Rheumatic pain in back and limbs. < heat, touch > open air , uncovering.

- **Belladonna**

- Shooting pains along limbs. Joints swollen , red shining, with red streaks radiating. Tottering gait, Shifting rheumatic pains. Cold extremities.

- **Colchicum**

- Tearing in limbs during warm weather, stinging during cold. Joint stiff , shifting rheumatism , inflammation of great toe , *cannot bear to have it touched or moved.*

- **Formica Rufa**

- Rheumatic pains, stiff and contracted joints. Muscles feel strained and torn from their attachment. Weakness of lower extremities. Pain in hips. Rheumatism comes with suddenness and restlessness. Sweat does not relieve. > After midnight and from rubbing.

- **Guaiacum**

- Rheumatic pains in shoulder, arms and hands. Growing pains(Phos). Gouty tearing with contractions. Immovable stiffness. Joints swollen , painful, and intolerant of pressure. Arthritic lancination followed by contraction of limbs. Feeling of heat in affected limbs.

- **Kali Carb**

- Backs and legs give out. Tearing in limbs with swelling. Limbs sensitive to pressure. Pain from Hip to knee. < cold weather > Warmth.

- **Kalmia**

- Deltoid rheumatism especially right. Pains from hips to knee and feet. Pain affect large part of limb and pain along ulnar nerve, with tingling and numbness of left arm.

- **Led pal**

- Gouty pains , shoot all through the foot and limb and in joints especially small joints. Crackling in joints , < warmth of bed. Gouty nodosities. Rhuematism begins in lower limbs and ascends. Soles painful

- **Lithium carb**
- Rheumatic pains throughout shoulder joint, finger and wrist. Swelling and tenderness of finger and toe joints. Rheumatism connected with heart lesions . Nodular swelling of joints.
- **Rhododendron**
- Joints swollen , Gouty inflammation of great toe joint. Rheumatic tearing in all limbs, especially right side < rest and stormy weather. Stiffness of neck. Pain in bones in spots and reappear by change of weather. Cannot sleep unless legs are crossed.
- **Ruta**
- Spine and limbs feel bruised. Small of back and loins pain. Legs give out on raising from a chair, hips and thighs are weak. Pain and stiffness in wrists and hands. Tendons sore, Ganglion.

- **Strontium Carb**
- Rheumatism with diarrhoea. Pain in right shoulder. Gnawing as if in marrow of bones. Cramps in calves and soles. Rheumatic pains with oedematous swelling.
- **Viola odorata**
- Rheumatism of upper parts of body especially carpal and metacarpal joints. Pressing type of pain. Right sided.

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*Thank
you*

