RHEUMATOID ARTHRITIS

Systemic inflammatory polyarthritis with extra articular manifestation.

Clinical Features

- Features of inflammation ++
- Early morning stiffness > 1hr
- Constitutional symptoms
- Symmetric
- Polyarthritis (less than oligo/mono)
- Small joints > large jts.
- Upper limb > lower limb

Most frequently - wrist, MCP, PIP joints.
DIP spared.

d/d → < 6 weeks.
↓
post viral arthralgia.

Common deformities

- Swan neck deformity
- Boutonniere deformity
- Z deformity

Swan neck → DIP flexion, PIP hyperextension.

Boutonniere → DIP hyperextension, PIP - flexion.

- ulnar deviation of fingers
- Hammer toe (flexion PIP)
- Hallux varus / valgus
- Bowstring sign
- Hitchhiker's thumb

(Q) Extra articular manifestations

① Rheumatoid nodules
- firm, non tender
- adherent to periosteum / tendons or ligaments
- Seen at forearm, sacral prominence, achilles tendon

② Secondary sjogren's

③ GIT.

④ osteoporosis

⑤ Lung involvement (Q).
- pleural effusion
pulmonary nodules
Interstitial LD : UIP/NSIP
CAPLAN SYNDROME: ~~Poly~~ Pulm. nodules + pneumoconiosis following silica exposure. + ve Rheumatoid arthritis.

⑥ Cardiac involvement
Pericarditis
cardiomyopathy
CAD
MC valve involved : MR

⑦ Hematological
Anemia of c/c disease
Neutropenia
FELTY SYNDROME: high risk of NHL B cell lymphoma
(neutropenia + nodular RA + splenomegaly)

⑧ Renal:
membranous nephropathy

Pathology

- c/c inflammation results in pannus formation.

pannus - synovial fibroblast + granulation resulting fibrovascular tissue

- ↓ gradually invades underlying cartilage and bone

pathogenesis - MHC II cells →

CD4 → T cells

↓

TH_1 TH_2 TH_{17}

→ release interleukins (TNFα)

→ activated B cells (plasma cells) → antibody

ACPA RF

osteoclast

bone resorption

ACR - EULAR classification

≥ 6/10 definite RA

- Joint involvement
- Serology
- ACPA
- Duration

Rule out: psoriatic arthritis, viral polyarthritis, gout, SLE

Investigations

① Serology (RF, ACPA).

RF (non specific, +ve in 1-5% healthy individuals)

+ve in SLE, Sjogren's, SABE, Hep B & C

② Synovial fluid.

WBC - 5 - 50K in inflammatory arthritis.

< 2K in OA.

crystals → gout, pseudogout

③ Imaging.

X Ray → bone erosions

MRI → bone marrow edema.

USG + Doppler → ↑ vascularity in synovitis

Clinical course

- 10% spontaneous remission.

Treatment

① NSAIDS → low dose steroid. 10 mg PREDNISONE

② GLUCOCORTICOIDS for initial phase.

↓ steroid therapy → consider prevention of osteoporosis. Ca and Vit D supplementation. Bisphosphonate / Denosumab. Teriparatide.

③ DMARDS.

Conventional: MTX, Leflunomide, Sulfasalazine, Hydroxychloroquine.

Biological: Anti TNF agents, IL inhibitors, Abatacept, Rituximab

Targeted synthetic DMARDS: Janus Kinase inhibitors → TOFACITINIB.

MTX → single dose / week. 7.5 - 10 mg + Folate

SDAI score → Tender joint & swollen joint count (28) + CRP + patient global activity

SDAI < 3.3 → remission