Spondyloarthropathies

- Immunological relation with HLA B27.
  1) Axial Spondyloarthropathy
     a) Ankylosing spondyloarthritis
     b) Axial spondyloarthritis
  2) Reactive arthritis
  3) Psoriatic arthritis.

Ankylosing Spondyloarthritis
↓ ↓ ↓
Stiffness Vertebra Inflammation

- Bechterew disease - Seronegative spondyloarthropathy that autoimmune diseases that affect the Joints with absence of Rheumatic factor.
- It is chronic Inflammatory disease that affects the vertebral Joints & (eyes & Blood vessels).

Etiology → Unclear
- Autoimmune disease with HLA B27 Positive
- Male to female ratio - 3:1.
- Associated with P - Psoriasis, I → IBD, R - Reiters syndrome.

Pathophysiology

Normally it has
1) Intervertebral Disc (Type I & Type II collagen)
   Annulus Fibrosis & Nucleus Pulposus.
   - shock absorber
2) Facet Joint (Synovial joint).
   - Limit the motion of spine.

Person with HLA B27 mutation positive.

↓

MHC class I molecule - serves the collagen

↓

T lymphocyte CD8+ T cells - binds to the antigen

↓

Cytokines → Neutrophils

↓

Cytokins (TNFα, IL1)

↓

Inflammation & destruction of the Intervertebral disc, facet joints & sacroiliac joint

↓

Fibroblast replace the destroyed with fibrin

↓

Fibrous band limits the motion.

↓

Osteoblasts forms the bone from fibrous tissue.

↓

Syndesmophytes (Maker Spine immobile)

Clinical Features

- Fatigue is the most common feature.
- Weight loss & fever.
- Sacroiliac Joint involvement is the criteria for diagnosis → Buttock pain.
→ Cervical / Thoracic region → Neck or Back pain & stiffness → Shortness of breath, Kyphosis.

Extra articular:

1) Anterior uveitis (common)
2) Prostatis and sterile urethritis.
3) Inflammatory Bowel disease.
4) Cardiovascular disease (Aortic valve disease).
5) Pulmonary fibrosis.

Investigation

→ Xray and MRI

Early → Erosion or narrowing of joint space.

Late → Joint fusion (Syndermophytes)

Xray → of Spine → Bamboo Spine → due to calcification of annulus fibrosus.

→ Blood → TCRP, TESR., Anemia

→ Genetic → HLA B27 positive.

→ No antibodies is associated like ANA, RF, ACPA.

Management

- Exercise, Physical therapy
- Biologics
- Spinal surgery is risky.

(Reiters Syndrome) Reactive arthritis. Seronegative

→ After infection causes inflammation. (HLA-B27)

Causes: Gram Negative (Lipopolysaccharide outride) (Endotoxin)

Sexually Transmitted
- Chlamydia

Gastroenteritis.
- Salmonella, Shigellosis, Yersinia, Camphylobacter, E.Coli

Clinical Features

2-3 weeks after infection

1) Pain & swelling of single large Joint } Reiters Syndrom.
2) Urethritis → Urgency, frequency, dysuria,
3) Conjunctivitis → Discharge, erythema, Burning
4) Cervicitis → Dyspareunia
5) Pericarditis → chest Pain & Fever.
6) Keratoderma blennorrhagia. → In palms & soles.
7) Circinate balanitis.
8) Uveitis, Mouth ulcers.

Investigation

- ESR & CRP.
- No antibodies for ANA, RF, ACPA.
- HLA B27.
- vaginal swab → Chlamydia.

Psoriatic arthritis ⇒ Inflammation.

Psoriasis → Red lesion

- Seronegative spondyloarthropathies

Pathology → Same as Psoriasis

CIF

5 types

1) Oligoarticular / Monoarticular.
2) Polyarticular ⇒ Resembles RA.
3) Distal Interphalangeal joint arthritis.
   ↳ Sausage digit or dactylitis ⇒ Hallmark
   → Nail abnormality like pitting.
4) Spondyloarthritis.
5) Arthritis mutilans.
   ↳ Telescoping of digit due to erosion of bone
   Opera-glass hand.

Enthesitis ⇒ Pain & stiffness in the insertions site of tendons or ligaments in bones.

Investigation

- HLA B 27, ↑CRP, ESR,
- No autoantibodies, No ACPA, ANA, RF
- X rays ⇒ Erosion, MRI, CT.