Ankylosing Spondylitis

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What is it?

- seronegative spondyloarthropathy
- enthesopathy
- primary or secondary
Epidemiology

- prevalence 0.5 - 1.5%
- male : female ratio equal

Van der Lind 85
Association with HLA B27

- Population and familial studies established the link

- Risk factor 2 - 10%

Emery 67
Brewerton 73
Is there a trigger?

- Klebsiella is implicated
- Stool counts *Ebringer* 78
- Modifying factor *Geczy* 80
- Lysis of lymphocytes
- Cross reaction *Prendergast* 83
IgA Levels

- Correlate with ESR and CRP
  
  *Cowling 83*

- IgA specific Abs fluctuate with disease activity
  
  *Trull 83*
What does this mean?

- Presence of cross-reactive antigens

OR

- Interaction between cell markers and the modifying factor
Cellular Events

- Infiltration by lymphocytes and mast cells
- Fibrous proliferation
- Chondrocyte metaplasia
- Endochondral ossification

Schichikana 85
Cellular Events

- Reaction between mast cell granules and fibroblasts actually leads to fibrosis
Clinical Presentation

- Age under 40
- Insidious low back pain
- Morning stiffness
- Non-dermatomal paraesthesia
Enthesopathies

- Achilles tendonitis
- Plantar fasciitis
- Costochondritis
- TMJ involvement
Extra-articular Disease

- Malaise and fever
- Ocular disease
- Restrictive lung disease
- Valvular heart disease
- Neurology (secondary to #)
Progression of Disease

- Axial disease leads to rigidity and deformity
- Minor trauma may cause fractures
- Two-thirds develop peripheral joint disease

*Hunter 78, Ginsberg 83*
Diagnosis

- Directed history taking
- Examine for both articular and extra-articular signs
- Schober Test
Radiographs

- Plain AP pelvis
- bilateral SI joint involvement
- symmetrical syndesmophytes
- facet joint involvement
- bamboo spine (ossification of AF)
Physical Therapies

- aim to maintain mobility
- females respond better than males
- young improve more than the old
- age of onset has no effect

- smoking hastens progression

Band 97

Averns 96
Can we operate?

- two-thirds get peripheral joint disease
- Hip joint frequently involved
- Good results with THR

Sochart & Porter JBJS 97
Heterotopic Ossification

- 14% grade I-II HO  *Sochart & Porter 97*

- Rares of HO no higher in AS than in controls  *Brinker 96*

- In neither series did any patient require revision because of HO
Spinal Surgery

- Cervical spine osteotomy  *McMaster 97*  
  *Koh et al 97*

- Lumbar spine osteotomy  *McMaster 85*  
  *van Royen 95*

- Complication rates
Pitfalls

- Romanus lesion

- Spiral fractures as a result of the rigidity of the spine causing it to fracture like a long bone