Revision Notes on Rheumatoid Arthritis

Definition
- Inflammatory, symmetrical polyarthritis
- Numerous extra-articular symptoms.
- Characterised by joint pain and stiffness in the morning and after exercise.

Incidence
- Incidence is increased in middle aged females
- FHx
- HLA DR4

Diagnostic pointers
1) Morning stiffness >1 hour for a duration of > 6 weeks.
2) > 3 joints involved for > 6 weeks.
3) Involves the joints of the hands and wrist.
4) Symmetrical
5) Rh nodules
6) Serum Rheumatoid factor (RF) +ve
7) XR changes

Signs and symptoms

General
- Pain
- Early morning stiffness
- Joint swelling
- Fever
- Fatigue
- Weight loss
- Anaemia- chronic disease, NSAIDs causing blood loss, DMARDs causing marrow suppression and Feltys syndrome causing splenomegaly.
- Rheumatoid nodules

Hands and wrist
- Symmetrical joint tenderness, redness, swelling
- Sausage shaped fingers
- Loss of valleys around the knuckles
- Loss of function
- Wasting of intrinsic hand muscles
- Swan neck deformity- hyperextension at the PIP joint and flexion of the DIP joint.
- Boutonniere deformity- flexion of the PIP joint and hyperextension of the DIP joint.
- Z thumbs
- Wrist subluxation
- Carpal tunnel syndrome
- Palmar erythema
- Radial deviation of the wrist
- Ulnar deviation of the fingers.
C- spine
- Atlantoaxial subluxation- need to take care during anaesthesia

Feet
- Hammer toes
- Hallux Valgus

Extra –articular manifestations
- Eyes- episcleritis, scleritis, dry eyes (Sjögrens syndrome)
- Skin- pyoderma gangemnomus, vasculitis, raynaud’s, rheumatoid nodules
- CVS- Pericarditis, myocarditis.
- Respiratory- pulmonary fibrosis (from methotrexate), pulmonary nodules, pleural effusion.
- Neuro- cord compression, carpal tunnel syndrome
- Felty’s syndrome- splenomegaly, reduced WCC, rheumatoid arthritis.
- Rheumatoid nodules- present on the elbow, Achilles tendon, pleura, pericardium, sclera.

Investigations
- FBC- anaemia of chronic disease
- ESR/CRP- ↑
- Rheumatoid factor (RF)
- Antinuclear antibodies (ANA)
- XR of joint- 1) Soft tissue swelling 2) Joint space narrowing 3) Secondary osteoporosis 4) Erosions at joint margins
- Synovial fluid- ↑ neutrophils, sterile
- CXR- heart and lung involvement

Treatments
- Physiotherapy
- NSAIDs- eg: diclofenac. They don’t halt disease progression. Use with PPI.
- Steroids- oral or intra-articular injections. Only for use in the short term.
- DMARDs- these slow progression, reduce inflammation and erosions. However take a long time to reach maximum effect (> 6 months). Often started soon after diagnosis with methotrexate plus another DMARD. Effectiveness monitored using CRP.
- With the DMARDs often start on methotrexate or sulphasalazine.
- Anti TNF α inhibitors (biological drugs)-only if 2 drugs have failed (1 of them to be methotrexate).
- Methotrexate- 1st line. However it is contraindicated in pregnancy as it is an anti-folate.
  SE: bone marrow suppression, pulmonary fibrosis, renal failure, heptotoxicity.
  Sulphasalazine- SE: heptotoxicity, bone marrow suppression, oligosperma.
  Azathioprine- SE: heptotoxicity, bone marrow suppression.
  Penicillamine- SE: nephrotic syndrome
  Gold –oral or IM injection. Is now rarely used. SE: nephrotic syndrome, skin reactions.
- Leflunomide- SE hypertension, heptotoxicity, teratogenic.
- Anti TNFα inhibitors- etanercept, adalimumab, infliximab.
  SE: blood dyscrasias, reactivation of TB, anaphylaxis.
• With all these drugs you need to monitor FBC, LFTs, U+Es, eyes (Hydroxychloroquine), BP (Leflunomide), PFTs (Methotrexate), urine for proteinuria.

• Surgery – if: worsening joint function, deformity, persistent pain.

Please Note
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