Connective Tissue Disease 1

- SLE
  - Pathology
    - Multi System autoimmune disease, with autoantibodies against a variety of autoantigens
    - Polycloncal B-cell secretion of pathogenic autoantibodies and formation of immune complexes
  - Epidemiology
    - Typically women of child bearing age
    - Common in Afro Caribbeans and Asians
  - Diagnosing SLE (4 or more)
    - Butterfly rash
    - Discoid rash
      - Erythematous raised patches with keratotic scales
    - Photosensitivity
    - Oral ulcers
    - Non erosive arthritis
    - Serositis
      - Pleuritis or pericarditis
    - Renal disorder
      - Persistant proteinuria or cellular casts
    - CNS Disorder
      - Seizures of psychosis
    - Haematological disorder
    - Immunological disorder
    - Anti-nuclear antibody
      - Over 95% cases are ANA +ive
      - Sensitive test
  - Clinical Features
    - Relapsing remitting condition
    - Other features: fatigue, pyrexia during flares, weight loss, myalgia, alopecia, Raynaud's
  - Monitoring activity
    - Double stranded DNA
      - A specific test
    - Decreased complement
    - CRP typically normal, ESR raised
  - Drug induced lupus
    - Over 50 drugs including isoniazid
    - Disease remits if the drug is stopped
    - OCP may worsen idiopathic SLE
  - Antiphospholipid syndrome
    - Can occur secodary to SLE (25% of cases) or as primary disease
    - Antiphospholipid antibodies are present
    - CLOT features
      - Coagulation defect, Livedo reticularis, Obstetric (recurrent miscarriage - give LMWH to prevent miscarriage), Thromobocytopenia
  - Treatment
    - High factor sunblock
    - Hydroxychloroquine
      - If joint / skin symptoms are uncontrolled by NSAIDs
      - SE: irreversible retinopathy
    - Steroids
      - Low dose may be of value in chronic disease
      - High dose prednisolone with severe flares
- Rheumatoid Arthritis
  - Chronic systemic inflammatory disease
    - Symmetrical, deforming peripheral polyarthritis
  - Presentation
    - Painful, swollen and stiff small joints of hand / feet
    - Higher prevalance in females; typically from 30s
    - Does not affect DIP joints
    - Worse in the morning
    - Peak onset in 40s
  - Acute flares superimposed over moderate progression
  - Signs
    - Early
      - Joint swelling (symmetrical MCP, PIP wrist), inflammation, synovitis
    - Later
      - Joint damage, deformity, ulnar deviation of fingers, dorsal wrist subluxation
      - Swan neck and Boutonniere deformities of fingers, Z-shaped deformities of thumb
    - Extra articular
      - Nodules on elbows, fibrosing alveolitis, pleural effusion, Raynaud's, carpal tunnel, periperhal neuropathy
    - Felty's Syndrome
      - Complication of RA
      - Triad of seropostive RA, neutropenia, and splenomegaly
  - Investigations
    - Rh Factor
      - Positive in 75% cases
    - Bloods
      - Anaemia of chronic disease
      - Inflammation causes raised platelets, CRP and ESR
    - X-Ray
      - Soft tissue swelling, juxta articular osteopenia, bony erosions
  - Management
    - Steroids
      - Rapidly reduce inflammation / controls symptoms in short term
      - Useful for acute flares
    - NSAIDs
      - Help control symptoms, try different NSAIDs as response varies
      - Paracetamol + weak opiates use is limited
      - Reduce inflammation
      - COX-2 inhibitors where indicated
    - DMA
      - Early use of disease modifying agents improve symptoms / long term outcomes
      - Methotrexate
        - Weekly dose; avoid in liver disease, pregnancy
        - SE: oral ulcers, nausea, lethargy, myelosuppression, hepatotoxicity
        - Anti-inflammatory effects are due to effects on TNF pathways
      - Sulfasalazine
        - SE: myelosuppression, nausea, rash, low sperm count
        - Reduces synthesis of inflammatory mediators and cytokines (no immunosupressant action)
      - Gold
        - Usually via IM injection, high toxicity
        - SE: myelosuppression, renal toxicity, rash, photosensitivity
      - Hydroxychloroquine
        - Least toxic, although possibly least effective
        - SE: rash, retinopathy
- Systemic Sclerosis
  - Features
    - Scleroderma - skin fibrosis
    - Vascular disease
  - Limited systemic sclerosis
    - CREST syndrome
    - Calcinosis (sub cut tissues), Raynaud's, oEsophageal and gut dysmotility, Sclerdactyly and Telangiectasia (non blanching haemorrhages)
    - Skin involvement is limited to face, hands and feet
    - Associated with anticentromere antibodies and pulmonary HT
  - Diffuse systemic sclerosis
    - Diffuse skin involvement, whole body when severe
    - More profound organ fibrosis: lung, cardiac and renal disease
    - Prognosis is often poor
  - Therapy
    - Currently no cure
    - Immunosuppressive regimens are used for organ involvement or progressive skin disease
    - Regular ACE-I reduces risk of renal crisis