Meningitis - if suspected cefotaxime immediately (benzyl penicillin if meningcoccal rash)

- ▲▲ Stiff Neck
  - Tonsillitis, pneumonia, subarachnoid bleed
- Organisms
  - Neisseria Meningitidis
    - Abrupt onset +/- rash
    - Septicaemia may occur without meningitis
    - Arthritis, conjunctivitis, myocarditis +/- DIC
    - Any age
    - Cefrotaxime + benzyl penicillin
  - Haemophilus Influenzae
    - Rare if immunised
    - Typically < 4 years
    - Steroids before antibiotics (prevent hearing loss)
    - Ceftriaxone + ampicillin
  - Strep Pneumoniae
    - Any age
    - Risk factors: resp infections, skull fracture, meningocele, HIV
    - Ceftriaxone or benzylpenicillin +/- rifampicin (if resistant)
  - E Coli
    - Major cause of meningitis in neonates
    - Signs: feeding difficulties, apnoea, seizure and shocks
    - Cefotaxime
  - Group B Haemolytic Streptococci
    - For example via mother's vagina
    - Infection may be delayed a month
    - Benzylpenicillin
  - *Meningococcal*
- Complications
  - Disseminated sepsis, subdural effusion, hydrocephalus, ataxia
  - Paralysis, deafness, decreased IQ, epiplepsy, brain absecess, DIC
- Meningococcal Prophylaxis
  - Contacts with aerosolised meningococci or deep kissing
    - Household contacts in droplet range
    - Contacts in nursery in saliva range
  - Rifampicin 12 hourly for 4 doses
    - Interacts with OCP, stains contact lenses, turns urine red
  - Ceftriaxone single IM dose
- Signs
  - Suspect in any ill baby or child
  - Insidious: usual crying, poor feeding, vomiting
  - Meningeal: stiff neck (absent < 18M), photophobia (late & unreliable), Kernig's sign (resistance to extending knee with hips flexed)
  - Raised ICP: irritable, high pitched cry, drowsy, vomiting, fontanelle sense
  - Septic: increased temp, odd behaviour, rash, cyanosis, DIC, tachycardic, low BP, tachypnoea, raised WCC
- Treatment (before organism is known)
  - Protect airway, high flow O2, IV access, colloid boluses
  - Cefotaxime IV
  - Dexamethasone IV with first antibiotic dose
  - If pre hernia signs treat for raised ICP with mannitol
  - If about to cone intubate and ventilate
  - Inform public health
  - Conning sign: bradycardic = hypertension
- Management
  - Lumbar puncture unless contra indicated with: focal signs, DIC, purpura (priority is penicillin), brain herniation, decreased concious level
  - Four CSF drops in each of 3 bottles for urgent gram stain, culture, virology, glucose and protein
  - Frequent CNS observations
  - FBC, U&E, culture blood, urine, nose swabs, virology
  - Hearing test when better

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