SYPHILIS

INITIAL EVALUATION IF MATERNAL VDRL or RPR POSITIVE

- Check maternal HIV and Hepatitis B status
- Take blood from infant for VDRL/RPR and anti-treponemal EIA IgM (1.3 mL clotted serology bottle, **not cord blood**). Tests required vary between Trusts, discuss with your laboratory first, and mark request with syphilis serology, maternal test positive
- Examine infant thoroughly for evidence of congenital syphilis, looking for**:**
  - rhinitis/ulceration of nasal mucosa
  - anal lesions causing fissures and bleeding
  - flat plaques on perineum
  - skin eruptions, usually maculopapular but can be circuate
  - swollen, red and mottled palms and soles, desquamating later
  - pseudoparalysis of an extremity
  - non-immune hydrops/anaemia
  - jaundice
  - hepatosplenomegaly and lymphadenopathy
  - pyrexia
- Obtain relevant history, particularly:
  - whether syphilis early or late
  - when mother treated (should be at least 4 weeks before delivery)
  - levels of maternal antibodies pre- and post-treatment
  - which antibiotics mother was treated with

Risk grouping and management

Infants with proven or highly probable disease

- Abnormal physical examination consistent with congenital syphilis

or

- Serum titre VDRL/RPR >4-fold (i.e. 16 times) that of maternal titre e.g. maternal 1:2, neonate >1:32 (i.e. 1:64 or more)

Infants at high risk but asymptomatic

- Normal physical examination **and**
- VDRL/RPR titre the same or <4-fold (i.e. 16 times) that of maternal titre **and** one or more of following:
  - mother not treated, inadequately treated, or has no documentation of having been treated
  - mother treated with erythromycin or other non-penicillin regimen
  - mother treated ≤4 weeks before delivery; or
  - mother has early syphilis and a nontreponemal titre that has not decreased fourfold from initial titre

If information required not available, consider infant as high-risk.
Infants whose mothers are HIV positive must be considered high-risk as their immunoglobulin concentrations may not be reliable

Investigations for both groups

- FBC, differential, and platelet count
- If clinically indicated:
  - chest X-ray
  - long bone X-rays
  - liver function tests
  - cranial ultrasound
  - ophthalmologic examination
  - auditory brainstem response
  - CSF VDRL, cell count and protein

Treatment (both groups)

Benzylpenicillin **30 mg/kg IV 12 hrly for first 7 days; then 8 hrly for further 3 days**

Infants at low risk and asymptomatic

- Normal physical examination **and**

- VDRL/RPR titre the same or <4-fold maternal titre **and** one or more of the following:
- mother treated appropriately for stage of syphilis and at least 4 weeks before delivery
- mother's titres reduced 4-fold after treatment for early syphilis or remained low and stable for late syphilis no evidence of subsequent relapse

Investigations
None required

Treatment
- Offer parents choice of either single IM injection of **procaine penicillin 100 mg/kg IM or, if unavailable,** benzathine penicillin 50,000 units (37.5 mg)/kg (given after using 0.5 mL 1% lidocaine) or 10 days IV benzylpenicillin as above
- benzathine penicillin does not treat neurosyphilis or syphilitic osteomyelitis adequately

Not infected to fully treated mother
- Normal physical examination and VDRL ≤ four fold maternal titres **and** maternal treatment was adequate before pregnancy with mother's titres remaining low and stable in pregnancy: no investigations or treatment required

FOLLOW UP
- If infant not infected to fully treated mother **and** mother seronegative, no follow-up
- Otherwise, serological testing (VDRL/RPR) every 3 months until test non-reactive or titre has decreased fourfold
- if titres stable or increase after 6-12 months, repeat investigations (e.g. LP) and treatment