

Neonatal Sepsis

Infection spreads rapidly through blood, and one of the most common we see in the nursery is staph or strep. If it's strep it's usually because somebody has a cold such as staff, nurse or even mom. Staph comes from the skin and is a result of poor hygiene, so practice good handwashing! There are about 1-5 incidences per 1000 births and the risks go up with the little babies in NICU. Sadly, infections in the neonate have a high mortality rate.

Sepsis: Risk Factors

- Maternal low SES
- Prolonged labor
- Premature labor
- Maternal UTI
- PROM
- Twin gestation
- there are others, but these are the main ones.

Sepsis: Signs & Symptoms

- Apnea, bradycardia
- Tachypnea, grunting, nasal flaring, retractions, low O2 saturations...basically signs of respiratory distress.
- Sepsis, which shows as acidosis, decreased cardiac output, hypotension, fever, elevated white count, decreased perfusion, decreased urine output, coagulopathies, etc.. For more information about sepsis, see the Sepsis Latte at www.straightnursingstudent.com

Diagnostic Tests for Neonatal Sepsis

- CBC with diff
- Chest X-ray
- Gram stains
- Pan cultures...blood (2), urine, sputum, spinal fluid, skin...basically anything and everything.

Therapy for Neonatal Sepsis

- Instituted before results of workup are obtained
- Two antibiotics, usually ampicillin and gentamicin given for about 7 to 14 days with the goal of maintaining respirations, optimizing hemodynamics, supporting nutritionally and achieving metabolic homeostasis.

TORCH Infections

- Toxoplasmosis S&S: convulsions, coma, hydrocephalus, microcephaly Survivors are often blind, severely retarded or deaf. Cats are carriers (pregnant women should not clean the litter box!)
- Rubella: can cause congenital cataracts and heart defects, deafness. Babies are infectious at birth and must be put into isolation. The treatment for this is to basically prevent it...mom must get the vaccine right before she leaves the hospital and she absolutely cannot get pregnant for three months!
- Cytomegalovirus infects a small number of newborns (0.5-2.5%), but it has a significant mortality rate of up to 30%. It causes a lot of problems including mental deficits, microcephaly, hydrocephaly, cerebral palsy, hearing deficits.
- Herpes Simplex is passed to the baby during the birthing process as baby passes through the vaginal canal. If mom has a present lesion she has to have a C/S because the risk of transmission is so high (50%). Babies get symptoms soon after birth, about 2-12 days and will have temperature regulation problems (too high or too low), jaundice, won't eat well, will have lesions and possibly even seizures. You'll treat with medication!

Other Infections

- Gonorrhea: babies will have neonatal conjunctivitis (aka ophthalmia neonatorum), corneal ulcerations and discharge and may even get septic. You'll treat prophylactically with erythromycin ointment.
- Syphilis: Baby will have a red or copper-colored rash, fissures at his mouth, be cranky, look edematous, have rhinitis and possibly others. You need to isolate these babes and give them penicillin.

- Hepatitis B is passed from mom to babe during childbirth, and can be prevented with a routine vaccine. If a baby is born to an infected mom, he will get immunoprophylaxis.
- HIV is an opportunistic disease with a vertical transmission of 13-40%. If you suspect HIV in your babe, you'll test them before they are 48-hrs old and can get results via PCR in 24-hours. You'll test again at 1-2 months and once more at 4-6 months. The signs of HIV are numerous and can include recurrent respiratory infections, rhinorrhea, enlarged glands/spleen/liver, and pneumonia (there are lots more). You will treat this baby by providing optimal nutrition to facilitate growth, protect him from infections, promote attachment with mom, provide good skin care and comfort the poor little guy.

Bacterial Infections

- Group B Strep signs/symptoms are respiratory distress and pneumonia, apnea (not breathing), shock states, meningitis (late-onset). Long-term you'll see neurologic complications. Risk factors for this infection are being premature, a maternal fever at time of birth, ROM >24 hrs, an infant that was previously infected and GBS bacteriuria in current pregnancy. Babies are screened and treated with prophylactic abx.
- Chlamydia Trachomatis will show as newborn conjunctivitis and pneumonia. You'll give these babes the erythromycin ointment (I think all babies get this actually).
- Other Bacterial Infections include TB (if active don't let baby have direct contact with mom), e. Coli, fungal infections, listeriosis and candidiasis (thrush, diaper rash...give Nystatin)

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