ASHFORD & ST PETER'S HOSPITALS NHS TRUST
Neonatal Intensive Care Unit Antibiotic Policy

1. Our antibiotic policy for early onset sepsis complies with the NICE guideline CG149. Minimising the use of antibiotics is important.

2. Microbiology support for the Neonatal Unit at St. Peter's is strong and cases of concern, or proposals to deviate from this guideline may warrant discussion with a consultant microbiologist.

3. This policy supercedes all previous policies. **Doses should be checked with the neonatal formulary.**

4. **First Line/Early Onset sepsis antibiotics** are used to cover primarily "maternally-acquired" type infections, such as Group B Streptococcus and gram negative enteric bacteria such as E.Coli.

5. For babies on the postnatal ward (Joan Booker Ward, JBW) and TCU who are generally well use **Cefotaxime 50mg/kg bd**. It can be given IM if venous access is not available at the time the antibiotic is due.

6. For babies admitted to the Neonatal Unit, use **Benzylpenicillin 25mg/kg every 12 hours and Gentamicin 5mg/kg every 36 hours** is administered i.v. for suspected early onset sepsis. The first gentamicin level is taken about 30 hours after the first dose, so the decision to continue antibiotics needs to have been made by that time.

7. If a baby moves between TCU/JBW and the Neonatal Unit, then the early onset antibiotic treatment should also change if appropriate to known culture results.

8. **Second Line/Late Onset sepsis antibiotics** are used to cover primarily "nosocomial" type infections, such as CONS and enteric gram negative infections (E.Coli, Klebsiella, Enterobacter). **Tazocin and vancomycin** are administered for suspected nosocomial sepsis. Vancomycin levels will need to be measured at regular intervals. These antibiotics remain the same regardless of where the baby is located (neonatal unit or TCU/JBW)

9. In babies with confirmed NEC, metronidazole may be added but Tazocin does provide broad anaerobic cover. Teicoplanin has the same spectrum as vancomycin, and is expensive, so requires consultant discussion before prescription.

10. Trimethoprim 2mg/mg nocte orally is used as prophylaxis in renal tract obstruction.

11. For confirmed staphylococcal skin infection, IV Co-amoxiclav covers staph well (see below). IV flucloxacillin may be used to narrow the spectrum.

12. The absorption of oral antibiotics in babies is unpredictable, which can result in sub-optimal treatment doses being used, which in turn may contribute to the emergence of bacterial resistance. However oral flucloxacillin may be considered.

13. The threshold for commencing antibiotic treatment is necessarily low in neonatal intensive care. However once commenced, the duration of treatment should be tailored to clinical circumstances with supporting laboratory evidence. Thus a CRP should be performed at presentation and again at 18 hours after presentation to help the decision making about when to stop antibiotics

14. If concern regarding suspected sepsis is subsequently allayed (negative cultures by 36 hours, normal laboratory indices, absence of clinical signs), antibiotics should be promptly discontinued. **If there is no evidence for sepsis, there is no place for "a course" of antibiotics.**

15. If the baby fails to respond to these antibiotics, consider fungal infection or a multi-resistant organism, and investigate appropriately before changing treatment. Proposals for antibiotic therapy that do not follow this guideline should always be discussed with either the attending **Neonatal Consultant** or the **Consultant Microbiologist**. Meropenem (± vancomycin) is the usual **third line antibiotic** in these cases.

16. We give routine antifungal prophylaxis (fluconazole, 6mg/kg every 72hrs) to babies <1000g on second line antibiotics, and to those on prolonged first line antibiotics. Treatment of confirmed fungal infection with i.v. amphotericin/ flucytosine or fluconazole is for discussion with the attending Neonatal Consultant

17. **Blood cultures taken at birth must be taken carefully**, so that skin contaminants are not cultured which could result in a false-positive blood culture (and potentially unnecessary treatment being given). Provided that the skin is cleaned properly, a cannula can be inserted and a sterile needle/syringe used to extract the blood flowing back. At least 0.5ml should be taken for culture, and the needle must be changed before insertion into the blood culture bottle, using an aseptic, no-touch technique. Remember to clean the lid of the culture bottle with an alcohol swab and don't touch it! A separate syringe should be used to collect blood for other tests. You must use gloves to protect yourself and the baby.

References

1. CG149 Antibiotics for early-onset neonatal infection: NICE guideline www.nice.org.uk

2. Selective fluconazole prophylaxis in high-risk babies to reduce invasive fungal infection" Archives of Disease in Childhood - Fetal and Neonatal Edition 2007;92:F454-F458

Guideline History

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