Does Transport Time to Offsite Microbiology Affect Time to Positivity of Blood Cultures in Infants Screened for Early Onset Sepsis?

Edward Donald James Broad, Norfolk and Norwich University Hospital

Background Screening babies for early onset sepsis represents a high proportion of neonatal antibiotics use. Due to historical concerns about the delays in transportation of blood cultures from our District General Hospital to off-site microbiology services, antibiotics are currently continued until the automatically generated report of 'no growth' appears 36 hours after incubation begins in the microbiology lab. Consequently, it was predicted that babies were having multiple doses of unnecessary antibiotics, and a prolonged stay, without ascertaining whether there was a significant delay in reporting of positive blood cultures caused by transport off-site.

Objectives To determine whether the transport time to offsite microbiology affects the Time To Positivity in blood cultures sent from a District General Hospital NICU.

Methods Blood culture data from 1/1/2015–13/05/2020 was obtained, and analysed for indication for antibiotics, CRP values, bacteria isolated, whether the bacteria was clinically considered a contaminant, and time elapsed from culture being taken and antibiotics commenced to phone call to NICU informing them of a positive result. Finally, NICE guidelines for discontinuation of antibiotics at 36 hours (well baby, low initial suspicion of sepsis, reassuring CRP trend) was retrospectively applied to the true positive blood cultures taken for early onset sepsis, to ascertain if any neonates would have inappropriately had their antibiotics stopped due to transport time to offsite microbiology.

Results 2113 blood cultures were sent over the 5 year period studied, of which 37 were positive, 14 were considered ‘true positives’, and 6 were true positives from infants screened for early onset sepsis. 5/6 (83%) flagged as positive at 36 hours from being taken, and 6/6 flagged at 48hrs from being taken. The single outlier was a baby who was intubated, cooled and transferred to a tertiary centre. Both CRP values in this child were >10. In early onset sepsis screening, the negative predictive value of a negative culture having further growth after 36hrs was 99.8%.

Conclusions If the NICE guidance for discontinuing antibiotics in early onset sepsis were followed, and antibiotics were stopped 36 hours after commencing in well appearing babies with a low initial suspicion of sepsis, with two CRP levels less than 10, and with blood cultures that have not flagged as positive by 36 hours from starting antibiotics, there would have been zero cases of missed bacteraemia in five years. The concerns about the impact of transport time are unwarranted, and lead to poor antimicrobial stewardship practices. Based on previously gathered data on the number of inappropriate extra antibiotic doses given to these babies, in a centre with 2500 live births/year, this has the potential to save £1700/year in drug costs alone, and could reduce the length of stay by 12–24 hours for 116 low risk babies per year.

British Association of Perinatal Medicine and Neonatal Society

Social Distancing in the Seminar Room of a Children’s Hospital – a Prospective QI Analysis of Practices and Recommendations

1Naveed Alam, 2Saadaya Nazneen Bhugalee, 3Muhammad Nadeem, 5Srinidhi Bandi, 2Sonal Kapoor, 2Mehulkumar Joshi, 1Leicester Royal Infirmary, 2Leicester Royal Infirmary

Background SARS-CoV-2 can be spread when people have close sustained contact. This means spending more than 15 minutes within two metres of a covid-positive person as it spreads through droplets from sneezes and cough. To that effect, Public Health England recommends social distancing, that is, maintaining a distance of at least 2 metres between people of different households. In cases where a 2m distance is not possible, additional measures such as a wearing a face covering and having adequate ventilation should be ensured.

Objectives The objective of this audit was to look at social distancing measures among healthcare professionals during the morning paediatric handover in the seminar room at our Hospital and to identify areas of improvement so as to prevent the spread of the infection among hospital.

Methods A daily handover was carried out at the morning handover in the seminar room from 1st November 2020 to