Results 105 positive blood cultures were returned for the time period. 6 did not have an FBC result performed close to the time of culture (N=99). These were compared to a control group of 269 negative blood cultures. Infants were matched for year of birth, birth weight and gestation.

The mean WCC in the culture-positive group was 14.2 (CI 5.76 – 18.45), and 18.63 in the negative group (CI 17.7 – 19.56).

ROC analysis revealed an Area Under Curve of 0.802 ($p < 0.0001$). A WCC cut-off value of 9 had a PPV of 0.8 (CI 0.5–1.3) and Specificity of 93.02% (CI 88.8–96.0) in predicting culture-positive EOS, a NPV of 100% (CI 99.9–100) and Sensitivity of 54.55% (CI 44.2–64.6).

Analysis of the mortality rate amongst positive cultures revealed that a WCC value of less than 4 gave an Odds Ratio (OR) for death of 3.66 (CI 1.14–11.8; $p < 0.03$) and relative risk for death of 2.92 (CI 1.17–7.5; $p < 0.03$) amongst infants with positive cultures.

Conclusions Our research has demonstrated a subgroup of WCC and neutrophil values which can help to identify infants who are likely to have EOS. This may aid neonatal staff in cohorting infants for admission and observation, or for earlier LP and high dose antibiotics.

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GP250 NEONATAL JAUNDICE SURVEILLANCE- ARE WE WINNING?

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Objectives To determine the incidence of babies presenting with Serum bilirubin (SBR) >400 micromol/litre in last five years (2013–2017)

To review the factors leading to admission of neonates with SBR >400 micromol/litre in last 2 years (2016–2017)

Method A multicentre retrospective review of the yearly data of neonates <28 days treated for very high SBR >400 micromol/litre across GGC between years 2013–2017 was collected from the Laboratory database. Detailed retrospective review of all the neonates treated for SBR >400 micromol/litre in three NNU in 2016 & 2017 was done by case notes, midwifery record notes and online patient database

Variables including gestational age, age at presentation, gender, family history, type of feeding, serial bilirubin levels (transcutaneous bilirubinometer (TcB), blood) before and at the time of start of treatment were reviewed to determine the causes of presentation with high bilirubin levels in spite of having a Jaundice surveillance system in place.

Results The number of babies needing treatment due to high SBR (>400 micromol/l) has significantly declined from year 2013 to 2017 across GGC (p value=0.002).

Total 18 patients with SBR >400 micromol/l were admitted in 2016 (n=10) and 2017 (n=8). Majority of the babies were male (n=10, 55%), commonest gestational age group was between 37–40 w (n=14, 78%), presenting between 5–10d of life (n=13, 72%) and referred by the community midwives (n=17, 94%). TcB was most commonly used to assess SBR before referral to hospital (n=11, 61%), majority of the babies received treatment for the first time (n=16, 89%) and most of the babies were breast fed (n=8, 44%). Predisposing factors for jaundice included breast feeding (n=10), cephalhematoma/bruising (n=3), Hereditary Spherocytosis (n=1) and G6PD deficiency (n=1). Other factors included lack of close monitoring for jaundice in community (n=8), discrepancy of correlation between TcB and SBR values (n=6), inappropriate plotting on bilirubin charts (n=2).

Conclusion Incidence of babies presenting with SBR >400 micromol/l has significantly reduced in last five years. This could be secondary to introduction of TcB in community and improvement in jaundice surveillance system. However there is still margin for improvement as new cases are still presenting either due to inappropriate monitoring in community or discrepancy in co-relation of levels between TcB and SBR.

GP251 IS HEART RATE VARIABILITY (HRV) A PREDICTOR OF INTRAVENTRICULAR HAEMORRHAGE (IVH) IN PRETERM INFANTS?

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Introduction Intraventricular haemorrhage (IVH) occurs in up to 15–20% of babies born before 32 weeks, and up to 30% in babies less than 28 weeks gestation.

Injury can cause detrimental short and long-term health outcomes.

Heart rate variability (HRV) is a measure of autonomic function controlled by cardiorespiratory reflexes.

Depressions and decelerations in HRV are sometimes witnessed clinically with acute central nervous system injury, such as haemorrhage.

Aim This study aims to describe HRV as a prognostic tool in diagnosing IVH.

Method This project analysed ECG data from 28 preterm infants (<32 weeks gestation) who have been enrolled in a prospective randomised trial of umbilical cord management in CUMH.

The HRV was computed from the ECG. This was achieved by

1. Extracting a 15 minute epoch of ECG free from major artefacts from the long-duration recordings. Two time points were chosen, 6 and 12 hours.
2. Identifying the ECG R-peaks by visual inspection using HRV Analysis (a UCC software package designed specifically for this task)
3. Extracting quantitative HRV features from the R–R interval.

The 7 HRV features were defined in 1996 by the Task Force of the European Society of Cardiology and the North American