P451 IMMUNE FUNCTION IN HEALTHY MALE AND FEMALE TERM INFANTS

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Aims Male neonates appear to be more susceptible to infection than females. The immunological reasons for this are poorly understood. Our aim was to compare the immune response of healthy term male and female neonates using flow cytometry and cytokine analysis.

Methodology Whole blood was collected with routine phlebotomy in healthy, term infants on the postnatal ward within 48 hours of delivery. Samples were processed for flow cytometry and cytokine analysis. Whole blood was treated with endotoxin (LPS; 10 ng/mL) for 1 hour at 37°C before subsequent analysis. Granulocytes and monocytes were identified by flow cytometry based on light scattering properties and cell surface markers. Multiplex ELISA was undertaken using a multisport 96-well plate customised for the experiment.

Results In total 26 neonates were analysed (13 of each sex) with 20 having flow cytometry analysis and 6 undergoing ELISA. Female monocytes had higher CD11B expression than males following endotoxin stimulation. GM-CSF, IL-10, IL-1RA and IL-8 increased significantly following endotoxin stimulation in females but not males ($p < 0.05$)

Conclusion Male and female neonates mount different immune responses following septic challenge. Results suggest that females mount a more robust immune response and may be better able to modulate the immune response resulting from infectious stimuli.

P452 AUDIT OF MN-CMS NEONATE OVERVIEW CLINICAL VIEW DATA AT DAY 2 NEWBORN CHECK

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Introduction Maternal and Newborn Clinical Management System (MN-CMS) is a new electronic medical record (EMR) that is used nationally in several maternity hospitals in Ireland. It was introduced to develop a paperless working environment and to facilitate access to patient information on a central system. In this audit, we aimed to evaluate the completeness of information entered in infants' EMR at birth and to assess which parameters are most frequently missing when the day 2 newborn check is performed. The aim was to identify which maternal and neonatal parameters are lacking and to increase awareness of this missing data.

Method For this audit, 100 infants' EMR were evaluated (50 public, 50 private patients) at two different time points to investigate if there was any difference in the recording rate from the Clinician View- Neonate Overview. Parameters included labour and birth information of the infants. All the data was analysed together and compared between the public and private patients.

Results

Abstract P452 Table 1

Categories (Neonatal Overview)	August – October results	November – January results
Date of birth	100	100
Time of birth	99	100
Apgars (1 and 5 minute)	91	98
Gender	99	100
Maternal pathway to delivery	89	83
Delivery category	87	83
Delivery type and birth	82	79
Maternal anaesthetic	33	42
Maternal rupture of membranes	50	52
EGA at birth	100	100
Birthweight	99	99
Neonatal multiple gestation	90	98
Cord bloods and results	29	40
Amniotic fluid color	73	67
Maternal age	100	100
Gravidity and Parity	100	100
Blood group	98	100
Serology	84	82
Fetal and Maternal risk factors	82	78
Feeding type	52	47

Discussion Results showed that though similar parameters were lacking in both groups, there was an improvement in recording noted in the second group (Date of Birth, Time of birth, Apgars, Gender, Estimated Gestational Age, Birthweight, Neonatal multiple gestation, Maternal age, Gravidity and Parity and Blood group). However, there are some areas that still require improvement and clarification as to when recording is needed or not. A follow-up audit is recommended to confirm that data recording training modules have been implemented and are successful.

P453 NEONATAL STREPTOCOCCAL B INFECTIONS

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Introduction Despite recommendations for universal screening and intrapartum antibiotic prophylaxis strategies for pregnant women, group B Streptococcus (GBS) remains a major cause of neonatal disease. The aim of our study was to determine the incidence, risk factors and outcome of maternal-fetal infection (MFI) due to GBS.

Methods A retrospective study of all cases of neonatal streptococcal B infections arising within 72 hours of birth between January 2012 and December 2017 in our department.