delayed in the smallest neonates. For all consecutive postnatal observations, Jaffe always resulted in higher Scr compared to the enzymatic technique, but the differences in median values between both techniques (0.1–0.26 mg/dl, equal to 8.8–23 μmol/l), were not a fixed value.

Conclusions When using Scr to estimate renal function in neonates, clinicians should in addition to postnatal changes and other covariates of renal function, also consider the technique applied. There is no fixed conversion factor to correct for differences between both techniques.

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1337 NEWBORN AND ADULT MONOCYTES SHOW DIFFERENT INFLAMMATORY RESPONSES TO BACTERIAL INFECTION: POTENTIAL ROLE OF MAPK INHIBITION

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Background and Aims The neonatal inflammatory response is associated with adverse outcomes like chronic lung disease. Recent studies suggested that newborn innate immune responses differ from adults. We aim to compare the expression of inflammatory cytokines between newborn and adult monocytes, and to investigate the mechanisms underlying the differential response.

Methods Purified monocytes from 15 healthy term newborns (C-section, no labor or chorioamnionitis) and 15 healthy adults (no infection), were cultured (90min) and stimulated without or with 0.1ng/ml or 10ng/ml LPS for 4 or 24 hours. Cells were harvested and RNA extracted. mRNA expression was determined with real-time PCR and normalized to β2-microglobulin as housekeeping gene. Results were analyzed by ANOVA and Students t-test with $p \leq 0.05$ considered significant.

Results Results are discussed in comparison to control values. Newborn monocytes showed increased IL6 (0.1ng/ml or 10ng/ml LPS) and TNFα (0.1ng/ml LPS) expression after 4h, whereas IL10mRNA was lower after 4h and 24h LPS compared to adults. LPS-stimulation increased NFKBp65 expression in adults but not in newborns at 24h. IKBα and Toll-interacting protein were comparable between groups. IRAK3 (TLR4-pathway regulator) was elevated in newborns at 4 and 24h with LPS-stimulation, but only at 24h in adults. Dual specificity phosphatase 1 (DUSP1) was significantly lower in newborn monocytes compared to adults after 24h LPS at both concentrations.

Conclusions Newborn compared to adult monocytes show increased expression of inflammatory cytokines. Diminished upregulation of DUSP1 (negative regulator of MAPK-pathway) might explain the enhanced pro-inflammatory profile of newborn compared to adult monocytes after microbial stimulation.

1338 HIGH PROPORTION OF INTESTINAL ESBL COLONIZATION AMONG INFANTS AT A NEONATAL INTENSIVE CARE UNIT IN A TERTIARY HOSPITAL IN ECUADOR

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Background and Aims Neonatal infections caused by Extended-spectrum beta-lactamase (ESBL)-producing bacteria are associated with increased morbidity and mortality. No data are available on neonatal colonization with ESBL-producing bacteria in Ecuador. The study aimed to assess the proportion of intestinal colonization with ESBL-producing *Enterobacteriacae* and their resistance pattern among infants hospitalized at the neonatal intensive care unit, Cuenca, Ecuador.

Methods From February to April 2011, stool specimens were collected, every two weeks, from all hospitalized neonates. Rectal swabs were plated on Mac Conkey agar containing cefotaxime and ceftazidime. Species identification and susceptibility tests were confirmed with Vitek2 and the epidemiologic typing was performed using Diversilab (Both bioMérieux).

Results 137 specimens were collected from 78 patients and 61.5% of the neonates became colonized with ESBL. The majority of the strains were *Escherichia coli* (EC, 88.5%) followed by *Klebsiella pneumoniae* (KP, 11.5%). Gentamicin resistance occurred in 98.6% of the EC and 100% of the KP and ciprofloxacin resistance in 98.6% of the EC and 0% of the KP strains. All strains were susceptible to carbapenems. Epidemiologic typing divided the EC isolates in two clusters and one unique isolate and the KP isolates were divided in two clusters. All EC and KP had $bla_{\text{CTX-M}}$ group 1 except for the unique EC isolate that had $bla_{\text{CTX-M}}$ group 9.

Conclusions The high proportion of patients colonized with four clones of ESBL-producing bacteria, reinforces the necessity for implementing surveillance programs as well as improved infection control to prevent further spread of ESBL strains between hospitalized neonates.

1339 THE VALUE OF PLACENTAL PATHOLOGICAL AND MICROBIOLOGICAL ASPECTS ON PRETERM DELIVERY AND OUTCOME

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Background Both clinical findings and the high incidence of decidual inflammation/infection in placentasare associated with preterm deliveries.

Objectives To find out the relation of histopathology and microbiology findings of the placenta and preterm birth and to document the association of placental changes and neonatal outcome.

Methods and results A comparative, analytical study was carried out on Placentas from 100 mothers, 50 with preterm delivery (case group), and 50 with full term delivery(control group). Pathology of the placentas and PCR to detect bacterial SrDNA were performed for the placentae and neonates. Preterm Placentas showed a significantly higher inflammatory lesions than those of full term placentas, (68% in preterm versus 4% in full term). The percentage of bacterial isolation by PCR from preterm placenta was significantly higher than full term placenta (75% vs 22%), suggesting that most of unexplained preterm delivery is inflammation and/or infection related. The study demonstrated significant association between placental and neonatal bacterialSrDNA. Our results showed that placental inflammatory lesions were significantly associated with lower gestational age, lower weight and length of preterm neonates. On follow up of the preterm neonates, the percentage of RDS, SGA, BPD and neonatal mortality rate were higher among preterm with placental inflammation/infection than those without.

Conclusion Infection of the placenta is associated strongly with histological chorioamnionitis and preterm birth Placental pathology is very useful in identifying undiagnosed subclinical maternal infection. The percentage of neonatal morbidity and neonatal mortality were higher in cases with positive placental findings for inflammation and infection.

1340 SHOULD TORCH SCREEN ROUTINELY PERFORMED IN ASYMPTOMATIC SYMMETRICAL SMALL FOR GESTATIONAL AGE (SGA) BABIES?

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Background and Aims The causes of symmetrical SGA babies include infection during intrauterine period. Screening for Toxoplasmosis, Rubella, Cytomegalovirus and Herpes (TORCH) is routinely performed in these SGA babies to identify the infective cause of growth restriction.

This study was carried out to study the usefulness of routine TORCH screening in symmetrical SGA babies.

Methods

- Newborn babies were identified from the immuno-pathology database of University hospital of North Tees for whom TORCH screening was requested from 1st January 2008 to 31st December 2011.
- The demographic and clinical details of all identified babies were obtained from the case notes and results of TORCH screen mapped to each baby.
- The reason for each request was obtained. Based on clinical details and coding each baby was grouped into symptomatic or asymptomatic group.

Results

- Over the 4 year study period there were 15000 babies born in this hospital. There were 153 TORCH screens requested in this period. Of these 70 were requested for symmetrical SGA babies.
- All asymptomatic symmetrical SGA babies had negative results of TORCH titres. Only 2 babies were positive for cytomegalovirus infection and both of these had signs of congenital infection such as thrombocytopenia and hepato-splenomegaly.

Conclusions

- TORCH screening should only be requested when clinical signs or symptoms of congenital infection are present.
- There is no justification of routinely testing asymptomatic SGA babies for TORCH titres.

1341 THE INCIDENCE OF SEPSIS IN PRETERM INFANTS DELIVERED BY ELSCS FOR MATERNAL PET WITHOUT SEPTIC RISK FACTORS

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Background Preterm infants are at an increased risk of developing early-onset sepsis compared to term infants. The reasons for this are numerous, but mainly revolve around their inherently immature immune system and its inability to fight pathogenic microorganisms effectively. The main cause of early-onset neonatal sepsis is vertical exposure to infectious pathogens which colonise the vaginal canal of the mother.

Aim To assess the incidence of sepsis in infants delivered by elective LSCS for maternal PET.

Methods Retrospective chart study of VLBW infants admitted to the NICU in the Rotunda Maternity Hospital in Dublin, between the years 2008–2011 following delivery by LSCS for maternal PET with no septic risk factors.

Results All 79 infants were of < 34 weeks gestation and had had septic work-ups completed on admission to the NICU. All of the infants were treated prophylactically for early-onset sepsis with antibiotics for 48 hours. Investigation of the septic screens included FBC, CRP and blood culture results at both 48 hour and 5 days. On review of all 79 septic screens, none of the infants had positive blood cultures at either 48 hours or 5 days. Similarly, none of the infants displayed any haematological signs indicative of early-onset sepsis. Mild deviations were observed in some of the haematological results, but these can explained by the effects of PET on the infant.

Conclusion Despite the absence of any early-onset septic risk factors, all 79 infants were unnecessarily treated with a 48 hour course of prophylactic antibiotics.

1342 ANTIBIOTICS FOR THE TREATMENT AND PREVENTION OF NEONATAL EARLY ONSET INFECTION: NICE GUIDELINE

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Background Early onset neonatal infection (EONI) is serious but uncommon. In England c. 10% of babies are treated for suspected EONI but practice varies significantly. The National Institute for Health and Clinical Excellence has developed guidelines for England.

Methods The guideline was developed according to the procedures in the NICE Guidelines Manual (2009).

Results The principles underlying the recommendations were: a) start antibiotics as quickly as possible; b) minimize the extent of antibiotic exposure in babies without an infection; c) continuous assessment of blood culture status in automated systems provides reliable information about whether a significant isolate is present; antibiotics can be stopped safely if blood cultures are negative 24–36 hours after they are taken. The key recommendations relate to: 1. The early administration of antibiotics; 2. The timely cessation of antibiotics if blood cultures are negative, the baby is well and a CRP measurement c. 24 hours after the start of antibiotics is normal; 3. The value of investing in information technology to support timely reporting of blood culture results to clinical areas because improved systems are likely to pay for themselves through reductions in hospital stay.

Conclusion The severity of EONI requires urgent action at the first suspicion of infection. Modern laboratory technology allows an early cessation of antibiotics in the majority of babies who are not infected.

1343 VANCOMYCIN RESISSTANT ENTEROCOCCI (VRE) COLONISATION IN A NICU

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Nowadays antibiotic resistant bacteria are found in community but more frequently in hospital environments. Development of resistant bacteria (gram positive cocci, esp.enterococci) to glycopeptide antibiotics are becoming important.

On behalf of infection, control after detection of VRE surveillance studies must be performed. To determine and control the rectal VRE colonisation in our NİCU the rectal swabs of 760 neonates were taken and send to the laboratory at admission for the last year, 2011.