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.

VRE was isolated in 12 (1.6%) of the neonates. 6 of the neonates (50%) were born in public hospitals and 50% in private hospitals. To prevent the outbreaks in NİCU we isolated the babies. Non of the babies were treated with vancomycin. The blood cultures were negative in all of them inspite of positive rectal colonisation. The diagnosis of these babies were as follows: 7/12 neonatal jaundice, 2/12 neonatal dehydration, 1/12 urinary tract infection, 1/12 bronchopneumonia, 1/12 preseptal cellulitis. Median hospital stay was 10 days(3–29 days). 2/3 of newborn were born with C/S delivery, there was no hospitalisation history.

Conclusion We wanted to emphasize the uncontrolled use of antibiotics can be a problem in future therefore surveillance studies should be performed.

1344 SERUM SILICON DURING THE FIRST YEAR OF LIFE

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Background and Aims Serum silicon (SSi) declines with age. Silicon is known to have positive effects on bone metabolism, but SSi in preterm infants and its relationship with other oligoelements have received little attention.

To study changes in SSi levels during the first year of life in preterm infants and to determine (a) whether there are differences compared with term newborns and one-year-old healthy infants, (b) their relationship with serum zinc and copper levels.

Methods We studied:

(a) 42 preterm infants (GA: 32±1.8 wk.; birthweight: 1651±281 g) assessed at 36 and 40 weeks post-conceptional age (PCA) and at 12 months corrected age (CA),
(b) 30 healthy full-term newborns aged 2–3 days and
(c) 30 healthy full-term infants aged 12 months.

At each evaluation, we recorded anthropometric measurements, serum Si, Zn, Cu (atomic absorption spectrometry) and bone alkaline phosphatase (immunoradiometric assay).

Results Preterm infants showed significantly higher SSi levels than non-preterm infants in all measurements. Although SSi decreased significantly between 40 weeks PCA and 12 months CA, it remained higher than in non-preterm infants. At 40 weeks PCA, zinc levels were lower while copper and bone alkaline phosphatase were higher in preterm infants. At 12 months the differences were not significant. There were no significant correlations between serum silicon, zinc and copper concentrations in any of the groups.

Conclusions SSi concentration in preterm newborns was significantly higher than in full-term newborns. Although it decreased during the first year of life, SSi remained higher than in full-term infants aged 12 months.

1345 THE VALUE OF TUBULARY PHOSPHATE REABSORPTIONRATIO IN DIAGNOSIS OF OSTEOPENIA OF PREMATURITY

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Objective The aim of this study was to evaluate the value of tubulary phosphorus reabsorption (TPR) ratio in diagnosis of osteopenia of prematurity.

Methods This prospective study was performed between June 2009 and March 2011 and premature infants < 32 weeks of gestation and/or < 1500 gram were included. Maternal and neonatal demographic data were all recorded. The plasma Ca, P, ALP and 25-OH vitamin D levels of mothers and infants were evaluated. The neonatal morbidities, duration of hospitalizati, on and total parenteral nutrition were also recorded. Infants were evaluated at postnatal 40th week. Bone mineralization was assesed by plasma Ca, P, ALP, urea, creatinine and GGT levels in combination with femur X-ray. Also, urine was collected to determine urinary Ca and P levels and tubulary phosphate reabsorption was calculated.

Results No significant differences were detected between infants with and without osteopenia of prematurity in terms of maternal biochemical values. On the postnatal 40th week, infants with TPR>95% had significantly higher ALP and lower P levels compared with those who had lower TPR. The sensitivity, specificity, positive predictive value and negative predictive value of TPR ratio in diagnosis of prematurity of osteopenia were found to be 27.2%, 82.7%, 17.1% and 89.6%, respectively.

Conclusion In conclusion, TPR ratio can be used as an ancillary diagnostic marker in addition to primary diagnostic tests in diagnosis of prematurity of osteopenia.

1346 HYPOTHYROXINEMIA VS HYPOTHYROIDISM IN VERY LOW BIRTH WEIGHT INFANTS

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Transient hypothyroxinemia without elevated thyroid-stimulating hormone (TSH) levels is common in prematurity, especially in very-low-birth weight (VLBW) infants. The transient hypothyroxinemia of prematurity (THOP) has been seen as a "benign" condition. Infants were classified as THOP by low thyroxine (T4) value without elevated TSH value (<20 μIU/mL). Primary hypothyroidism (PH) defined by low thyroxine (T4) and elevated thyroid-stimulating hormone (TSH) levels. Both of them can be seen at premature infants.

Retrospectively we compared the premature infants born at ≤32 weeks who required thyroxine supplementation for THOP and hypothyroidism. 24 neonates required thyroxine supplementation for THOP and 18 neonates for PH were included the study between January 2008 and December 2010.

There were no statistically differences in respect to demographic and prenatal characteristics between two groups. There was mild positive correlation between free T3, free T4 levels and gestational age. Median starting time of thyroxine supplementation was 13 days in PH and 21 days in THOP group (p=0.014). There were no statistically differences between groups in respect to birth-weight, hospitalization time, sepsis, NEC, PDA, and RDS rates. Although the THOP group started the thyroxine supplementation late, median weight of the neonates at discharge were significantly higher in THOP group (1774 vs 2070 p=0,018). Weight gaining per day after the thyroxine supplementation was significantly higher than the days before supplementation started (p=0.001).

Infants who get enough calories but not satisfactory gaining weight should be screened for THOP and PH.

1347 BODY COMPOSITION AT 32–36 WEEKS CORRECTED AGE IN INFANTS BORN BEFORE 32 WEEKS GESTATION

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