

- There was a statistically significant association between mode of delivery and positive culture result,  $\chi^2(1) = 10.263$ ,  $p = 0.001$  (Figure 2).
- Sensitivity, specificity and positive predictive value for skin swab were 36.3%, 86.7% and 16% respectively.

### Conclusions

- Routine SSC is inefficient in predicting the pathogen responsible for sepsis among premature neonates.
- E coli was the predominant organism in the study and 37% of babies with positive SSC had E. coli sepsis (blood culture).
- Mean CRP was higher in positive skin  $\pm$  blood culture cases. However this was statistically not significant.
- There was increased risk of EONS with Vaginal delivery.

### PO-0556 HAND HYGIENE IN AN INDIAN NICU: SCOPE FOR IMPROVEMENT

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**Background** Stringent handwashing practice is an essential component of patient care in neonatal intensive care units. We evaluated handwashing practices followed in the Neonatal Intensive Care Unit at Shree Krishna Hospital in Karamsad, India.

**Methods** Prospective observational study over a week in November 2013. Motion activated camera placed over washbasin recorded handwashing. Six main steps i.e. step 2 to step 7 of World Health Organisation's hand hygiene technique with soap and water were used for evaluation. Handwashing was categorised as excellent if it exceeded 20 seconds and all six steps were followed, acceptable if duration exceeded 20 seconds but only 3 steps were followed. Rest was classified as unacceptable.

**Results** Of 1081 recordings, 775 (71.7%) were nurses, 204 (18.9%) were parents and 102 (9.4%) were of doctors. From these, 403 (37.3%) were excellent, 521 (48.2%) were acceptable and 157 (14.5%) were unacceptable handwash. From nurses, 82 (10.6%), from parents 70 (34.3%) and from doctors 5 (4.9%) were unacceptable handwash. There were 665 (61.5%) occurring during day time (8 am to 8 pm) and 416 (38.5%) during nights. Unacceptable handwashing was more prevalent in the night as compared to daytime (73 [17.5%]) vs. 84 [12.6%],  $p = 0.025$ . Twelve people washed their face after washing their hands in the night shift.

**Conclusion** The study indicates scope for improvement with emphasis on night shifts and parents. Innovative interventions may be required for parents. Empowerment of all stakeholders with reemphasis with constructive feedback may be considered along with repeat cross sectional studies to improve quality.

### PO-0557 NEURO-IMAGING IN INFANTS WITH CONGENITAL CYTOMEGALOVIRUS INFECTION: RELATION WITH TIME OF ONSET OF INFECTION DURING PREGNANCY

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**Background** Cytomegalovirus infection early in pregnancy results in major disabilities, including cerebral palsy and sensorineural hearing loss (SNHL). Cerebral abnormalities detected using cranial ultrasound (cUS) and magnetic resonance imaging (MRI) have been related to neurological sequelae.

**Objective** To evaluate additional value of MRI and assess relationship between time of infection during pregnancy and outcome in infants with congenital cytomegalovirus (cCMV) infection.

**Patients and methods** Demographic and clinical data were collected in infants with cCMV infection (1992–2013). Time of onset of infection during pregnancy, neuro-imaging results and outcome were reviewed. Cerebral abnormalities were categorised into none, mild (lenticulostrate vasculopathy (LSV), germinolytic cyst, high signal intensity T2 weighted images) and severe (migrational disorder, ventriculomegaly, cerebellar hypoplasia). Fisher exact test was used for statistical analysis.

**Results** Thirty-five infants were eligible for analysis. cUS was performed in all and MRI in 19 infants. cUS was superior for diagnosing LSV ( $p < 0.01$ ) and MRI for diagnosing migrational disorders ( $p < 0.01$ ).

In 17 infants time of onset of infection during pregnancy was ascertained. Eight of ten infants infected during first trimester had severe cerebral abnormalities and adverse sequelae, two had no or mild cerebral abnormalities and normal outcome. Two of three infants infected during second trimester had normal outcome and one developed SNHL. All four infants infected during third trimester had normal outcome.

**Conclusion** Infants with first trimester cCMV infection are most at risk of severe cerebral abnormalities and neurological sequelae. MRI provides additional information for presence of migrational disorders, essential for early prediction of outcome.

### PO-0558 ANTI-INFLUENZA IGG LEVELS IN NEWBORN INFANTS, BORN FROM MOTHERS, VACCINATED FROM INFLUENZA AT PREGNANCY

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**Background and aims** Influenza vaccination with inactivated vaccines is safe for pregnant women, as for fetus. But the levels of immunity protection against influenza in newborn infants, born from mothers, vaccinated by immunoadjuvant vaccines in pregnancy are not investigated yet. We study transplacental IgG levels in newborn infants, born from mothers, vaccinated in pregnancy by subunit influenza vaccines.

**Materials and methods** We study 79 infants, born from mothers, vaccinated in second and third trimester of normal pregnancy. 42 of them (first group), whose mothers were vaccinated by three-valent subunit vaccine (Grippol Plus by Petrovax, Ltd company, Russia, contain 0,5 mcg influenza strains and 500 mcg of Polyoxidonium, 37 (second group) – were from mothers, vaccinated by three valent subunit vaccine ('Agrippal S1' by Novartis Vaccines and Diagnostic', Italy) see Table 1. Criteria of Committee for Proprietary Medicinal Products by CPMP/BWP/214/96 protocol be used as immunological criteria. IgG-antibody levels were measured in umbilical cord blood by hemagglutination-inhibition reaction.

**Results** Comparative characteristic of laboratory data achieve that in newborn infants 53,1%, 67,6% and 62,5%, 57,7% were