

levels were - 2ng/mL at birth, 15 ng/mL at 24 hours and 2ng/mL from 48 hours onwards.

**Result:** This evaluation was performed over one month. 29 episodes of suspected sepsis were evaluated. 20 episodes were of early onset and 9 were of late onset. Procalcitonin was raised in all cases of suspected sepsis where there was clinical concern with raised CRP. 3 infants (10%) had raised procalcitonin level at point of suspicion where the CRP levels were normal, 2 were term infants with significant clinical concerns regarding late onset sepsis. One infant had raised CRP levels at birth and 24 hours although the procalcitonin levels were normal.

**Conclusion:** Procalcitonin was noted to be more sensitive than CRP for early detection of neonatal sepsis, particularly in late onset sepsis in term infants. Further evaluation is needed to determine whether procalcitonin helps to reduce use of antibiotics and helps in cost-effectiveness.

1371

### COMPLICATIONS ASSOCIATED WITH INSERTION OF PERCUTANEOUS CENTRAL VENOUS LINES

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**Objective:** To analyse the complications involved in insertion of central venous lines (CVL). To determine the association of Coagulase negative staphylococcal (CONS) sepsis with CVL duration.

**Method:** Prospective study of percutaneous CVL insertions over a 4 month period (Aug'2009-Nov' 2009) in Nottingham City Hospital (a UK Level 3 non-surgical Neonatal intensive care unit). Data were collected from the notes of those babies in whom a percutaneous CVL was inserted.

**Results:** Twenty seven babies (23-40 weeks gestation, median 32 wks) had 36 percutaneous central venous lines inserted during the study period. The indications were predominantly for administering parental nutrition and/or for inotropes. 35 (97%) of insertions were completely documented in notes using a proforma. Twelve (33%) of the line insertions were associated with complications such as blockage (5), extravasations (2), coiled (2) and CONS sepsis (3). Complications were more common using 1 French lines (10/26) compared to 2 French

lines (2/10). Median duration of line placement was 6 days, ranging from 1 to 32 days. Three babies (11%) became unwell with CONS sepsis confirmed by blood cultures, two of these having had the line in for more than 14 days. In all three occasions the line was removed and the baby treated successfully with antibiotics.

**Conclusion:** This study showed a high incidence of percutaneous CVL complications (33%), less frequent when using 2 French lines. Strict aseptic precautions should be adhered to during line insertions and line removal should be considered if sepsis is suspected.

1372

### SEVERE NEONATAL CENTRAL NERVOUS SYSTEM INFECTION - A RARE INFECTION BY PARECHOVIRUS 3

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**Background:** Enteroviruses (EV) are an important cause of neonatal disease including hepatitis, meningoencephalitis, and myocarditis that can lead to death or severe long-term sequelae. Less is known about severe neonatal infection caused by the parechoviruses (PeV) of which type 1 (PeV1) and type 2 (PeV2) were previously known as echovirus 22 and echovirus 23. They belong to the same family of Picornaviridae as the EV. Of the PeV, so far only PeV3 has been associated in 2 recent reports with severe neonatal infection including involvement of central nervous system.

**Clinical cases:** Both neonates were admitted and treated for refractory septic shock and refractory focal fits. Investigations revealed structurally normal hearts with raised TroponinI with normal EEGs and USG head. However 1<sup>st</sup> neonate showed significant changes on MRI head and blood as well as CSF PCR revealed Parechovirus. Whereas second neonate had blood PCR positive for Parechovirus with normal cranial images.

**Conclusion:** HPeV is another important cause of viral sepsis and meningitis in neonate and young children that has frequently been undetected. HPeV-specific PCR should be included in viral diagnostic testing for CSF samples help diagnosis, duration of antibacterials, as well as prognosis. Continued research on neonates with HPEV-3 infection is needed to further understand this disease.