ROLE OF SERUM PROCALCITONIN AS MARKER OF NEONATAL SEPSIS

Pradeep Gupta*, Anil Narang. 1Norvic International Hospital, Kathmandu, Nepal; 2Chaitanya Hospital, Chandigarh, India

Background Despite the advances in perinatal and neonatal care and use of newer potent antibiotics, the incidence of neonatal sepsis remains high and the outcome is still severe. Early diagnosis of neonatal sepsis followed by appropriate treatment decreases mortality and morbidity in infants.

Objective To study the ROLE OF SERUM PROCALCITONIN AS A MARKER OF NEONATAL SEPSIS and To compare procalcitonin with CRP as a diagnostic marker for neonatal sepsis

Methodology Hospital Based prospective observational study.

Results 50 neonates (preterm & term) with clinically suspected sepsis were studied during 1 year from Jan 2016 to Dec 2016 in Chaitanya Hospital Chandigarh. Conventional sepsis workup was done in all cases and the diagnosis of neonatal sepsis was proved based on the results of blood culture. The serum Procalcitonin was measured by quantitative Enzyme linked immunofluorescence assay and the results were compared to CRP levels between the neonates with or without proven sepsis.

Results Of the total 220 babies admitted in NICU during that period 50 were eligible for study and analyzed. 24% babies had Definite Sepsis, 60% had Probable Sepsis and 16% babies had No Sepsis. Of the neonates with suspected sepsis 24% had culture positive and 76% were culture negative. Mean PCT level was 13.27+- 33.2 ng/ml. The mean PCT levels were higher in Meningitis group (Mean PCT-26.45) than no meningitis group (p=0.216).The mean PCT levels was highest in neonates whose CRP=5000 (Mean PCT-18.5) (p value-0.002). The mean PCT levels were higher in all 3 infection groups in neonates with CRP>0.5 mg/dl (positive) than that of neonates with CRP≤0.5 mg/dl (negative). Mean PCT levels were 0.433, 52.22 and 27.95 in no infection, probable infection and definite infection group respectively. (p value-0.001) Evaluating CRP as a diagnostic marker for definite neonatal sepsis with cut off value as 0.5 mg/dl, had sensitivity of 41.67%, Specificity of 89.47%, Positive Predictive Value of 55.56% and Negative Predictive value of 82.93%.Evaluating PCT as a diagnostic marker for definite neonatal sepsis. The Sensitivity, Specificity, Positive Predictive Value, Negative Predictive Value were 83.3%, 26.32%, 26.32% and 83.3% respectively taking cut- off level of procalcitonin to be >0.5 ng/ml.

Conclusion The importance of procalcitonin in diagnosing neonatal sepsis becomes more useful when it is used along with other investigations. Especially in identifying the group of neonates who may not be infected and may not require antibiotics.

Background Congenital heart defect affects around 10 in a 1000 live born babies. Truncus arteriosus is a rare conotruncal defect in which a common arterial trunk supplies systemic, pulmonary and coronary circulation. The incidence of truncus arteriosus is quoted as 1% of all congenital heart malformations.

Objective To evaluate the initial neonatal management and long-term outcomes of newborns with truncus arteriosus.

Method We conducted a retrospective review of all newborns with truncus arteriosus admitted to our neonatal unit and referred to a surgical centre between 2010 and 2018. Data were collected from Badger and Cardiology databases to evaluate the initial neonatal management and long-term outcomes of this cohort of patients.

Results Fifteen newborns with truncus arteriosus were admitted to our neonatal unit. Their mean gestational age was 36 weeks with a mean birth weight of 2407 grams. Cardiac defects were detected prenatally in 12 patients (80%). Three babies were diagnosed postnatally. One following failed pulse oximetry screening requiring non-invasive respiratory support and 2 diagnosed following on-going respiratory support on echocardiography. Respiratory support was initiated within the...
first 24 hours of life in 8 patients; these included all patients with a postnatal diagnosis of truncus arteriosus. Four patients required mechanical ventilation. Whilst in the neonatal intensive care unit, 3 babies developed heart failure and were treated with diuretics and 2 developed necrotising enterocolitis which was managed conservatively. Median length of stay before transfer to our local surgical cardiology centre was 3 days. Thirteen patients (87%) underwent common arterial trunk repair. 10 (77%) babies survived to date. Two patients died in the initial post-operative period and one patient at 14 months of age. The remaining two patients did not receive any surgical intervention and subsequently died (4 and 11 days old). Of the 10 babies who survived, the median length of hospital stay post operatively was 20 days.

Conclusion Truncus arteriosus is a rare conotruncal defect. The majority of these were detected antenatally. They are likely to require respiratory support but the surgical outcomes are good. The following information can be used when counseling parents antenatally and managing their expectations.

**P449 PROBIOTICS AND RETINOPATHY OF PREMATURE: SYSTEMIC REVIEW**

1Reza Saeidi*, 2Azra Izanloo. 1Department of Pediatrics, Mashhad University of Medical Sciences, Mashhad, Iran, Islamic Republic of; 2Razavi Cancer Research Center, Razavi Hospital, Imam Reza International University, Mashhad, Iran, Islamic Republic of

10.1136/archdischild-2019-epa.785

**Introduction** As we know, ROP is a multifactorial disease, and several preventable factors are dependent on increased ROP. Thus, we decided to undertake a systematic review to study the effects of probiotics on the prevalence and severity of ROP.

**Method** We searched studies in the PubMed, Cochrane collaborative library and Google Scholar at all levels until January 30, 2019. The papers were evaluated independently by two reviewers according to the predefined criteria and relevant data were extracted. The initial complications of ROP and its severity and stage were analyzed.

**Results** Of the 780 extracted studies, only 13 studies were relevant, none of which had directly investigated the effect of probiotics on the prevalence of ROP. A thorough study of the articles revealed that 9 studies had examined the effect of probiotics on the severity of ROP without reporting any significant correlation. Moreover, 4 studies had assessed the effect of probiotics on the stage of ROP with none of them reporting a significant difference. A meta-analysis published in 2017 suggested that the use of probiotics significantly reduces the risk of infection without affecting the severity and stage of ROP.

**Conclusion** According to the results of the study, a challenging problem in clinical trials is that poor infant growth can be a predictor of ROP and proper nutrition can improve infant growth. Hence, further studies are required to determine whether probiotics have an indirect or direct effect on the incidence or severity of ROP or not.