ID 271

Comparison of Demographic, Clinical and Maternal Risk Factors between Neonatal Sepsis and Non-sepsis Patients in Colombo South Teaching Hospital Kalubowila and Castle Street Hospital for Women

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Neonatal septicaemia is one of the commonest causes of mortality and morbidity among the neonatal population in the world. Clinical features alone may not be specific for the diagnosis of neonatal sepsis as they may mimic other non-infectious inflammatory conditions. Therefore, the study aimed to differentiate sepsis condition from systemic inflammatory response syndrome. Episodes of sepsis suspected cases in Colombo South Teaching Hospital Kalubowila and Castle Street Hospital for Women were retrospectively reviewed for a one-year period. Out of 219 suspected neonatal sepsis cases, 116 neonates were confirmed as sepsis while 103 neonates were non-sepsis. Demographic and clinical characteristics of the neonate, maternal risk factors for sepsis were descriptively analysed. Further laboratory investigations (CRP, FBC and biochemical investigations) were compared using an independent sample t –test to determine the statistical difference between the two groups. Among the sepsis suspected patients (n=219), 20% of gestational diabetes mellitus, 22% of dribbling and 19% of prenatal steroid exposure were reported as common features. In comparison, a higher proportion of neonates with birth weight < 1 kg (sepsis-10.1%, non-sepsis-1.4%) and preterm delivery <28 weeks (sepsis-9.20%, non-sepsis-0.5%) were identified. Furthermore, 24% of sepsis patients reported their 1st minute APGAR score as <7 and only 8% in the non-sepsis group. According to the t-test results, two haematological indices; monocyte percentage and MCHC level, showed a significant difference between the sepsis and non-sepsis groups ($p<0.05$). Significantly, lower total and indirect bilirubin levels were observed in the sepsis group ($p<0.001$) than in non-sepsis group. Low birth weight, preterm delivery and APGAR score may be reliable predictors of neonatal sepsis among the study population.

Keywords: *neonatal sepsis, maternal risk factors, clinical features*