

Prevalence of Microbial Agents of Neonatal Sepsis in Emam Reza Hospital in Kermanshah (2006-2010)

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Background & Objectives: Sepsis is one of the most common reasons of mortality in developing countries. The pattern of bacterial agents of neonatal sepsis changes depend on geographic locations. Maternal, neonatal and environmental risk factors contribute for the development of sepsis in neonates. This study was done to determine the pattern of bacterial agents causing neonatal sepsis. We also attempted to investigate the role of maternal and neonatal risk factors responsible for neonatal sepsis.

Methods: This cross-sectional prospective study was conducted in a teaching hospital in Kermanshah, Iran. During 2006-2010, 639 neonates admitted to the hospital with a clinical diagnosis of neonatal sepsis. Blood cultures were performed from these patients. Bacterial agents identified using standard microbiological and biochemical Methods. Data analysis was performed using SPSS software.

Results: Of the 1278 neonates, 57.7% were males and 42.3% were females. The mean age of the neonates was 1 ± 9.4 days. 41.9% were preterm and 45.2% had low birth weight (<2500 g). Of the 1278 neonates investigated for sepsis, 106 (8.3%) were positive for blood culture. The most common isolated organisms were *Staphylococcus aureus* (28.3%) and *Citrobacter spp.* (21.6%) and Coagulase-negative Staphylococci (17%). Maternal risk factors such as urinary tract infection, hypertension and eclampsia were strongly associated with blood culture proven neonatal sepsis ($p < 0.05$).

Conclusion: *Staphylococcus aureus* and *Citrobacter spp.* were the most common organisms causing neonatal sepsis. We found strongly association between maternal risk factors such as urinary tract infection, hypertension and eclampsia with blood culture proven neonatal sepsis.

Keywords: Neonatal Sepsis; Blood Culture; Risk Factors