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**Evaluation of Sepsis Screening Tests in Severe Bacterial Infections in Infants beyond Neonatal Age**

**Anushree Chaturvedi**

*Dr SN Medical College, Department of Pediatrics, Jodhpur*

**Abstract**

**Background and Aims:** Blood culture has its limitations in detecting serious bacterial infections in infants. There is a need for a test or group of tests which can detect the condition early. Sepsis scoring [CRP, micro ESR, total leucocyte count (TLC), toxic granules, I:T ratio & band cells] have traditionally been used in neonatal age group but very few studies have evaluated these tests in invasive bacterial infections in infants. In this study we have evaluated the role of these tests both individually and in union in predicting the presence of serious bacterial infection.

**Methods:** 65 patients within the age group of 1 month to 1 year admitted with suspected sepsis, meningitis, consolidation, and urinary tract infection were included in the case control type of study with healthy children taken as controls.

**Results:** CRP had highest sensitivity of 77.77 %. The sensitivity of both micro ESR and TLC was 66.66% but they had a poor specificity and positive predictive value. Highest negative predictive value was observed for toxic granules (89.28%). Highest specificity of 87.50% was observed for I:T ratio. A combination of micro ESR & TLC have shown maximum specificity of 90.47% and negative predictive value of 94.70%. When three tests were combined, a combination of micro ESR, ESR and toxic granules had 100% sensitivity, 100% negative predictive value and 80% accuracy.

**Conclusions:** The study indicates that a collective use of simple and low cost screening tests can be a definitive aid to diagnosis of sepsis. Their rapid nature can help us in deciding about appropriate management at the earliest.