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## RESEARCH ARTICLE

## SPECTRUM OF BACTERIAL MICRO ORGANISMS FOUND IN LATE ONSET SEPSIS AND MENINGITIS

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### Abstract

**BACKGROUND:** Bacterial sepsis and meningitis continue to be major causes of morbidity and mortality in newborns. The present study was undertaken to know the spectrum of bacterial micro organisms found in late onset sepsis and meningitis.

**METHODS:** The study was a Hospital based observational study, conducted in the Post Graduate department of Pediatrics, Government Medical College, in the G.B.Pant Cantonment General Hospital; Srinagar. The study was conducted from 1<sup>st</sup> April, 2012 to 31<sup>st</sup> March 2013 for a period of one year. 423 patients fulfilling the inclusion criterias were included and subjected to detailed history, clinical examination followed by investigations like complete blood counts, C-reactive protein, blood culture, cerebrospinal fluid analysis, blood sugar, renal function tests, chest x ray and ultrasonography.

**RESULTS:** There were 54 blood culture positive isolates out of 423 which comprised 12.7% of total culture positivity. The commonest isolate recovered was MRSA constituting 44.4%, followed by Klebsiella 18.5%, E. Coli (16.6%), Enterobacter 7.4%, Acinetobacter 5.5% and finally Coagulase negative staphylococcus and Pseudomonas 3.7% each. Blood culture was positive in 42.6% cases of meningitis. As a whole 48.1% of the culture positive sepsis cases were due to gram positive organisms and rest 51.8% belonged to the gram negative group. Meningitis was seen in 60.7% of proven gram negative sepsis as against 30.7% cases of proven gram positive sepsis. ( $p < 0.005$ ). 17.6% cases of meningitis had mortality as against 4.8% in those who had sepsis but no meningitis. ( $P < 0.005$ ).

**CONCLUSION:** Although MRSA remains the most commonly isolated organism, gram negative organisms are the predominant organisms isolated in patients of late onset sepsis. Meningitis was found to be more common in patients in whom gram negative organisms were isolated. Further more the presence of meningitis was associated with high mortality of 17.6% as compared with 4.8% in patients with sepsis without meningitis.

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## INTRODUCTION