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**Original article**

**Antibiotic sensitivity and resistance pattern in blood and urine culture reports obtained from paediatric patients in a tertiary care hospital, Pondicherry**

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**Abstract:**

**Introduction:** Blood streamand urinary tract infections remain one of the most important causes of morbidity and mortality in paediatric age group. Due to inappropriate use of antibiotics, antibiotic resistance is increasing and treatment of UTIs and blood stream infections becomes more difficult by time. Thus, it is necessary to inform the clinicians and other health care professionals about the bacterial profile of a particular area and their antimicrobial susceptibility patterns to design an empirical treatment policy for the patients.The present study was undertaken to assess the commonest bacteriological profile in urine and blood culture specimens and their antibiotic sensitivity, resistance patterns in our hospital. **Materials and methods:** This retrospective observational study was conducted in our teaching hospital. Blood and urine culture reports of paediatric patient records maintained in the department of Microbiology were collected during the period from May-2012 to April- 2014. The data were analysed and expressed in descriptive statistics.

**Results:** A total of 156 culture reports ( Blood-88 and Urine-68) were analysed. In urinary isolates the predominant organisms were E.coli (48%) and Klebsiella (34%). Sensitivity rates were high for Imipenem (94%) and Nitrofurantoin (87%). Highly resistant antibiotics for urinary isolates include Penicillin G (76%), Ciprofloxacin (62%) and Amoxicillin+Clavulanic acid (52%). In blood culture reports, most common organisms isolated were coagulase negative Staphylococci (CONS- 49%) and Salmonella typhi (22%) with high sensitivity towards Amikacin (92%) and Vancomycin (90%). Highly resistant antibiotics for blood culture organisms include Penicillin G (68%) and Erythromycin (64%). **Conclusion:** High proportion of drugs were found to be resistant to commonly prescribed drugs. E.coli was the most common isolated organism in UTI and CONS in blood culture. The urinary isolates were highly sensitive to Imipenem, Nitrofurantoin and in blood culture isolates were highly sensitive to Amikacin and Vancomycin. This study showed that it is important to monitor antibiotic sensitivity and resistance trends in infection control measures to prevent emergence and spread of multi-resistant bacteria.

**Key words:** UTI, Blood stream infection, Antibiotic Sensitivity, Antibiotic Resistance, Urine culture and Blood culture.