

Frequency of Antibiotic Resistance Patterns in Bacteria Isolated from Children

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Abstract

Background and Objective: Bacterial infections in particular meningitis, pneumonia and septicemia are still some of the most causes of mortalities in children. The aim of present study was to identify the most common bacterial agents causing infections in children under 14 and detection of antibiotic resistance patterns.

Material and Methods: During two years, 1897 samples were obtained from the patients suspected bacterial infections. They were investigated for bacterial cultures, age, sex and antibiogram patterns. The species were identified by biochemical and serological methods.

Results: Of 1897 samples, 563 (29.6%) had positive bacterial culture. Of these 74.7% were gram negative and 25.3% gram positive. The most common species were *Escherichia coli* (34.1%), *Staphylococcus aureus* (17.1%), *Pseudomonas aeruginosa* (12.4%), *Kelebsiella* (11%) and *Staphylococcus epidermidis* (5.7%). The most effective antibiotics against both gram positive and gram negative bacteria were ceftriaxone, nitrofurantoin, nalidixic acid, amikacin and gentamycin.

Conclusion: The gram negative bacteria in particular *Escherichia coli*, *Pseudomonas aeruginosa* and *Kelebsiella* are the predominant causes of bacterial infections in children under 14 in these regions. Most species showed a high relative resistance to routine antibiotics such as ampicillin, trimethoprim and chloramphenicol.

Key Words: Bacteria; Infection; Children; Antibiotic