

Antimicrobial Susceptibility of Bacterial Agent in Hospitalized Neonates in Intensive Care Unit in Bahrami Hospital of Tehran, Iran

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Received: 5 Aug 2013

Revised: 3 Sep 2013

Accepted: 5 Oct 2013

Abstract

Background and Objective: This study aimed to investigate the antimicrobial susceptibility of the most common pathogens in hospitalized neonates in Intensive Care Unit.

Material and Methods: In this one-year descriptive study, 150 blood samples of neonates in Intensive Care Unit of Bahrami hospital of Tehran were divided into two groups of early onset sepsis (the first 72 hours of life) and late onset sepsis (after the 72 hours of life). After isolating and identifying of bacteria, their antibiotics susceptibility was studied by Kirby– bauer method in accordance with CLSI guidelines.

Result: The most isolated organisms were *Klebsiella pneumoniae* (41.3%). Coagulase negative *staphylococcus* was the cause of early onset septicemia and *Klebsiella pneumoniae* of both early and late onset septicemia. The highest susceptibility in gram-negative microorganisms was shown to Ciprofloxacin (89.6%) and in gram positive to Vancomycin (82.8%).

Conclusion: Gram-negative bacteria are the main cause of contamination in NICU and ciprofloxacin is the most effective antibiotic. Thus, it is imperative that NICU should be extremely controlled.

Keywords: Septicemia; Antibiotic Susceptibility; Neonatal Intensive Care Unit