

ANTIMICROBIAL SUSCEPTIBILITY PATTERN OF BACTERIAL ISOLATES IN
THE INTENSIVE CARE UNIT OF AL-ANSAR HOSPITAL, SAUDI ARABIA

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ABSTRACT

Nosocomial infections are becoming difficult to treat due to the increasing trend of antibiotics resistance, especially the critically ill patients in the intensive care unit (ICU). Antibiotics resistant Gram positive and negative bacteria cause hospital acquired infections. To identify the prevalence of predominant bacterial infections and to evaluate the antibiotic susceptibility testing of bacterial pathogens in the ICU of al-ansar hospital, Medina. During a 12 months period (from January to December 2013), a total of 1226 isolates were collected from various samples such as sputum (32%), blood (25%), urine (24%), and others (19%). All bacteria were identified by standard microbiological methods, and Microscan, antibiotic sensitivity was performed using disk diffusion technique according to CLSI guidelines and ESBLs confirmation was done by double disk diffusion method. The most common isolates were *Pseudomonas aeruginosa* (16.3%), followed by *Escherichia coli* (13.6%), *Acintobacter baumannii* (10.4%), *Klebsiella pneumonia* (8.5%), and *Staphylococcus aureus* (6.3%). Both Gram-positive and-negative isolates expressed resistance to most of the penicillin and cephalosporins tested. *Ps. aeruginosa* was highly sensitive to piperacillin/tazobactam, imipenem, and amikacin and showed high degree of resistance to cefotaxime (90%) and ceftriaxone (85%). *E. coli* showed resistance to tetracycline (86%), piperacillin (78%), and co-trimoxazole (75%). *A. baumannii* was highly resistance to third generation of cephalosporin. High frequencies of multi-drug resistant bacteria in ICU. High rates of the ESBLs of *K. pneumonia* and *E. coli* were observed (49% and 40%, respectively). VRE made up 14% of enterococci and MRSA made up 43% of Staphylococci isolates.

Keywords: Intensive care unit, Antibiotic susceptibility testing, Bacterial resistance, *Pseudomonas aeruginosa*, *Acintobacter baumannii*.