

Understanding Antibiotic Susceptibility Patterns of Bacterial Isolates:

Crucial in Determining Empirical Therapy in Intensive Care Units

OBJECTIVES

To understand the antibiotic susceptibility patterns in various Intensive Care Units (ICUs) to ascertain the suitable empirical antibiotic therapy for the critically ill patients.

METHODS

A cross-sectional study that was conducted for a period of 12 months by collecting culture reports of patients from various intensive care units such as Neuro ICU, Respiratory ICU (RICU), Surgical ICU (SICU). Bacterial identification was done by VITEK COMPACT 2 automated system. Antibiotic susceptibility testing was done with the help of Automated Minimum Inhibitory Concentration (MIC) methods according to the Clinical and Laboratory Standards Institute (CLSI) guidelines. The patient demographics, types of specimens collected, culture results, and antibiotic resistance pattern were collected manually by using a data extraction form.

RESULTS

The commonly received culture samples was from Endotracheal tube (45.5%). Overall, the most common isolate from Endotracheal tube was found as *Acinetobacter* species (22.9%), from urine it was predominantly *Enterococcus* species (4.4%) followed by *E. coli* (3.4%), from pus it was *Klebsiella pneumoniae* (2.4%) followed by *Pseudomonas aeruginosa* (2.3%) and from blood it was *Klebsiella pneumoniae* (2.8%) followed by *Acinetobacter* species (2.4%). Most of the bacteria exhibited high resistance to Ciprofloxacin (85%), Ceftriaxone (80%) and Amoxicillin+ clavulanic acid (74.8%). The lowest bacterial resistance rates were observed with Amikacin (87%), Imipenem (78%) and Gentamicin (68%).