TITLE: ANTIMICROBIAL SUSCEPTIBILITY PROFILE OF ESKAPE PATHOGENS ISOLATED FROM AN INTENSIVE CARE UNIT OF A TERTIARY HOSPITAL

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ABSTRACT:

ESKAPE group (*Enterococcus faecium, Staphylococcus aureus, Klebsiella pneumoniae, Acinetobacter baumannii, Pseudomonas aeruginosa, and Enterobacter species*) are important agents of nosocomial infection that are frequently resistant to broad-spectrum antimicrobial agents. In intensive care units (ICUs), fragility of the patients facilitates the presence of nosocomial infections. The present study evaluated the occurrence of ESKAPE pathogens and their antibiotic resistance profile in patients admitted in an ICU of a tertiary hospital, in 2017. Pathogens identification and antimicrobial susceptibility patterns were collected from record books from the clinical microbiology laboratory. Out of 289 bacterial isolates, 148 (51,2%) were identified as pathogens of the ESKAPE group. *Acinetobacter baumannii* was the most isolated microorganism (30.4%) followed by *Pseudomonas aeruginosa* (28.4%), *Klebsiella pneumoniae* (22.3%), *Enterobacter* sp. (10.1%) and *Staphylococcus aureus* (8.8%). *Enterococcus faecium* was not identified during the referred period. Regarding the resistance patterns, for *A. baumanii* high levels of resistance were identified for meropenem (93.3%), imipenen (88.8%), ceftazidime and ciprofloxacin (80%). For *Enterobacter* sp. high levels of resistance were detected for ampicillin (100%) and ciprofoxacin (73.3%), whereas for *P. aeruginosa* were observed for aztreonam (66.6%), imipenem (64.3%) and meropenem (59.5%). For *K. pneumoniae* high levels of resistance were detected for ampicillin (81.1%), cefepime, ceftazidime and ceftriaxone (72.2%), while for *S. aureus* were observed for oxacillin (76,9%), tetracycline (84.6%), erythromycin and clindamycin (69.2%). This study showed relevant data on multidrug resistance bacterial strains in critical areas. Our data are highly relevant for surveillance systems and raise discussions on containment strategies and rational use of chemotherapy.

Keywords: ESKAPE group; Intensive Care Unit; Antimicrobial Resistance

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