TITLE: ANALYSIS OF THE PROFILE OF SUSCEPTIBILITY TO ANTIMICROBIALS OF BACTERIA ISOLATED FROM URINE SAMPLES IN A HOSPITAL OF SOUTHEAST MINEIRO

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ABSTRACT

To investigate the antimicrobial susceptibility profile of bacterial strains of urocultures of individuals from Adult Intensive Care Units (adult ICU) and Neonatal and Pediatric Intensive Care Units (neonatal and pediatric ICU) from a private hospital in southeast Minas Gerais. This is a descriptive, retrospective study aimed at analyzing positive uroculturas of the Adult ICU and Neonatal and Pediatric ICU performed in a private hospital in the southeast of Minas Gerais, from September 2016 to August 2017.The study investigated 212 positive samples (34.47%), of which 116 were female patients (54.7%). The most prevalent microorganisms were *K. pneumoniae* (18.0%), *E.coli* (17.6%), *P.aeruginosa* (9.5%) and *E.faecalis* (6.3%). Penicillins, cephalosporins, quinolones and sulfas were the antimicrobial agents that presented the highest degree of resistance among Gram negative, while piperacillin with tazobactam and colistin were the most effective antimicrobials in that group. The profile found concerned shows that 63.2% of fermenters and 100.0% of non-fermenters present multiple resistance to at least three classes different from antimicrobials. Another important data refers to the high index producing strains of Beta Lactamase of Extended Spectrum (ESBL), where 31.6% of the isolates of the Enterobacteriacea family showed positivity for ESBL. In addition, 28.1% of the fermenters showed resistance to all carbapenems suggesting the production of carbapenemases, although such genotype was not addressed in the present study. Among Gram positive, erythromycin was the least effective drug, while antimicrobials vancomycin, linezolid, tigecycline and teicoplanin had the highest sensitivity indexes. The present study warns of the high degree of antimicrobial multiresistance of strains coming from Adult ICU and Neonatal and Pediatric ICU, demonstrating the current worrisome scenario and the emerging need for the development of new drugs and new control measures.

Keywords: Bacterial drug resistance; Urine; Microbial sensitivity test.