PREVALENCE OF MICROORGANISMS ISOLATED FROM ADULTS PATIENTS WITH BLOODSTREAM INFECTIONS IN A UNIVERSITY HOSPITAL

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The presence of bloodstream infections is a serious complication in the situation of critical patients and they are major challenge for tertiary hospitals worldwide due to their high prevalence and mortality rates, therefore the blood culture is an important feature in the diagnosis of microbial agent. The aim of this study was to determine the prevalence of microorganisms identified in blood cultures of adults patients admitted at the Hospital de Clinicas-Unicamp from June 2014 to May 2015. The blood culture samples were processed by the Clinical Microbiology Laboratory using the BD Bactec™ Fx automated system both aerobic and anaerobic cultures bottles. Positives samples detected by the equipment were subculture for microorganism isolation. The isolated colonies were identified using the BD Phoenix™ automated microbiological system**.** The data were analysed by the BD EpiCenter™ software. During this period, 1,342 blood sample bottles were cultured of whom 1,498 (9.76%) were positive and 13,844 (90.24%) negatives. 1,931 microorganisms were identified both aerobic and anaerobic cultures bottles. The more frequently isolated gram-negative rods were *Escherichia coli* 278 (14.4%), *Klebsiella pneumoniae* 271 (14.03%), *Pseudomonas aeruginosa* 69 (3.57%), *Enterobacter cloacae* 67 (3.46%) and *Acinetobacter baumanni* 65 (3.36%). The gram-positive cocci more isolated were *Staphylococcus coagulase negative* 392 (20.3%), *Staphylococcus aureus* 196 (10.15%), *Enterococcus faecalis* 53 (2.74%) and *Streptococcus pneumoniae* 45 (2.33%). The fungi identified were *Candida spp* 59 (3.05%), *Cryptococcus neoformans* 11 (0.6%), *filamentous fungi* 4 (0.2%) and Trichosporon spp 2 (0.1%). Furthermore, there was growth *of 30 (1.55%)* anaerobic microrganisms in anaerobic cultures bottles, 3 (10%) gram-positive cocci and 27 (90%) gram-negative rods, however, these agents were evaluated by microscopic examination following Gram staining. These results show the prevalence of microorganisms that most frequently cause bloodstream infections in hospitalized adult patients admitted at the HC-Unicamp The importance of knowing the most frequent microorganisms that infect these patients allow for effective antibiotic treatment taking into account the susceptibility and resistance patterns of these microorganisms. Thus, bloodstream infections in hospital environment should be investigated with the aid of Hospital Infection Control Committee that measures be taken to minimize its impact.

Key words: bloodstream infection; blood culture; prevalence of microorganisms