TITLE: Epidemiological profile of hospital infections by multidrug-resistant bacteria in a hospital of Sao Jose dos Campos city in the State of Sao Paulo (Brazil)

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ABSTRACT:

Backgound and Objectives: Hospital infection (HI) is an increasingly frequent problem and the presence of resistant microorganisms generates clinical and economic impact. This study aims to determine the epidemiological profile of hospital infections caused by multidrug-resistant bacteria (MDR) in a hospital in the city of Sao Jose dos Campos, State of Sao Paulo. Methods: The results of cultures performed by the laboratory of this hospital were analyzed for the period from January 2016 to December 2016. All HI cases by MDR bacteria were included in the study. Results: There were 95 cases of HI per MDR, of which 62 (65%) were male. The most frequent MDR infection sites were: Urinary Tract Infection (32%) and infection of the bloodstream (21%). The highest frequency of cases occurred in the period from 0 to 15 days of hospitalization. The bacteria most commonly found were: *Klebsiella pneumoniae* (33%), *Staphylococcus aureus* (19%), *Pseudomonas aeruginosa* (14%), *Escherichia coli* (7%), *Enterobacter aerogenes* and *Klebsiella oxytoca* (both 6%), *Proteus mirabilis* (3%), *Achromobacter xylosoxidans* (2%), *Cedecea lapagei, Citrobacter amalonaticus, Citrobacter freundii, Enterobacter cloacae, Enterococcus faecalis, Serratia rubidaea, Morganella morganii, Providencia stuartii, Klebsiella ozanae* and *Acinetobacter baumannii* (all 1%). The most frequent mechanism of resistance was resistance to carbapenems (KPC) with 52% of the cases, followed by 28% extended spectrum betalactamase (ESBL), 19% of methicillin-resistant *Staphylococcus aureus* (MRSA) and 1% of vancomycin-resistant enterococci (VRE). Conclusion: The prevalence of MDR infection in the period studied was 4%. It is important to detect and control the dissemination of MDR microorganisms because of its impact on patient morbidity and survival.

Keywords: Infection, microorganisms, multidrug resistant, prevalence.

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