TITLE: RESISTANCE TO MEROPENEM BY ENTEROBACTERIA IN ICU OF A HOSPITAL IN NORTHERN RS

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ABSTRACT

Bacterial resistance and its fast and progressive spread is currently described by the World Health Organization (WHO) as one of the three greatest threats to human health. In recent decades, nosocomial infections by enterobacteria resistant to Carbapenemic (ERC) have spread easily worldwide and represents an imminent public health problem, as they have limited therapeutic options and high mortality rates. This study aimed to determine the most prevalent microorganisms of the *Enterobacteriaceae* family in adult Intensive Care Unit (ICU) patients of the public hospital Fundação Hospitalar Santa Terezinha of the city of Erechim (RS) and to evaluate, retrospectively, the resistance of these against the Meropenem, observing in the clinical records the results of the cultures and antibiograms, besides the factors age, sex, performing invasive procedures, length of hospitalization and clinical outcome. Information was collected from 55 patients, whose results from the cultures and antibiograms revealed 11 distinct Meropenem resistant enterobacteria (MRE). The most prevalent MRE were *Klebsiella ozaenae* (23/70), *Serratia liquefaciens* (17/70) and *Escherichia coli* (11/70). The resistance of these microorganisms to Meropenem was 32.9%, 24.3% and 15.7%, respectively. The age group with the highest isolation of MRE was 60 years or more and the predominant gender was male (33/55). The samples corresponded 85.4% to tracheal aspirates. As for the invasive devices, mechanical ventilation (96.4%), vesical delay probe (90.9%) and central venous catheter (83.6%) were the most prevalent, in addition to 56.4% of the hospitalized had been submitted to surgical procedure. With regard to length of stay, 66.6% of patients who had two or more enterobacteria were hospitalized for at least 27 days, indicating a possible correlation between length of stay and isolation of MRE. 22/55 deaths were reported, with 14 patients being male and 8 female. Based on the results, the importance of the knowledge of the microorganisms responsible for Healthcare Associated Infections (HAI) and the possible associated factors is reaffirmed, as well as the indispensable role of an effective hospital infection control program with the involvement of health professionals in the execution of preventive measures.

Keywords: Bacterial resistance; Enterobacteria; Meropenem; ICU; HAI