

TITLE: EPIDEMIOLOGICAL SURVEY OF *Pseudomonas* ISOLATED IN THE PERIOD OF 2018 BY LABORATORIES PARTNERS IN THE CITY OF GOVERNADOR VALADARES-MG

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ABSTRACT

Pseudomonas aeruginosa is a strictly aerobic gram-negative bacillus, non-sporulated and non-fermenting glucose. Studies have shown a high prevalence of *P. aeruginosa* in several sites causing wound infections, burns, meningitis when introduced during a lumbar puncture and infection of the urinary tract when introduced by catheters. The present study aims to analyze the prevalence of strains of *P. aeruginosa* from a database made available by two laboratories in Governador Valadares, in the year 2018. The research presents a descriptive methodology and a quantitative approach. The sources of information are bibliographic and documentary, using scientific articles, books, theses, dissertations and data from records provided by the laboratories involved. 148 samples positive for *P. aeruginosa* were evaluated. In relation to the age group of 21 - 30 years, the percentage of lab 1 (lab 1) of 2% and laboratory 2 (lab 2) of 21%, the interval between 31 - 40 years in lab 1 (5%) and of 14, 31% in lab 2, between 41-50 years in lab 1 (1%) and lab 2 (29%). The age group of 51-60 years had positive samples only in lab 1 (13%), that of 61-70 years, in lab 1 it presented 15% and of lab 2 rate of 14.3%, from 71 - 80 years old. lab 1 had 25.5% and lab 2, 14.3%. Finally, the period between 81-90 years (28%) and lab 2 (7.1%) and between 91 and 100 years, the positive samples for lab 1 presented 8.5%. As far as sites are concerned, there are four with a higher prevalence of positive samples; blood 2.2% and 71.5% in laboratories 1 and 2, respectively; secretions in lab 1 (25.4%) and lab 2 (7.1%). The swab site showed positive samples only in lab 1 (15%), while urine in lab 1 (42.5%) and lab 2 (21.4%). Regarding the resistance factor, *P. aeruginosa* showed resistance to AMIC antimicrobials only in lab 1 (17.4%), CEFE lab 1 (34.1%) and lab 2 (14.2%), CIPRO lab 1 (38.1%) and lab 2 (21.4%), GENT lab 1 (35.6%) and lab 2 (21.4%), MERO only lab 1 (27.7%) and PI + TA only lab 1 (12.5). Thus, it is inferred that the results obtained are mainly aligned with the conclusions presented in investigations previously described in the literature. In addition, the aspects related to the antimicrobial resistance rates of the samples taken from patients with age range from 60 years of age are highlighted. We suggest new comparative studies using laboratory samples with a longer period of time to verify the prevalence of these samples and the evolutionary flow of resistance rates.

Keywords: *Pseudomonas aeruginosa*s, Resistance factor, Antimicrobial, Bacterial prevalence.

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