

TITLE: PROFILE OF NOSOCOMIAL INFECTIONS BY *Pseudomonas aeruginosa* IN A TEACHING HOSPITAL IN CEARÁ, BRAZIL

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ABSTRACT:

Nosocomial infections negatively compromise the public health situation, as there is a high mortality rate associated with it and has as a precursor, many times, the action of multiresistant bacteria. This problem led to the creation of international programs aimed at preventing and combating these infections, but the studies carried out do not yet reflect the desired results. *Pseudomonas aeruginosa* is an opportunistic microorganism with several virulence factors that has intrinsic resistance characteristics to several antimicrobials. Usually present in a hospital environment, this is responsible for worsening the clinical condition of immunocompromised patients, mainly burn victims and patients with cystic fibrosis. Thus, the objective of this study was to identify the profile of nosocomial infections caused by *P. aeruginosa* in a teaching hospital in Sobral, Ceará, Brazil. The justification for this study was the need to define in which sectors the greatest number of infections occurred in order to intensify prevention measures in the hospital environment. This is an analytical, cross-sectional study with a quantitative approach. Microbiological data from patients with nosocomial infections were reported by the Hospital Infection Control Commission from January 2018 through April 2019. Data were tabulated in the Excel 2016 program according to the place of hospitalization and the site from which the sample was obtained. A total of 86 *P. aeruginosa* nosocomial strains were isolated from microbiological samples of 75 patients distributed as follows: hospitalized in wards (n = 32); pediatric Intensive Care Unit (ICU) (n = 11); adult ICU (n = 9); neonatal ICU (n = 6); neurology (n = 6); oncology (n = 4); pediatric ward (n = 3); emergencies (n = 2); hemodialysis (n = 1); not reported (n = 1). The microorganism was isolated from blood samples (n = 17); secretion (n = 14); urine (n = 9); catheter tip (n = 8); tracheal aspirate (n = 7); oropharynx (n = 3); anal swab (n = 2); nasal swab (n = 1); liquor (n = 1); and others (n = 24). The results demonstrated higher frequency this pathogen in the different wards than in ICU at analyzed hospital, and the majority of the strains was isolated from blood and secretion. Therefore, the data collected highlights the need for intensification of control and prevention measures in order to reduce nosocomial infections caused by *P. aeruginosa* in this teaching hospital.

KEYWORDS: Health assistance, nosocomial infection, multiresistant bacteria, teaching hospital.

DEVELOPMENT AGENCY: Santa Casa de Misericórdia de Sobral – CE.