

Title: SENSIBILITY AND RESISTANCE PROFILE OF NONFERMENTING GRAM-NEGATIVE BACILLI ISOLATED FROM A LABORATORY SITUATED IN CARUARU CITY - PE

Authors: Oliveira, S.R, Germinio, J. E. S., Araújo, D.G, Oliveira, M.E.F.

Institution: Associação Caruaruense de Ensino Superior - ASCES (Avenida Portugal, nº 1.019, Bairro Universitário, Caruaru- PE)

Resume:

Nonfermenting Gram-Negative Bacilli (NFGNB) are a heterogeneous group of microorganisms that do not have the ability to ferment carbohydrates in order to obtain energy. NFGNB are broadly distributed in the nature and there are more than 120 species, which are classified as pathogenic, standing out among them, *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, *Stenotrophomonas maltophilia* and *Burkholderia cepacia*. Infections caused by these organisms are mostly acquired in the hospital environment because these are opportunistic pathogens. According to the manual of prevention and hospital Infection control from ANVISA, the NFGNB are among the most important bacteria with clinical and epidemiological relevance. This study aimed to evaluate the sensibility and resistance profile of nonfermenting Gram-Negative Bacilli isolated from a laboratory in Caruaru city - PE. Strains were inoculated in TSI and MacConkey culture media to verify respectively, the absence of fermentation and growth inhibition. The samples were also submitted to the oxidase test to prove the oxidase enzyme production, polymyxin resistance test in addition to the Gram stain, for better identification of bacterial genera. Finally, it was carried out an antibiogram test to verify the susceptibility and resistance profile to antibiotics that are most frequently used against strains. From the 69 strains analyzed, 14% were classified as NFGNB. From these, the genus *Acinetobacter* sp was most frequently found (50%), followed by *Pseudomonas* (20%). Regarding the sensitivity and resistance profile, *Acinetobacter* sp strains were sensitive to minocycline but resistant to gentamicin, meropenem, imipenem, amikacin, tazobactam + piperacillin, ciprofloxacin, ceftazidime, ceftriaxone, cefotaxime whereas *Pseudomonas* sp strains showed sensitivity to gentamicin, meropenem, imipenem, amikacin, levofloxacin, norfloxacin, ceftazidime and cefepime. The execution of studies in order to determine the microorganisms profile has proved one of the main ways of combating them, helping to identify drug-resistant strains, seeking the best ways to eliminate them and preventing more serious infections to the population, which highlights the importance of developing more research in this area.

Keywords: Nosocomial infection, NFGNB, bacterial susceptibility.

FINANCIAL SUPPORT: Not applicable