

Title: FACTORS ASSOCIATED WITH CIPROFLOXACIN RESISTANCE IN BACILLI GRAM-NEGATIVE ISOLATED FROM URINARY TRACT INFECTIONS

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Abstract:

The urinary tract infections (UTI's) are among the most often causes of medical appointments, accounting for a high consumption of antimicrobials. It also presents one of the main nosocomial infections, which can cause extending hospitalization of patients and may worsen when there the development of bacterial resistance to commonly used antibiotics, such as the group of fluoroquinolones. This study aimed at analyzing the factors associated with resistance in gram-negative bacteria from urinary tract infections of patients attended in the University Hospital Dr. Miguel Riet Corrêa Jr., in the Rio Grande city, Rio Grande do Sul. In the research. A total of 562 clinical isolates of positive urocultures in a period from August 2012 to July 2013 were studied. The analysis of associated factors with resistance to ciprofloxacin was performed using Poisson Regression with the following hierarchical levels: age and gender, type of infection, site of origin of the sample, length of stay, bacterial species, species/absence of extended spectrum β -lactamases (ESBL). In spite of no statistical significant value, we observed a linear increase of bacterial resistance with the increase associated with aging patients. The associated factors to ciprofloxacin resistance were male gender (OR 3.12; CI95%: 1.97-4.96) and infections acquired in the hospital (62% of resistance). Patients hospitalized for seven days or more were three times more chances to acquire resistance bacterial strains in comparison to ≤ 3 days. Although the bacterial species has been excluded as associated factor, the presence of ESBL was significantly relevant, eleven more times of chances to be bacterial strains resistant to ciprofloxacin. With these data, we could conclude the high frequency of resistance to ciprofloxacin in gram-negative strains from UTI's and this strong associated with the presence of ESBL enzymes. It is important the local knowledge of the susceptibility profile from microorganism for preventing treatment failure and development of resistance bacterial strains.

Keywords: bacterial resistance, ciprofloxacin, UTI's

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