

TITLE: Epidemiological profile of bacterial infections in onco-hematologic patients during febrile neutropenia at referral service in Pernambuco.

AUTHORS: Soares, C. R. P, Firmo, E., Leal, N. C., Xavier, D., Araújo, P. S. R., Silveira, V. M.

INSTITUTION: Universidade Federal de Pernambuco, Recife/PE. Av. v. Prof. Moraes Rego, 1235 - Cidade Universitária, CEP 50670-901, Recife - PE, Brasil.

ABSTRACT

Febrile neutropenia (NF) is one of the most frequent and lethal complications in onco-hematologic patients undergoing chemotherapy. Bacteria are primarily responsible for infections during NF. The investigation of infections during febrile neutropenia in intensive care hematologic patients is of great clinical importance, due to the higher rates of morbidity and mortality in these patients. The objective of this study was to trace the epidemiological profile of patients affected by bacterial infection during episodes of febrile neutropenia in the referral service in Pernambuco. Epidemiological clinical data were extracted retrospectively from medical records of the hematology service of the Cancer Hospital of Pernambuco between 2014 and 2017. Of the 328 records found in this period, only 145 medical records of patients presenting 268 episodes of NF and 37 occurrence of death in this period. With a mortality rate of 13.8% per NF episode. The majority had only one episode of NF, with a mean age of 45 years and a discrete predominance of females (54.5%). Most episodes of NF occurred from the second to the eighth cycles of chemotherapy of the proposed regimen. In only 68 samples of blood cultures collected there was bacterial isolation, having isolated 52 gram-negative, being most (39/68) multi-sensitive. The bacterial agents most frequently isolated during episodes of NF were, *Klebsiella* sp, (22), *Escherichia coli* (15) and *Staphylococcus Coagulase Negative* (13). Within these strains were found a resistance profile to ESBL (13.24%), KPC (5.88%), OXAs (17.65%) and VR (8.82%). We observed a large prevalence of gram-negative infection in these patients and a broad spectrum B-lactamase resistance profile and class A, B and D carbapenemases. These data differ somewhat from those described in the literature that show a predominance of gram-negative agents -positive drugs possibly due to the use of chemotherapeutic agents associated with more severe oral mucositis and diarrhea and the wide use of CTI or CVC, as well as the prophylaxis disseminated with quinolone. Therefore, we can see that prophylaxis is an important factor in this population. In contrast, we perceive a high mortality rate that may be associated with delayed diagnosis and consequently inadequate treatment.

Keywords: Epidemiological profile, onco-hematological, bacterial infection, febrile neutropenia.

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