Abstract

Introduction. Febrile neutropenia is a common complication of chemotherapy treatment of malignant hematological diseases. However, there is insufficient information regarding the infectious complications of febrile neutropenia in our country. Objective. We will evaluate the microbial characteristics of bacterial and fungal isolates and the clinical outcome of patients with febrile neutropenia who received medical attention at an oncological reference center in Colombia. Materials and methods. A prospective case series included patients with histologically confirmed oncological disease, who were admitted because of febrile neutropenia or presented with febrile neutropenia during hospitalization. Patients with benign hematological diseases were excluded. Demographic, microbiological, and clinical features as well as treatment and outcome information from patients with febrile neutropenia were obtained. We performed univariate and multivariate analyses, with mortality defined as the outcome. Results. One hundred and thirty episodes of febrile neutropenia were identified in 104 patients. The mean patient age was 19, and 53% of the patients were male. Approximately 86% of the episodes occurred in patients with hematological disorders. An infectious site was identified in 65% of patients; 41% and 24% of the febrile neutropenia patients' episodes exhibited a localized infectious focus and developed bloodstream infections, respectively. The majority of infections were found in blood, urine, gastrointestinal tract, and soft tissue. Distribution analysis of microbiological isolates revealed 46.4% Gram-negative bacilli, 38.4% Gram-positive cocci, 8% fungi, and 7.1% parasites; there was a 7.7% mortality rate. Appropriate empirical antimicrobial therapy was a protection-related factor in multivariate analyses (OR= 0.17; 0.034 - 0.9 95% CI; p= 0.037). Conclusions. The mortality rate was relatively low and comparable to the rate reported by developed countries. Inappropriate empirical antimicrobial therapy was the main factor associated with mortality.

Keywords

Neutropenia/microbiology, neutropenia/mortality, neoplasm/complications, antineoplastic agents/adverse events, Colombia.