

Predictors of Severity Associated with Diminished Survival of Patients with Febrile Neutropenia Episodes in Patients in an Oncological Pediatric Intensive Care Unit

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Abstract

Background: Febrile neutropenia (FN) is a frequent complication of chemotherapy treatment in children with oncological diseases. It can cause serious complications due to infections (SIC), such as severe sepsis and septic shock. In order to identify the predictors of severity for diminished survival in these patients, it is important to have a better treatment strategy, so as to reduce the rate of mortality. Procedure: Retrospective, descriptive and analytical study conducted through a review of medical records of cancer patients from 0 to 18 years old with FN episodes admitted to the Pediatric Intensive Care Unit in Brazil, from June/2013 to January/2018. Epidemiological, clinical and laboratory variables were analyzed for survival outcome. The rates of severe sepsis, septic shock, and mortality were also investigated. Results: Data from 140 FN episodes were analyzed. Most of the children had hematological diseases (80.8%), the average age was 8.5 years old, and the main microorganisms identified in cultures were Gram negative bacteria. The predictors of severity for diminished survival utilizing multivariate analyses were hematological neoplasms in relapse, abnormal capillary filling, and a serum calcium value <7 mg/dL. The rate of severe sepsis was 38.57%, the rate of septic shock was 37.85%, and the rate of mortality was 25.71%. Conclusion: Predictors of severity for diminished survival were hematological neoplasms in relapse, abnormal capillary filling time, and a serum calcium value lower than 7 mg/dL. The rate of severe sepsis was 38.57%, the rate of septic shock was 37.85%, and the rate of mortality was 25.71%.

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