

Single dose filgastrim in cytotoxic-induced neutropaenia in children

Abstract:

OBJECTIVE: To document the impact of fixed dose weight adjusted filgastrim (G-CSF) in cytotoxic-induced neutropaenia. **DESIGN:** A descriptive cross-sectional study. **SETTING:** Paediatric Oncology Unit at Kenyatta National Hospital, Nairobi, Kenya. **SUBJECTS:** All paediatric oncology patients who had developed cytotoxic-induced neutropaenia. **MAIN OUTCOME MEASURES:** The following were documented for every tissue proven case of malignancy; age, sex, type of malignancy, treatment regimen and schedule, initial blood count at the time of neutropaenia; subsequent blood counts daily for five days from day one of single dose filgastrim, and the calculated neutrophil incremental count. **RESULTS:** Initially eight patients with solid tumours previously treated with filgastrim revealed that cytotoxic induced neutropaenia could be ameliorated by a single dose of filgastrim. Subsequently, the study listed thirty patients. This cohort consisted of; 37% rhabdomyosarcoma, 30% Burkitts, 27% acute lymphoblastic leukaemia and 6% Hodgkin's lymphoma. Increased neutrophil count after 48 hours was documented in 26 (87%) patients, with absolute neutrophil counts range of 0.5 to 31.5 x 10⁹/L. This response was significantly influenced by gender ($p > 0.0001$), malignancy type and chemotherapy regimen ($p > 0.001$). **CONCLUSION:** The study shows that chemotherapy induced neutropaenia can be alleviated by a single dose of filgastrim without adverse effects on lymphoblastic leukaemia. This study suggests that a single dose of filgastrim should be first tried in cytotoxic induced neutropaenia in the paediatric age group