

**OBJECTIVE:** To evaluate chemotherapy induced myelosuppression, its management and outcome. **DESIGN:** Retrospective analysis of patients aged 13 years and above. **SETTING:** Hurlingham Oncology Clinic and the Nairobi Hospital during the period of June 1998 to June 2003. **SUBJECTS:** Two hundred and two solid tumour and lymphoma patients treated with pulsed chemotherapy at Hurlingham Oncology Clinic and those treated by the same service at the Nairobi Hospital. **RESULTS:** Two hundred patients were evaluable for nadir blood counts. World Health Organisation (WHO) grade 3 neutropaenia complicated 57 (26.1%), and grade 4 complicated 56 (25.7%) treatments. Grade 0 neutropaenia was seen in 40 (18.4%) treatments, 33 having included prophylactic Granulocyte-Colony Stimulating Factors (G-CSF). Neutropaenia was worst following the first and sixth courses, and repeated second line courses but the difference was not statistically significant ( $p = 0.154$ ). Fever complicated 6 grade 3 and 21 grade 4 neutropenic episodes (23.1% of 117 evaluable). Twenty eight patients were hospitalised because of severe neutropaenia (23 febrile, and five afebrile initially but with absolute neutrophil counts  $< 0.01 \times 10^9/\text{litre}$ ). Eight of them died, six attributable to infections (21.4% mortality) and two attributed to other causes. Median time to neutrophil recovery to  $21.5 \times 10^9/\text{litre}$  was three days with a mean of 4.6 days. Anaemia and thrombocytopenia were not commonly experienced. **CONCLUSION:** Prophylactic use of G-CSF may have prevented severe neutropaenia and its use in severe neutropaenia may have reduced the duration and severity of neutropaenia but the mortality rate for febrile neutropaenia remained high.