Neutropenia is a major cause of infection-related morbidity and mortality in patients treated with myelosuppressive chemotherapy regimens. Each patient signed informed consent and institutional ethics approval was obtained from Pharma-Ethics, Pretoria, South Africa. The serious medical complication rate on this intermediate risk group of patients was low. The incidence of grade 4 neutropenia remains a significant problem in cancer intermediate-risk patients undergoing chemotherapy. The primary objective of this real-world study is to estimate the rate of patients who will develop at least one episode of febrile neutropenia (FN) and as an adjunct to support the delivery of dose-dense (increased frequency) or dose-intense (increased dose) chemotherapy. The primary objective of this real-world study is to estimate the rate of patients who will develop at least one episode of febrile neutropenia, and as an adjunct to support the delivery of dose-dense (increased frequency) or dose-intense (increased dose) chemotherapy regimens. The incidence of severe neutropenia (grade 3-4) was 7%.

Methods

Study Design

This was a prospective, observational, multinational, multicenter study which recruited 377 patients from Dec 2016 – Dec 2019. A total of study sites participated in the following centres in Belgium, Lebanon, Pakistan, South Africa and Switzerland. Patients were enrolled through a secure website or in cases they have signed informed consent forms and before the start of chemotherapy. Patients were followed for the duration of the chemotherapy (up to 4 cycles and up to 90 days after the last day of chemotherapy administration).

Patient Characteristics

In total, we evaluated 332 patients receiving 1657 cycles of chemotherapy. Patients with any unmeasurable malignancy other than Hodgkin’s lymphoma or NHL are not eligible. Prior treatment with dose dense chemotherapy and/or stem cell transplantation. Patients with Neutropenia for all cycles 79% of cycle 1 and 21% of cycle 2.

Results

The incidence of FN at cycle 1 was 19% (CI 95% 15-23) and cycle 2 was 19% (14-25). The incidence of FN 10 – 20%).

Conclusions

Febrile neutropenia and grade 4 neutropenia remains a significant problem in cancer intermediate-risk patients undergoing chemotherapy. The relative dose intensity (either reductions or delays) in which patients undergoing chemotherapy treatment. The relative dose intensity (either reductions or delays) may impact treatment efficacy.

References