The need for improved neutropenia risk assessment in DLBCL patients receiving R-CHOP-21: Findings from clinical practice


This manuscript reports results for 704 diffuse large B-cell lymphoma (DLBCL) patients retrospectively and prospectively enrolled in the observational, multicentre IMPACT NHL study which evaluated febrile neutropenia (FN) risk assessment and granulocyte-colony stimulating factor (G-CSF) prophylaxis use in clinical practice in 1’829 non-Hodgkin lymphoma (NHL) patients receiving cyclophosphamide, doxorubicin, vincristine and prednisone (CHOP) chemotherapy with or without rituximab (R). Baseline FN risk was assessed according to EORTC guidelines for G-CSF use. Overall, 434 patients (62%) were assessed as being at high FN risk (≥20%) and 266 (38%) were assessed as being at low FN risk (≤20%). Among those with high FN risk (N=434), 204 (47%) patients received primary G-CSF prophylaxis (PP), 113 (26%) received secondary G-CSF prophylaxis (SP), 44 (10%) were treated with G-CSF during chemotherapy, and 70 (16%) received no G-CSF. FN occurred in 44 patients (10%) in the first cycle and 91 (21%) had FN in any cycle of chemotherapy. Among those with low FN risk (N=266), 48 (18%) patients received primary G-CSF prophylaxis, 85 (32%) patients received secondary G-CSF prophylaxis, 21 (8%) were treated with G-CSF during chemotherapy, and 114 (43%) received no G-CSF. FN occurred in 16 (6%) in the first cycle and 43 (16%) had FN in any cycle of chemotherapy. Dose delays of more than three or five days were less frequent in patients receiving PP than in patients receiving either SP or treatment with G-CSF. Frequency of dose reductions of more than 10% was almost the same for both groups receiving either PP or SP, but they were less frequent in the PP group than in the G-CSF treatment group. Relative dose intensity of ≥90% was more often achieved in patients receiving PP than in patients receiving only SP or treatment with G-CSF. The authors see a need for improved FN risk-assessment and thorough guideline adherence to further reduce FN and better support chemotherapy delivery.

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