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Successful hematopoietic stem cell mobilization with vinorelbine and filgrastim in germ cell tumor

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Abstract

Germ cell tumor (GCT) is the most frequent cancer in young men and is highly curable. Almost 80 % of patients with the disease in an advanced stage achieve a reliable response to cisplatin combination chemotherapy. For relapsing or refractory disease, autologous hematopoietic stem cell transplantation (HSCT) is an effective therapy. The two most used mobilization strategies for HSC collection are filgrastim alone or filgrastim after chemotherapy (chemomobilization). HSC collection with filgrastim mobilization can be difficult, especially in highly treated patients. While the addition of chemotherapy improves mobilization and reduces the number of apheresis sessions, it can increase morbidity rate as well. We describe a case of a 45-year-old male with classical seminoma who was submitted to orchiectomy. Two months after, he presented progression of the tumor. He received four cycles of cisplatin, etoposide and bleomycin, with residual retroperitoneal mass and cervical lymphadenopathy. Further, he was submitted to three more cycles of cisplatin, ifosfamide and paclitaxel. Thereupon, he showed partial response. At that moment, autologous HSC transplantation was considered. In the first mobilization, filgrastim alone was used without success in harvesting. The second mobilization consisted of vinorelbine at day 1 (35 mg/m^2) and filgrastim (16 µg/kg) started at day 5. The peak of CD34+ cells in peripheral blood was 32.6 × 10^6 cells/L on day 8, with 4.73 × 10^6 cells/kg CD34+ collected on days 8 and 9. The benefits of this scheme include: (a) outpatient administration, (b) fewer doses of filgrastim, (c) minimal risk of febrile neutropenia and (d) reliable prediction of collection day. For these reasons, we conclude that vinorelbine chemomobilization is a great option for GCT, particularly in patients with high risk of mobilization failure. Furthermore, it requires less resource usage, hospitalizations and transfusions than conventional chemomobilization.

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