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311.DISORDERS OF PLATELET NUMBER OR FUNCTION: CLINICAL AND EPIDEMIOLOGICAL

Efficacy and Safety of Avatrombopag in the Treatment of Chemotherapy-Induced Thrombocytopenia Refractory to Rhtpo in Patients with Lymphoma

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Background: Chemotherapy-induced thrombocytopenia (CIT) is a common cause of chemotherapy dose reductions and treatment delays. With applications of recombinant human interleukin 11 (rhIL-11) and recombinant human thrombopoietin (rhTPO), outcomes of patients with CIT have improved significantly. however,some patients with severe thrombocytopenia still have poor responses to the above therapies. Avatrombopag is an orally administered thrombopoietin receptor agonist and can stimulate thrombopoiesis in haematopoietic stem cells. Avatrombopag has been approved in the USA, Europe, and China for thrombocytopenia in patients with chronic liver disease who are scheduled to undergo a surgery. It also has been approved for patients with chronic immune thrombocytopenia who are unresponsive to previous treatments in the USA and Europe. The aim of this study is to evaluate the efficacy and safety of avatrombopag in the treatment of refractory CIT.
Methods: The clinical data of 23 lymphoma patients with grade 3/4 CIT unresponsive to rhTPO treatment for 7-10 days were collected from April 2022 to May 2023. All patients received avatrombopag orally at a dose of 40 to 60 mg / day combined with subcutaneous injection of rhTPO (300 U/kg/day). Response (R) was defined as a platelet count≥ 50 × /L, or doubling of the baseline platelet count, and absence of bleeding. Platelet transfusion was allowed when the platelet count was less than 10×109/L or with bleeding events. When the platelet count recovered to ≥100 $\times 10^9$/L or increased 50 $\times 10^9$/L from baseline, treatments of avatrombopag and rhTPO were stopped.
Results: The median age of the 23 patients with refractory CIT was 57 (range 17–83) years. The pathological subtypes were diffuse large B cell lymphoma (DLBCL) (n=10), Burkitt lymphoma (n=4), angioimmunoblastic T-cell lymphoma (AITL) (n=3), follicular lymphoma (FL) (n=2), extranodal NK/T cell lymphoma (ENKTL) (n=1), anaplastic large cell lymphoma (ALCL) (n=1), B-lymphoblastic lymphoma (n=1), and mantle cell lymphoma (MCL) (n=1). The treatment consisted of CHOP (cyclophosphamide, doxorubicin, vincristine and prednisone) (n=11), Hyper-CVAD (hyperfractionated cyclophosphamide, vincristine, doxorubicin, dexamethasone), high-dose methotrexate with cytarabine (n=6), liposomal mitoxantrone-containing regimen (n=4), bendamustine-containing regimen (n=1), and peg-asparaginase-based regimens (n=1). At baseline, 19 patients experienced grade 3 and 4 patients experienced grade 4 thrombocytopenia after chemotherapy. The median lowest platelet level was 12×10 ^{9}/L (range 2–44×10 ^{9}/L). Two patients developed grade 1 bleeding events and one patient occurred grade 2 bleeding events. Nineteen patients received platelet transfusion. After receiving the combination therapy of avatrombopag, 73.9% (17/23)of patients achieved the primary end point of corrected platelet counts (≥50×10 ^{9}/L)and were free from platelet transfusion. The median time to response was 11 (range 5–25) days. No treatment-related adverse events such as elevated aminotransferases, thrombosis, fatigue, fever and dizziness were noticed during administration. Two patients received avatrombopag as secondary prophylactic treatment, and there were no grade 4 thrombocytopenia or bleeding events during subsequent cycles of chemotherapy.
Conclusion: Avatrombopag is effective and safe in the management of CIT for lymphoma and it can be used as an alternative / combination treatment for the patients who refractory to rhTPO. The further clinical research is still needed to confirm this conclusion.

Disclosures No relevant conflicts of interest to declare.

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