Abstract: PB3346

Title: MANAGING CHEMOTHERAPY-INDUCED THROMBOCYTOPENIA (CIT) WITH ELTROMBOPAG; A RETROSPECTIVE REAL-WORLD ANALYSIS

Abstract Type: Publication Only

Topic: Platelet disorders

Background:

CIT (Chemotherapy-induced thrombocytopenia) is a known and debilitating complication of anticancer treatments. CIT may cause delays and disruptions in anticancer treatment; examples include partial treatment stoppage, treatment application outside of the recommended dose and duration, and dosage adjustments. CIT poses a significant clinical challenge in cancer treatment, leading to an increased risk of bleeding and dose reductions or delays in chemotherapy. Eltrombopag, a thrombopoietin receptor agonist, has shown promise in managing CIT. However, data on its efficacy and safety in this specific population remain limited.

Aims:

This retrospective multicenter study aimed to evaluate the efficacy and safety of eltrombopag in managing chemotherapy-induced thrombocytopenia in cancer patients. Specifically, we sought to assess changes in platelet counts, incidence of bleeding events, and adverse effects associated with eltrombopag therapy.

Methods:

We conducted a retrospective analysis of 21 cancer patients with chemotherapy-induced thrombocytopenia who received eltrombopag treatment across four medical centers between 2021-and January 2024. Patient demographics, cancer types, chemotherapy regimens, baseline platelet counts, eltrombopag dosages, and treatment durations were collected from medical records. The primary outcomes included changes in platelet counts following eltrombopag initiation, success in continuing chemotherapy incidence of bleeding events during treatment, and adverse effects related to eltrombopag therapy. Eltrombopag started at 50 mg/day before the planned chemotherapy regimen. Statistical analyses were performed to assess the significance of observed changes and associations.

Results:

A total of 21 patients were included in our analysis. Fourteen were female and 7 were male. The median age of the patients was 63 ranging between 41 and 85. Breast cancer as the most prevalent solid tumor type (n=7), followed by lung (n=3) and gynecologic (n=3) malignancies. Other tumor types included stomach (n=2), pancreas (n=2), prostate (n=2), mesothelioma (n=1), and CNS (central nervous system) (n=1). Fourteen patients (66.7 %) had stage IV disease, 6 patients (28.6 %) had stage III disease and one patient (4.7 %) had stage one disease. Patients had a median of 2 prior chemotherapy regimens, ranging from 1 to 5. The median delay in chemotherapy treatment was 5 weeks (3-18). Median Thrombocyte count before starting Eltrombopag treatment was 34×10^9/L. The median duration of eltrombopag usage was 8 weeks. Patients got a median 2.5 cycles of chemotherapy after eltrombopag. After beginning eltrombopag treatment, the median platelet count values were found to be 73, 86, 132, and 108×10^9/L in the first week, 4th week, 6th week, and 12th week respectively. While grade 1 liver transaminase elevation was detected in 3 patients, no other side effects were observed.

Summary/Conclusion:

Our findings suggest that pre-chemotherapy administration of eltrombopag may be a promising strategy for managing chemotherapy-induced thrombocytopenia in cancer patients. These findings highlight the possible benefits of eltrombopag as a kind of supportive care for cancer patients receiving chemotherapy. Larger sample sizes and additional prospective studies are needed to confirm these results and clarify the best ways to

dose and time eltrombopag in this particular population.

Table 1 Demographic, Clinical and Treatment Data of the Patients

Baseline Characteristics of the Patients	Number (%)
Gender	
Female	14 (66,7)
Male	7 (33.3)
Solid Tumor type	
Breast	7 (33.3)
Lung	3 (14.3)
Gynecologic	3 (14.3)
Stomach	2 (9.5)
Pancreas	2 (9.5)
Prostate	2 (9.5)
Mesothelioma	1 (4.7)
CNS	1 (4.7)
Stage	
II	1 (4.7)
III	6 (28.6)
IV	14 (66.7)
Age (median, range)	63 (41-85)
Number of prior Chemotherapy regimens (median, range)	2 (1-5)
Duration of Chemotherapy delay in weeks (median, range)	5 (3-18)
Thrombocyte count before the start of Eltrombopag (median, range) x 10^9/L	34 (13-70)
Duration of Eltrombopag use (median, range) weeks	8 (3-116)
Number of chemotherapy cycles after eltrombopag (median, range)	2.5 (1-16)
Thrombocyte count at first week of eltrombopag (median, range) x 10^9/L	73 (10-269)
Thrombocyte count at 4th week of eltrombopag (median, range) x 10^9/L (n:19)	86 (31-287)
Thrombocyte count at 6th week of eltrombopag (median, range) x 10^9/L (n:14)	132 (26-248)
Thrombocyte count at 12th week of eltrombopag (median, range) x 10^9/L	108 (21-260)