Myelosuppressive hematologic adverse events (HAEs; anemia, neutropenia, and/or thrombocytopenia) are common complications of chemotherapy treatment among patients with cancer. Cytotoxic chemotherapy regimens are designed to cause myelosuppression. The chemotherapy-induced myelosuppression is managed with dose reductions and/or supportive care interventions, such as granulocyte colony-stimulating factor (G-CSF), erythropoiesis-stimulating agents (ESAs), and red blood cell (RBC)/platelet transfusions. In February 2021, trilaciclib, an intravenous cyclin-dependent kinase 4/6 inhibitor, was approved by the US Food and Drug Administration to decrease the incidence of chemotherapy-induced myelosuppression in adult patients when administered prior to a platinum/etoposide- or topotecan-containing chemotherapy regimen for ES-SCLC.

In March 2021, the National Comprehensive Cancer Network Clinical Practice Guidelines in Oncology (NCCN Guidelines) added trilaciclib as a prophylactic option to manage chemotherapy-induced myelosuppression in patients with ES-SCLC, as indicated, to its Guidelines for Small Cell Lung Cancer, and for hematopoietic Growth Factors.

OBJECTIVE

To assess the prevalence of grade 3 myelosuppressive HAEs and associated health care resource utilization (HCRU) in the community oncology setting.

STUDY POPULATION

Primary and secondary analyses were conducted on data from 2 separate patient populations in the Integra Connect database:

1. For the primary analysis, adult patients with ES-SCLC who received trilaciclib (primary analysis).
2. For the secondary analysis, adult patients with ES-SCLC who received trilaciclib (secondary analysis).

METHODS

DATA SOURCE

This retrospective, observational study was conducted using structured data from the Integra Connect database.

DATA ANALYSIS

Primary and secondary analyses were conducted on data from 2 separate patient populations in the Integra Connect database:

1. For the primary analysis, adult patients with ES-SCLC who received trilaciclib (primary analysis).
2. For the secondary analysis, adult patients with ES-SCLC who received trilaciclib (secondary analysis).

RESULTS

TREATMENT PATTERNS

Among the 27 patients who received chemotherapy + trilaciclib, 17 (63.0%) received trilaciclib with chemotherapy alone, and 10 (37.0%) received trilaciclib with chemotherapy + immunotherapy.

MYELOSUPPRESSIVE HAEs

Among the 2707 chemotherapy-treated patients with ES-SCLC, 57.4% had grade ≥ 3 neutropenia, and 49.5% had grade ≥ 3 thrombocytopenia.

Among the 2707 chemotherapy-treated patients with ES-SCLC, 125 (4.8%) had grade ≥ 3 neutropenia, and 19.0% had grade ≥ 3 thrombocytopenia.

METHODOLOGY

The prevalence and incidence of grade 3 HAEs, treatment patterns, supportive care use (G-CSF, ESA, blood transfusions), and all-cause hospitalizations following up to study, whichever occurred first (Figure 1).

OUTCOMES AND ANALYSIS

- Myelosuppressive HAEs were identified using laboratory values based on Common Terminology Criteria for Adverse Events version 5.0 (dichotomous) (Figure 1).
- The prevalence and incidence of grade 3 HAEs, treatment patterns, supportive care use (G-CSF, ESA, blood transfusions), and all-cause hospitalizations following up to study, whichever occurred first (Figure 1).

CONCLUSIONS

- Results were based on data from community oncology settings and may not be generalizable to academic settings.
- Hospitalizations may be under captured, due to data limitations.
- The sample size of patients with ES-SCLC who received chemotherapy + trilaciclib was too small for statistical comparison with patients who were treated with chemotherapy alone.
- Trilaciclib is a novel oral agent for the prevention of chemotherapy-induced myelosuppression in patients with ES-SCLC. Future studies using data from larger patient populations are recommended to enable this comparison.

LIMITATIONS

- Results from this study suggest that trilaciclib is a novel oral agent for the prevention of chemotherapy-induced myelosuppression in patients with ES-SCLC. Further studies using data from larger patient populations are recommended to enable this comparison.
- The potential to reduce such burden.