Overall Survival in Patients with Advanced Systemic Mastocytosis: Avapritinib Versus Midostaurin or Cladribine

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Background

- Advanced systemic mastocytosis (ASM) is a rare hematological malignancy characterized by the accumulation of mast cells in bone marrow and other tissues.
- The World Health Organization (WHO) classifies ASM into three categories: aggressive systemic mastocytosis (ASM), SM with associated hematologic neoplasms (SM-AHN), and mast cell leukemia (MCL).
- Midostaurin is approved for the treatment of SM-AHN and ASM, with a labeled indication that it is for patients who have received prior therapy.
- Cladribine is an alternative agent, especially for patients who have received prior therapy or are intolerant to midostaurin.

Methods

- Aim: To compare avapritinib, midostaurin, and cladribine in a real-world setting and evaluate outcomes in patients with advanced ASM.
- Study design: A retrospective study analyzing data from real-world patients treated with avapritinib, midostaurin, or cladribine.
- Patient selection: Patients with advanced ASM who received at least one line of therapy from midostaurin or cladribine at a participating site on or after January 1, 2009.

Results

Baseline demographics

- The analysis included 176 patients treated with avapritinib, 94 treated with midostaurin, and 49 treated with cladribine.
- Patients treated with avapritinib were more likely to have an S/R/S mutation and fewer patients had an ASM subtype.
- Patients treated with midostaurin were more likely to have a median time to treatment with TKIs and a lower number of prior lines of therapy.

Prior systemic therapy

- Avapritinib was received as first-line therapy in 65% of patients, compared to 56% for midostaurin and 44% for cladribine.
- The agent most commonly used with TKIs (52.3% and 42.9%, respectively), and the agent most commonly used with biologic therapy were interferon-alpha and azacitidine, respectively.

Cohort characteristics

- The avapritinib cohort had the lowest number of prior lines of therapy and prior use of TKI, cytoreductive, and biologic therapy.

Baseline clinical characteristics

- Fewer patients in the cladribine cohort (28.5%) had SM-AHN subtype, compared to patients in the avapritinib (37.9%) and midostaurin (45.8%) cohorts, while more patients in the cladribine cohort had an S/A/R mutation (45.9%) compared to patients in the avapritinib (15.8%) and midostaurin (22.9%) cohorts.

- In the avapritinib cohort, 9.8% of patients had prior treatments with midostaurin, compared to 0% in the midostaurin and 3% in the cladribine cohort.

Prior therapy

- Prior treatments with TKIs (52.3% and 42.9%, respectively), and prior treatments with biologic therapy were interferon-alpha and azacitidine, respectively.

Survival outcomes

- In the avapritinib cohort, median overall survival was 2.3 years, compared to 1.0 year in the midostaurin cohort and 0.9 year in the cladribine cohort.
- The Kaplan-Meier survival curve for avapritinib is significantly better than for the other two cohorts.

Conclusions

- Avapritinib significantly improved survival compared with patients treated with midostaurin or cladribine in real-world clinical practice.

Acknowledgments

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References