Background

Mepolizumab is a targeted anti-interleukin (IL)-5 monoclonal antibody that has been approved for the treatment of severe eosinophilic asthma and eosinophilic granulomatosis with polyangiitis.1 The efficacy and safety of long-term treatment with mepolizumab in patients with severe eosinophilic asthma have been demonstrated for up to 4.5 years in previous double-blind2 and open-label studies.3,4

There are no data on the impact of stopping treatment after longer than 1 year of mepolizumab treatment. The COMET study assessed outcomes in patients with severe eosinophilic asthma who had been treated with mepolizumab 100 mg administered subcutaneously (SC) for ≥3 years and then either stopped or continued long-term treatment.

Methods

Outcomes Following Continuation or Stopping Long-Term Mepolizumab Treatment in Patients With Severe Eosinophilic Asthma: The Randomized COMET Trial

Originally accepted as an oral presentation [abstract A4211]. A video recording is available on the ATS virtual platform and the recording and presentation slide deck are also available via http://tago.ca/ats04.

References

≥3 yrs

Week

≥3 years and then either stopped or continued long-term treatment.

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Other endpoints

• Time to decrease in asthma control (ACQ-5 score increase from baseline ≥0.5-points)

• Time to first clinically significant exacerbation (requiring systemic corticosteroids, ED visit or hospitalization)

Prepared for the American Thoracic Society Annual Meeting (2020)

Conclusions

• Patients with severe eosinophilic asthma who stopped long-term (≥3 years) mepolizumab treatment had the following, versus those who continued:

- An increase in exacerbations and shorter time to first exacerbation
- A reduction in asthma control
- An increase in blood eosinophil counts back to pre-treatment levels

- Differences in efficacy outcomes were seen from Week 12 (16 weeks after the last dose)
- Data from COMET show a safety profile of mepolizumab consistent with previous trials

- These results support continued mepolizumab treatment having sustained clinical benefits in patients with severe eosinophilic asthma

Other key results

• Exposure to mepolizumab was shorter for the ‘stopped’ mepolizumab group then for the ‘continued’ group during the treatment period (94 vs 115 patient-years, respectively)

• Exacerbations requiring hospitalization or an ED visit and exacerbations requiring hospitalization were rare in both groups (5% vs 7%, and 4% vs 1%, in the ‘stopped’ and ‘continued’ groups, respectively).

• The number of adverse events per 1000 patient-years exposure was similar in both groups (1308 and 2748 in the ‘stopped’ and ‘continued’ groups, respectively), the safety profile of mepolizumab was consistent with previous trials.