Real-world Effectiveness of Mepolizumab in Patients with Respiratory Comorbidities and Severe Asthma

Beth Hanl PhD, Thomas Casale MD, Nestor Molfino MD, MSi, Jared Silver MD, PhD, Michael Bogart PharmD, Elizabeth Packnett MPH, Donna McMorrow BS, Juan Wu ScD

Aims

- Mepolizumab has been shown to improve severe asthma control in clinical trials and real-world studies. However, the potential benefits of mepolizumab in patients with respiratory comorbidities that can complicate asthma management are not well defined.
- The objective of this real-world study was to assess effectiveness of mepolizumab in patients with severe asthma and common respiratory comorbidities: nasal polyps, chronic sinusitis, respiratory infection and/or COPD.

Methods

- This was a retrospective analysis of US patients from November 1, 2014 – December 31, 2018 using the MarketScan® Commercial and Medicare Supplemental Databases.

Key Inclusion Criteria

- 12 years of age during baseline
- Continuous enrollment with medical and pharmacy coverage during 12-month baseline and follow-up period
- 1 asthma diagnosis during baseline
- 1 asthma diagnosis during the follow-up period
- 2 respiratory comorbidities
- Existing or new mepolizumab treatment

Key Exclusion Criteria

- Pregnancy or lactation
- Pneumonitis
- Serious allergic reactions (anaphylaxis) to mepolizumab
- Severe infection

Results

Table 1. Baseline demographics and clinical characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n = 288</th>
<th>Eligible patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasal Polyphs</td>
<td>143</td>
<td>45%</td>
</tr>
<tr>
<td>Chronic Sinusitis</td>
<td>147</td>
<td>51%</td>
</tr>
<tr>
<td>Respiratory Infection1</td>
<td>145</td>
<td>50%</td>
</tr>
<tr>
<td>COPD</td>
<td>125</td>
<td>44%</td>
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</table>

- Mean exacerbations per follow-up period: 1.2
- 2% of patients had 3 or more exacerbations per year.

- 87 (60.8%) patients were inpatient claims in the 12-month baseline period.

Exacerbation definition: asthma-related outpatient/emergency department (ED) claim with at least 5 days of systemic corticosteroids, 4 days of inpatient care, or an inpatient hospital admission with an asthma diagnosis code in the primary position.

- Oral corticosteroids (DOS) > 10 mg/day prednisone equivalent or 10 mg/day prednisone equivalent for ≥28 days within 12-month baseline period.

- 63% patients met study eligibility. Patients were stratified into non-mutually exclusive subgroups based on the comorbidities of interest. The average number of mepolizumab injections over follow-up ranged from 15-15 injections for all patient subgroups.

Conclusions

- These real-world data reveal that mepolizumab offers considerable efficacy in patients also experiencing a variety of common and significant medical comorbidities, which often complicate the ongoing management of severe asthma.

References:


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