Patients with severe eosinophilic asthma achieved remission over 2 years with benralizumab: integrated analysis of the >1000-patient, multinational, real-world XALOC-1 study

Girolamo Pelai,1,2, David J. Jackson,3 Parameswaran Hari,4 Benjamin Emmanuelli,5 Trung N. Tran,1 Andrew Menzies-Gow,6 Michael Warr,7 Sheena Kanyayi,8 Silvia Boarino,9 Javier Nueco,6 Maria Pardal,5 Anat Shafir,10 Vivian H. Shih,11 David Cohen,12 Claudia Loureiro,13 Alicia Pedilla-Galiz14

1 Department of Medicine, University of Washington, Seattle, WA, USA; 2 Division of Pulmonary, Allergy, and Critical Care Medicine, Beth Israel Deaconess Medical Center, Boston, MA, USA; 3 Department of Respiratory Medicine, King’s College Hospital, London, UK; 4 Department of Respiratory Medicine, Hospital Costa del Sol, Marbella, Málaga, Spain; 5 Pulmonology, Hospital Universitario Cruces, Barakaldo, Spain; 6 Thoracic Unit, Hospital Universitario de Salamanca, Salamanca, Spain; 7 Department of Respiratory Medicine, Hospital Universitario 12 de Octubre, Madrid, Spain; 8 Department of Respiratory Medicine, Hospital Universitario Alcalá de Henares, Alcalá de Henares, Spain; 9 Department of Pulmonology, Policlinico Universitario A. Gemelli, Rome, Italy; 10 Department of Respiratory Medicine, University of Coimbra, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal; 11 Department of Pulmonology, Centre for Asthma and Respiratory Disease, Northern General Hospital, Sheffield, UK; 12 Department of Pulmonology, College of Medicine, University of Nigeria, Enugu, Enugu, Nigeria; 13 Department of Respiratory Medicine, Hospital Sangüina, Vigo, Pontevedra, Spain; 14 Department of Respiratory Medicine, Hospital Universitario La Paz, Madrid, Spain

Reasons to perform this research

- Sea is characterised by frequent exacerbations, poor disease control and accelerated decline in lung function despite adherence to high-dose inhaled therapies or adequate asthma control only when taking high doses of OCS.1,2
- Biologic therapies have made clinical remission a viable goal in patients with SEA; however, long-term data are lacking.1,2
- We aimed to describe clinical remission in patients with SEA, with or without prior biologic experience, over 2 years of benralizumab therapy in the large-scale, real-world, XALOC-1 programme.

Materials and methods

2. Design: retrospective, multi-national data assessed clinical remission.
3. XALOC-1 programme design
   - Baseline period: 12 months
   - Follow-up period: 36 months
   - Clinical remission criteria: 3-component remission (No exacerbations, ACT score ≤ 16, and mOCS score ≤ 1.5)

Results

- Among all patients who met remission criteria at Week 96, 50.3% had sustained remission from Week 48.
- Clinical remission is a realistic, sustainable goal up to 2 years for patients with SEA receiving benralizumab, and can be achieved regardless of prior biologic experience.
- Regardless of remission status, very high percentages of patients achieved individual components of remission at 2 years.

Table 1. Baseline demographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>All patients (N=1070)</th>
<th>Biologic-naïve (N=636)</th>
<th>Biologic-experienced (N=434)</th>
<th>Omalizumab-experienced (N=372)</th>
<th>Mepolizumab-experienced (N=308)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean (SD)</td>
<td>62.2 (13.7)</td>
<td>62.3 (13.7)</td>
<td>62.2 (13.6)</td>
<td>62.0 (13.5)</td>
<td>61.9 (13.4)</td>
</tr>
<tr>
<td>Female, n (%)</td>
<td>531 (49.6)</td>
<td>341 (53.9)</td>
<td>190 (43.9)</td>
<td>251 (67.5)</td>
<td>180 (58.3)</td>
</tr>
<tr>
<td>BMI, mean (SD)</td>
<td>28.8 (5.6)</td>
<td>28.8 (5.6)</td>
<td>28.8 (5.6)</td>
<td>28.8 (5.6)</td>
<td>28.7 (5.6)</td>
</tr>
<tr>
<td>mOCS use, n (%)</td>
<td>585 (54.7)</td>
<td>363 (56.7)</td>
<td>222 (51.1)</td>
<td>242 (65.2)</td>
<td>143 (46.6)</td>
</tr>
<tr>
<td>Exacerbations/mean (SD)</td>
<td>3.8 (5.4)</td>
<td>3.9 (5.3)</td>
<td>3.5 (5.0)</td>
<td>3.0 (2.8)</td>
<td>3.5 (5.6)</td>
</tr>
<tr>
<td>Controlled asthma, n (%)</td>
<td>194 (26.3)</td>
<td>114 (25.6)</td>
<td>79 (17.9)</td>
<td>37 (10.0)</td>
<td>44 (22.7)</td>
</tr>
</tbody>
</table>

Table 2. Patients meeting criteria for 3-component clinical remission

- All patients: 68.4% (451/657) at Week 48, 67.9% (452/664) at Week 96
- Biologic-naïve: 67.0% (432/644) at Week 48, 66.6% (436/654) at Week 96
- Biologic-experienced: 66.2% (299/453) at Week 48, 65.9% (296/449) at Week 96
- Omalizumab-experienced: 66.9% (232/344) at Week 48, 66.5% (232/348) at Week 96
- Mepolizumab-experienced: 65.9% (159/242) at Week 48, 65.3% (157/239) at Week 96

Figure 1. 3-component clinical remission assessed at Weeks 48 and 96

- No exacerbations during treatment
- ACT score ≤ 16
- mOCS score ≤ 1.5

Figure 2. Patients meeting criteria for 3-component clinical remission

- All patients
- Biologic-naïve
- Biologic-experienced
- Omalizumab-experienced
- Mepolizumab-experienced

Figure 3. Exacerbation-free patients

- No exacerbations during treatment
- ACT score ≤ 16
- mOCS score ≤ 1.5

Figure 4. Patients with no mOCS use

- No exacerbations during treatment
- ACT score ≤ 16
- mOCS score ≤ 1.5

Figure 5. Patients with asthma symptom control

- ACT score ≤ 16
- mOCS score ≤ 1.5

Acknowledgements

This study was funded by AstraZeneca. Medical writing support was provided by Springer Healthcare Ltd, UK, which was funded by AstraZeneca in accordance with Good Publication Practice guidelines from the Committee on Publication Ethics. The authors state that they have no conflicts of interest.

Supplementary materials

- Table S1: detailed demographics
- Table S2: baseline clinical characteristics
- Table S3: clinical remission rates by age and sex
- Table S4: clinical remission rates by country
- Table S5: clinical remission rates by biologic therapy
- Table S6: clinical remission rates by prior biologic therapy
- Table S7: clinical remission rates by asthma control
- Table S8: clinical remission rates by symptom control

Disclosures

No disclosures.

Corresponding author: pelai@uw.edu

Poster presented at the ERS Congress, Milan, Italy, 9–13 September, 2023