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LETTER

Efficacy of omalizumab in the treatment of nasal polyps

Omalizumab, a humanised monoclonal anti-immunoglobulin E (IgE) antibody, is indicated as adjuvant treatment in refractory allergic severe asthma.¹ In both chronic rhinosinusitis (CRS) with nasal polyps (NP) and allergic rhinitis, IgE is increased in mucosal tissue and frequently in serum. The role of omalizumab has been clearly established in allergic asthma and rhinitis, but remains to be elucidated in NP.² The only evidence for the potential efficacy of omalizumab in NP relies on case reports and small series of patients which suggest that, when NP and asthma coexist, the anti-IgE may have therapeutic value on NP.^{3 4}

We describe the evolution of NP in 19 patients who were treated with omalizumab for severe asthma and who also had CRS with NP (age 49 ± 9.5 years, 58% women). The baseline serum IgE level was 257 KU/l (range 115–328). The subcutaneous dosage of omalizumab was based on weight and baseline serum IgE, and treatment follow-up was 16 months (range 15–28). Thirteen patients (68%) with CRS with NP had undergone at least one endoscopic sinus surgery (2 (range 1–3)), with a mean elapsed time of 29 months (range 18–39) between surgery and the start of omalizumab treatment. All patients with CRS with NP were examined at baseline and every 3 months by an ENT specialist. Using nasal endoscopy, the size of NP was scored in both nasal cavities as 0 (no polyp); 1 (polyps restricted to the middle meatus); 2 (polyps in the middle meatus but not reaching the upper edge of the inferior turbinate); 3 (polyps between the upper and lower edges of the

inferior turbinate); and 4 (large polyps reaching the floor of the nasal fossa), with a bilateral total score ranging from 0 to 8. The use of intranasal corticosteroids was also recorded both at baseline and during treatment. Data are presented as median (25–75th interquartiles) and the non-parametric Wilcoxon test was used for statistical comparisons ($p < 0.05$ was considered statistically significant).

NP size was significantly reduced at the end of follow-up compared with baseline (1 (0–2) vs 2 (0–4), $p = 0.035$). None of the patients needed additional surgery during omalizumab treatment. Furthermore, there was a clear reduction in the proportion of patients using intranasal corticosteroids between baseline and the end of the follow-up period (95% vs 42%, $p = 0.002$).

These observations show that omalizumab is effective in improving, or at least stabilising, the natural course of CRS with NP in patients treated for refractory severe asthma, in accordance with previous findings.^{3 4} In the surgical group, the long time between surgery and the start of omalizumab treatment (29 months (range 18–39)) is in agreement with the EP³OS definition⁵ of NP recurrence and in keeping with an improvement in NP due to omalizumab rather than to surgery. In addition to its effect on severe asthma, this analysis supports the potential benefit of omalizumab in NP by reducing NP size and the need for further medical and surgical treatment, and strongly suggests the potential role of IgE in the pathophysiology of NP. However, larger prospective studies are needed to confirm our preliminary results.

María del Carmen Vennera,¹ César Picado,¹ Joaquim Mullol,² Isam Alobid,² Manuel Bernal-Sprekelsen²

¹Department of Pneumology and Respiratory Allergy, Hospital Clínic, CIBERES, Spain; ²Department of Otorhinolaryngology, Hospital Clínic, Universitat de Barcelona, Barcelona, Spain

Correspondence to María del Carmen Vennera, Department of Pneumology and Respiratory Allergy, Hospital Clínic, Villarroel 170, Barcelona 08036, Spain; cvennera@clinic.ub.es

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