Olfactory Function and Biologic Treatments: Comment on Available Real-Life Studies

Landis BN[1], Coattrenec Y[2], Soyka MB[3,4]
[1]*Department of Otorhinolaryngology - Head and Neck Surgery, Geneva University Hospitals, Geneva, Switzerland*
[2]*Divison of Immunology and Allergology, Department of Medicine, Geneva University Hospitals, Geneva, Switzerland*
[3]*Department of Otorhinolaryngology - Head and Neck Surgery, University Hospital of Zurich, Zurich, Switzerland*
[4]*University of Zurich, Zurich, Switzerland*

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To the Editor:

We read with interest the recent article by Barroso et al [1] on improvement in olfaction in patients with chronic rhinosinusitis with nasal polyposis (CRSwNP) and asthma who received monoclonal antibodies (MABs).

We would like to congratulate the authors for their comparison of biological treatments, which adds to our knowledge in this evolving field and highlights the need for real-world studies. The clinical impression of the efficiency of MAB-based treatments is sometimes less convincing than shown in the initial trials [2]. Studies such that of Barroso et al [1] help to further refine the indication for MABs.

We would like to make a few comments on areas not addressed by the authors. Meier et al [3] reported similar results 2 years ago, and it is reassuring to see their poor outcome for olfactory function confirmed by Barroso et al [1]. They also compared 3 MABs (mepolizumab, omalizumab, and benralizumab), showing that all 3 treatments had moderate success rates for control of CRS, olfaction, and other symptoms, with mepolizumab performing best.

A recurrent problem when studying olfaction and reported outcomes is whether this sensory function has been measured or merely assessed using self-estimation. It is well acknowledged in the field and repeatedly shown that self evaluation is unreliable [4-6] and that only measurement adequately reflects sensory function. It is of particular interest that humans tend to confound nasal patency and olfactory function [4]. In the patient population investigated, the MABs may also be a confounding factor, since the nasal condition was influenced by both the treatment and the underlying disease (CRS). Measuring olfaction would have more clearly shown the effect MABs have on nasal obstruction, nasal patency, and olfaction. This missed opportunity for clarity by measurement is not a singular event but remains very prevalent in publications on olfactory outcomes [7].

In light of the recommendations given by several societies on the use of MABs, which require measurement of olfactory function [8], and the increasing surveillance by health regulatory offices and insurance companies, olfaction should be measured when biological treatments are given. Olfactory data are important.

Finally, the present study confirms previous results [3] but does not provide a new and urgently needed head-to-head comparison for one of the most recently approved MABs, dupilumab. With regard to olfactory function, our clinical experience is that dupilumab is better than all the other MABs available to date for CRSwNP and asthma [2]. We, as probably most clinical rhinologists and allergologists caring for patients with CRS-related olfactory impairment, eagerly await such a real-life study. Having said that, it is a pity that the authors did not disclose the olfactory outcomes of the 4 patients on dupilumab, even in such a plausibly small cohort. Given that olfaction would have improved in all 4 cases, such data would be of real-world interest.

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Conflicts of Interest

The authors declare that they have no conflicts of interest.

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Basile Landis

Rhinology-Olfactology Unit
Department of Otorhinolaryngology - Head and Neck Surgery
Department of clinical neurosciences
Geneva University Hospitals,
4 rue Gabrielle-Perret-Gentil,
CH-1211 Geneva 14, Switzerland
E-mail: Basile.Landis@hcuge.ch

