Editorial

Nasal Cytology in Eosinophilic Granulomatosis with Polyangiitis

David Longhino 1,2,*, Arianna Aruanno 1,2,* and Eleonora Nucera 2

1 Allergy Unit, Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, 00168, Italy; david.longhino@gmail.com
2 Università Cattolica del Sacro Cuore, Rome, 00168, Italy; eleonora.nucera@policlinicogemelli.it
* Correspondence: arianna.aruanno@policlinicogemelli.it; Tel.: +39-0630154965

In recent years, nasal cytology (NC) has become a valuable diagnostic tool in rhinology due to its easy practicability, non-invasiveness, and low cost [1]. In addition, the reproducibility of NC enables the monitoring of the efficacy of therapeutic strategies over time [2]. NC is employed in various rhinological conditions such as infectious rhinitis, allergic rhinitis (AR), cellular non-allergic rhinitis (non-allergic rhinitis with neutrophils, non-allergic rhinitis with eosinophils, non-allergic rhinitis with mast cells, non-allergic rhinitis with eosinophils and mast cells), mixed rhinitis, and chronic rhinosinusitis (CRSwNP) and without nasal polyps (CRSsNP) [3], while its use in other systemic diseases is still limited. This Editorial aims to discuss the possible role of NC in diagnosis and follow-up of eosinophilic granulomatosis with polyangiitis (EGPA) patients. Ear, nose, and throat (ENT) involvement, especially CRSwNP and CRSsNP, can be found in up to 78% of EGPA patients [4]. Nasal involvement is included in the 2022 ACR/EULAR Classification Criteria for EGPA [5], and the absence of ENT symptoms is a negative prognostic index in the revised Five Factor Score [6]. Therefore, implementing the currently used diagnostic tools (e.g., nasal endoscopy, sinonasal computed tomography) would be a great help in managing this disease.

We found only one study in the literature on NC in EGPA, conducted by Seccia et al. [7]. Of the 39 patients analyzed, 38 had nasal involvement, of which 18 with CRSwNP, 10 with CRSsNP, 3 with AR, and 7 with non-allergic rhinitis (5 with non-allergic rhinitis with eosinophils, 2 with non-allergic rhinitis with neutrophils) [7]. The presence of neutrophils in the two patients with NARNE could be explained by the possible role these cells play in the pathogenesis of the disease; in fact, neutrophil infiltrates are significantly higher in EGPA surgical specimens of nasal polyps [8].

In the study mentioned above [7], the majority of patients had CRS (71.8%), so it would also be appropriate to distinguish patients with EGPA from those with eosinophilic chronic rhinosinusitis (ECRS). Suzuki et al. showed that EGPA patients had significantly less ethmoid-dominant inflammation than ECRS patients and that although most EGPA patients had nasal polyps, as well as ECRS patients, EGPA patients also had a significantly lower risk of nasal polyps than those with ECRS [9]. NC allows to see the state of the nasal mucosa with a minimally invasive, fast, and low-cost maneuver; in a recent genome-wide association study (GWAS) published by Lyons et al., it was hypothesized that ANCA-negative EGPA may result from mucosal/barrier dysfunction rather than autoimmune disease [10]. It would therefore seem to be of considerable help to have an instrument that identifies healthy or damaged nasal mucosa without needing a biopsy. Furthermore, NC would also allow monitoring of the condition of the nasal mucosa in those patients undergoing biological therapy (e.g., anti-IL5 Ab) in whom we would expect a reduction in the nasal resident eosinophilic population, but further studies on this topic need to be carried out.
Author Contributions: All authors contributed equally. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

References


Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions referred to in the content.