



# The Relevance of Nasal Cytology in the Workup of House Dust Mite-Induced Allergic Rhinitis

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We read with great interest the paper of Chen and colleagues.<sup>1</sup> It highlights the practical role of nasal cytology (NC) in the management of allergic rhinitis (AR) in clinical practice.<sup>1</sup> We would like to stimulate debate about this matter, reporting our experience in allergen immunotherapy (AIT) prescription. In this regard, house dust mites (HDMs) commonly cause AR, mainly in children, and AIT is the unique causal treatment.<sup>2</sup> Although AIT has long duration, expensive cost, and sometimes limited efficacy, there is the need to well define the characteristics of ideal eligible candidates for HDM-AIT as recently appointed.<sup>3</sup> On the other hand, AR may frequently be associated with other upper airway disorders, including nonallergic rhinitis (NAR). NAR presents symptoms caused by non-immunoglobulin E (IgE)-mediated pathogenesis. Different types of NAR may exist and NAR classification is based on NC assessment providing predominant infiltrating cells: eosinophils (NARES), mast cells (NARMA), both (NARESMA), and neutrophils (NARNE).<sup>4</sup> In this context, an Italian multicenter observational survey (conducted in 17 allergy clinics) investigated the role of NC in the workup of AR patients with HDM allergy. Inclusion criteria were: age between 6 and 60 years, diagnosis of AR, monoallergy to HDMs, and written informed consent. AR diagnosis was established according to validated criteria, such as consistency between symptoms occurrence after exposure to dust and documented sensitization to HDMs. Exclusion criteria were: a different age, allergy to other allergens, a previous history of AIT, and severe psychiatric disorders. The study was approved by the Ethical Committee of each participating allergy center (approval No. 2233). The study was managed, monitored, and analyzed by a Contract Research Organization (CD-Pharma Group, Mi-

lan, Italy) using electronic case report forms. Stallergenes Italia (Milan, Italy) sponsored the study. Nasal endoscopy and NC were performed as previously reported.<sup>4</sup>

Forty-six patients with AR to HDMs (24 females and 22 males; mean age 21 years, age range 6-56 years) were evaluated. NC assessment showed that 21 AR patients (45.7%) presented also NAR as represented in Figure A. In detail, 11 patients had NARESMA, 6 NARNE, 3 NARMA, and 1 NARES as reported in Figure B. The present finding is clinically relevant as it underlines the high prevalence of associated NAR in patients with HDM-AR (about 50%). The importance of this outcome has clinical impact as patients with NAR, mainly NARESMA, usually show more severe symptoms and resistance to antihistamines.<sup>5</sup> On the other hand, AIT is usually prescribed, regardless of NAR evidence in clinical practice.<sup>6,7</sup> At present, nasal comorbidity is not considered an obstacle to AIT prescription, even though this issue should be adequately considered in clinical practice. In this regard, AIT should be prescribed after a thorough assessment to define eligible candidates as previously discussed.<sup>7</sup>

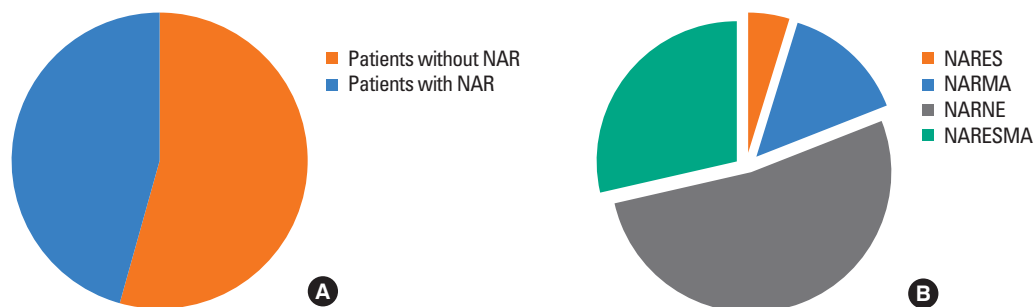
In conclusion, the current findings derived from a real world multi-center study demonstrate that NAR may frequently be associated with AR, so from a pragmatic point of view NC should routinely be assessed in the workup of patients with AR to HDMs.

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Received: August 21, 2017; Accepted: December 5, 2017

• There are no financial or other issues that might lead to conflict of interest.



**Figure.** (A) Distribution expressed as percentage of patients with or without associated NAR. (B) Distribution expressed as percentage of patients with NARESMA (n=11), NARNE (n=6), NARMA (n=3), and NARES (n=1). NAR, nonallergic rhinitis; NARESMA, nonallergic rhinitis with eosinophils and mast cells; NARNE, nonallergic rhinitis with neutrophils; NARMA, nonallergic rhinitis with mast cells; NARES, nonallergic rhinitis with eosinophils.

## ACKNOWLEDGMENTS

Italian Cometa Study Group: S. Barberi (Milano), B. Barbone (Sesto San Giovanni), A. Ferraro (Firenze), A. Foresi (Sesto San Giovanni), E. Galli (Roma), F. Gani (Orbassano), M. Gelardi (Bari), I. La Mantia (Acireale), D. Peroni (Pisa), E. Ridolo (Parma), G.E. Senna (Verona), L. Ricciardi (Messina), AM Riccio (Genova), A. Romano (Roma), O. Rossi (Firenze), G. Scala (Napoli), N. Quranta (Bari), S. Testi (Firenze).

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