

Rhinitis: A Clinical Marker of COPD-Asthma Overlap Phenotype?*



Reflexiones sobre la rinitis como un marcador clínico de fenotipo EPOC-asma

To the Editor,

According to the EPI-SCAN study, up to 17% of patients diagnosed with COPD may be classified as having COPD-asthma overlap syndrome, and, as such, be candidates for the early introduction of inhaled corticosteroids. For the diagnosis of asthma-COPD overlap syndrome, GesEPOC proposes the following major criteria: bronchodilator test >15% and 400 ml, eosinophilia in sputum, and a diagnosis of asthma before the age of 40 years; and minor criteria: elevated total IgE, atopy and bronchodilator test >12% and 200 ml on 2 or more occasions.

Surprisingly, rhinitis, observed in up to 75% of patients with allergic asthma and up to 80% of non-allergic asthmatics, was excluded from the diagnostic criteria, in favor of atopy and elevated total IgE levels, with the aim of identifying an eosinophilic inflammatory substrate. However, diseases such as asthma or rhinitis may occur with eosinophilic infiltration, but with no evidence of sensitization or elevated IgE levels.

While the concept of a single pathway in asthma is well established, very little scientific evidence on the coexistence of rhinitis and COPD is available as yet. Several studies have reported that up to 88% of COPD patients report upper respiratory tract symptoms, primarily rhinorrhea.^{1,2} Jamieson et al.³ identified what they defined as an allergic phenotype in COPD patients who showed positive sensitization to pneumoallergens and/or allergic upper respiratory tract symptoms, demonstrating that these are more symptomatic subjects with a higher risk of exacerbations.

In accordance with the single pathway concept, the type of inflammatory substrate in the upper airways should give an idea of the type of inflammation occurring in the bronchi. Hurst et al. detected elevated IL-8 levels in the nasal lavage of patients with

COPD, suggesting a neutrophilic response.² These findings coincide with those of Vachier et al., who, after analyzing nasal mucosa biopsies of active smokers with COPD, found elevated levels of neutrophils and CD8.⁴ In contrast, Hens et al. reported high levels of eotaxin in the nasal lavage of COPD patients with no increase in IL8 concentrations compared to asthma subjects, suggesting an eosinophilic response.⁵ Moreover, Neves MC et al. confirmed that rhinitis symptoms in COPD patients are associated with nasal eosinophilia with an OR of 4.1 (1.59–11.39), and that these patients are more likely to show a positive bronchodilator test.⁶

These contradictory findings might support the concept of COPD phenotypes. Until it is confirmed in clinical trials, the high prevalence of rhinitis in asthma patients makes it reasonable to propose this symptom as a clinical marker for the COPD-asthma overlap syndrome.

References

1. Kelemence A, Abadoglu O, Gumus C, Berk S, Epozurk K, Akkurt I. The frequency of chronic rhinosinusitis/nasal polyp in COPD and its effect on the severity of COPD. *COPD*. 2011;8:8–12.
2. Hurst JR, Wilkinson TM, Perera WR, Donaldson GC, Wedzicha JA. Relationships among bacteria, upper airway, lower airway, and systemic inflammation in COPD. *Chest*. 2005;127:1219–26.
3. Jamieson DB, Matsui EC, Belli A, McCormack MC, Peng E, Pierre-Louis S, et al. Effects of allergic phenotype on respiratory symptoms and exacerbations in patients with COPD. *Am J Respir Crit Care Med*. 2013;188:187–92.
4. Vachier I, Vignola AM, Chiappara G, Bruno A, Meziane H, Godard P, et al. Inflammatory features of nasal mucosa in smokers with and without COPD. *Thorax*. 2004;59:303–7.
5. Hens G, Vanaudenaerde BM, Bullens DM, Piessens M, Decramer M, Dupont LJ, et al. Sinonasal pathology in nonallergic asthma and COPD: 'United airway disease' beyond the scope of allergy. *Allergy*. 2008;63:261–7.
6. Neves MC, Neves YC, Mendes CM, Bastos MN, Camelier AA, Queiroz CF, et al. Evaluation of atopy in patients with COPD. *J Bras Pneumol*. 2013;39:296–305.

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