



Correspondence

Common variable immunodeficiency and asthma Coexistence or coincidence?



To the Editor: We read with great interest the well-presented article entitled, “Comprehensive assessment of respiratory complications in patients with common variable immunodeficiency,” by Moazzami et al¹ who reported a high pulmonary disease burden in patients with common variable immunodeficiency (CVID). Thus, early respiratory monitoring is a high priority, even in asymptomatic patients with CVID. Although abnormal pulmonary function tests were recorded in more than half of the patients, no reference was made to asthma diagnosis.

The coexistence of CVID with asthma has been sporadically reported in the literature.^{2,3} In a few studies evaluating respiratory comorbidities in patients with CVID, the prevalence of asthma was found to be up to 18%.³ Silent progression of pulmonary alterations has been documented, even in patients receiving adequate intravenous gamma globulin replacement therapy.^{2,4} Furthermore, patients with asthma are more likely to have a diagnosis of CVID compared with those without asthma.^{2,3} Other authors defined CVID as an unusual mimicker of asthma, which needs to be taken into consideration when standard asthma therapies fail.^{2,3} Little is known about whether patients with asthma are predisposed to develop CVID over time or whether asthma or atopy could be a phenotypic marker for a subgroup of patients with CVID, similar to the chicken and egg situation. The following question then arises: Is CVID a masker or a mimicker of severe refractory asthma?

The exact causal mechanism underlying the concomitant presence of CVID and asthma remains largely unexamined.^{1–3} Many patients with CVID have a clinical history suggestive of allergic respiratory disease or obstructive lung disease.^{2,3} It is hypothesized that CVID leads to a capacity loss to block the entry of allergens through the mucosa, which predisposes patients with CVID to the development of allergic reactions to aeroallergens, inflammation, bronchial hyperresponsiveness, and, consequently, asthma.^{2,3} However, asthma can be masked by a history of recurrent respiratory infections.^{2,3} Moreover, CVID might precede asthma in most cases.^{2,3} Nevertheless, there is a difficulty in determining the accurate time of the incidence of CVID owing to its asymptomatic nature.

Conversely, patients with asthma are more susceptible to protracted respiratory viral and microbial infections, owing to impaired innate and adaptive immunities, which might delay a possible recognition of any humoral immunodeficiency.² Thus,

CVID could be a hidden defect in patients with severe uncontrolled asthma. It is therefore essential to look beyond the box in cases of severe refractory asthma.

The role that atopy plays in patients with CVID is an issue of importance. Levels of total immunoglobulin (Ig) E or specific IgE are often low. However, Agondi et al⁴ suggested that an IgE-mediated response could play a role in the pathogenesis of asthma in patients with CVID. In these frames, there is only 1 study regarding the use of omalizumab in a woman with CVID and severe asthma, which revealed an elevation of peripheral blood myeloid cells after the initiation of monthly omalizumab injections.⁵ Extended follow-up studies are needed to address the safety of omalizumab for the treatment of severe asthma in the patients with CVID.

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