The lung and 3 cases of biopsy-proven eosinophilic granulomatosis with polyangiitis (EGPA) limited to the lung.

Although Nasser et al’s first patient did not meet the EGPA criteria (due to the absence of asthma), EoV was detected in the lung. Vessel necrosis and granuloma were not detected. Given (i) the biopsy-proven EoV associated with eosinophilic infiltrates in the pleura and a blood eosinophil count >1.5 x 10^6/L, (ii) the absence of antineutrophil cytoplasmic antibodies (ANCAs), and (iii) the absence of other disorders or conditions causing eosinophil-induced organ damage and secondary vasculitis, this case meets the definition of idiopathic EoV (ie, hypereosinophilic syndrome–associated vasculitis) suggested by the French National Reference Center for Hypereosinophilic Syndromes (CEREO, Lille, France).

In our case series, we found that EoV affected a single organ in 41 of the 117 patients. Indeed, these patients with isolated EoV affecting the coronary artery (n = 29), temporal artery (n = 8), or cerebral artery (n = 4) differed from the other patients with regard to the absolute eosinophil count (which was often normal in the 41 patients) and/or the course of the disease.3 Of the 76 patients considered as having truly systemic, idiopathic EoV, 24 (32%) presented the disease in a single organ (skin: n = 11; nerve: n = 4; lung: n = 2; colon: n = 1; fascia: n = 1; prostate: n = 1) and/or a single vascular territory (limb arteries: n = 4). Necrotizing vasculitis was less frequent in limited-extension cases (n = 5 of 24, 21%) than in cases with systemic extension (n = 23 of 43, 54%; biopsies were unavailable in 9 cases; P = .01 in Fisher’s exact test). This histologic characteristic (which can vary with the size of the biopsy) might reflect the disease’s overall severity and extension, rather than the severity of the organ damage: indeed, the case described by Nasser et al1 had non-necrotizing, lung-limited EoV associated with abundant pleural effusion and severe bleeding requiring bronchial artery embolization. Hence, we totally agree that this patient presented with an organ-limited (but severe) form of idiopathic EoV.

In the 3 asthmatic patients with lung-limited EGPA, the criteria for EoV were not met.7 Given (i) the severity of the asthma and (ii) the presence of eosinophilic granuloma in 2 of 3 patients, we suggest that a diagnosis of lung-limited EGPA is appropriate in these patients, even in the absence of nonrespiratory manifestations. Indeed, in our series of EoV cases, granuloma was detected in 2 of the 24 patients (8%) with limited EoV and in 7 of the 43 cases (16%; P = .5) with systemic idiopathic EoV. These data suggest that EoV is typically a nongranulomatous form of vasculitis, although the presence of granuloma on biopsy does not necessarily rule out this diagnosis. Indeed, in a large, national cohort, granulomatous infiltrates were detected in only 29% of ANCA-negative patients with EGPA.7 It would be interesting to assess the value of the serum C-reactive protein (CRP) level as a biomarker in these cases: a low level might be suggestive of EoV and/or hypereosinophilic syndrome (as in the case described by Nasser et al, in which the CRP level was just below 36 mg/L), rather than EGPA.7

In conclusion, the new cases reported by Nasser et al support the idea that ANCA-negative, limited EoV (as described in our case series), and limited EGPA are organ-limited forms of systemic diseases, rather than single-organ vasculitides. These data also suggest that the presence of vessel necrosis (or probably) granuloma does not discriminate well between EGPA and EoV. Further studies must determine whether or not asthma is predictive of a poor prognosis and justifies a different type of treatment.

REFERENCES

Reply to “Idiopathic non-necrotizing eosinophilic vasculitis limited to the lung: Part of a complex spectrum”

To the Editor:
It was with great interest that we read Nasser et al’s1,2 report on a case of biopsy-proven eosinophilic vasculitis (EoV) limited to the
Guillaume Lefèvre, MD, PhD\textsuperscript{ab,cd}
Amélie Leurs, MD
Jean-Baptiste Gibier, MD, PhD\textsuperscript{cd}
Matthieu Groh, MD\textsuperscript{de}
Jean-Emmanuel Kahn, MD, PhD\textsuperscript{ef}

\textsuperscript{a}Centre de Référence National des Syndromes Hypér eosinophiliques (CEREO), Lille, France
\textsuperscript{b}Département de Médecine Interne et Immunologie Clinique, Centre de Référence des Maladies Auto-immunes Systémiques Rares du Nord et Nord-Ouest de France (CERAINO), Univ. Lille, CHU Lille, Lille, France
\textsuperscript{c}U1286—Institute for Translational Research in Inflammation, Univ. Lille, Inserm, CHU Lille, Lille, France
\textsuperscript{d}Institut de Pathologie, Centre de Biologie Pathologie, Univ. Lille, CHU Lille, Lille, France
\textsuperscript{e}Département de Médecine Interne, Hôpital Foch, Suresnes, France
\textsuperscript{f}Service de Médecine Interne, Assistance Publique-Hôpitaux de Paris, Hôpital Ambroise Paré, Boulogne Billancourt, France.

No funding was received for this work.

Conflicts of interest: The authors declare that they have no relevant conflicts of interest.

No funding was received for this work.

Corresponding author: Guillaume Lefèvre, MD, PhD, Institut d’Immunologie, Univ. Lille, CHU Lille, Lille, France. E-mail: guillaume.lefevre@chru-lille.fr.

REFERENCES


https://doi.org/10.1016/j.jaip.2020.04.028

Analyzing environmental control studies by the achieved decrease in exposure

To the Editor:

In his recent editorial, Eggleston\textsuperscript{1} discussed the limitations of analyzing environmental control trials by only comparing the active intervention group and the control group—where the control group, knowing that it is in a study concerning a potentially harmful environmental substance, also decreases its exposure—and he noted that information is to be gained by also sorting data according to the actual decrease in allergen achieved. Specifically, a study of mouse-allergen remediation,\textsuperscript{2} in which there were similar reductions in household allergen exposure and asthma activity in both the active and control groups, showed decreased disease activity when the data were sorted by the decrease in the final allergen level, with each 50% decrease in bedroom floor mouse allergen level associated with a further reduction in asthma symptoms, beta-agonist use, and emergency department visits for asthma. A recent follow-up of that study cohort\textsuperscript{3} also showed that a reduction in mouse allergen exposure by 75% or more, whether in the active remediation group or the control group, was associated with a greater increase over 1 year in prebronchodilator forced expiratory volume in 1 second and in pre- and postbronchodilator forced expiratory flow at 25% to 75% of forced vital capacity.

It should be noted that this approach has also been applied to dust mite allergens. In his comprehensive book Dust Mites, Colloff\textsuperscript{2} revisited the Cochrane meta-analysis on house dust mite control measures for asthma.\textsuperscript{2} That meta-analysis, comparing all combined treatment groups with all combined control groups, had concluded that there were no statistically significant differences in number of patients improved, asthma symptom scores, or medication usage. However, the studies in that meta-analysis used different methods, of differing effectiveness, in their effort to decrease mite allergen exposure. When Colloff separated those studies that showed clinical improvement from those that did not, he found that only in the former had there been a significant decrease in allergen levels in the active group compared with the controls.

Allergen avoidance studies can thus yield 2 distinct types of information: the effectiveness of measures to reduce allergen levels, which can be obtained by comparing active and control groups, and the clinical effects of such reduced allergen exposure, which can be obtained by comparing those with decreased exposure with those without such a decrease. Environmental control studies should be looked at with both questions in mind.

Jeffrey D. Miller, MD\textsuperscript{4,5}

\textsuperscript{4}Mission: Allergy, Inc., Hawleysville, Conn
\textsuperscript{5}Department of Pediatrics, New York Medical College, Valhalla, NY.

No funding was received for this work.

Conflicts of interest: J. D. Miller is the owner and CEO of Mission: Allergy, Inc., a manufacturer and distributor of products for allergen avoidance.

Received for publication February 17, 2020; accepted for publication February 20, 2020.

Available online April 20, 2020.

Corresponding author: Jeffrey D. Miller, MD, Mission, Inc., 28 Hawleysville Rd., Hawleysville, CT 06877. E-mail: JeffreyMillerMD@comcast.net.

REFERENCES

4. Colloff M. Dust Mites. The Netherlands: Springer; 2009

https://doi.org/10.1016/j.jaip.2020.02.045