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LETTER TO THE EDITOR: RESPONSE

Alpha-gal syndrome

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Dear Editor,
We thank and appreciate the in-depth questions evoked regarding our article.[1] We take this opportunity to delve deeper into some aspects of our clinical case, which, for reasons of brevity, we were unable to include in the text.

Unfortunately, for ethical reasons and because tests for naproxen are not available, we were unable to ascertain its role. Owing to the severity of the reaction (anaphylaxis) and according to the guidelines on drug allergy,[2,3] we chose to perform an oral challenge to test tolerance to an alternative nonsteroidal, anti-inflammatory drug, nimesulide, and, although our patient tolerated the same, a drug allergy to naproxen is not ruled out. The role of naproxen is not related to alpha-gal sensitization, because the excipient magnesium stearate present in the naproxen tablet is of plant origin. Another hypothesis is that naproxen acts as a cofactor of the reaction manifested after eating a sandwich containing ham.

Regarding the "anaphylaxis with hypovolemic shock" mentioned in the abstract, we confirm that the patient experienced anaphylactic shock immediately after an emergency surgical procedure when a gelatin-containing drug was injected to treat the onset of hypovolemia. In fact, a key issue in our case report was to alert clinicians that a routine product, such as colloids, used in the operating room could cause anaphylactic shock in an already critical patient.

About the third point, our patient was sensitized to the following airborne allergens: IgE to *Dermatophagoides pteronyssinus* = 0.41 KU/L; IgE to cat epithelium = 0.92 KU/L; IgE to dog epithelium = 0.92 KU/L; and IgE to cow's epithelium = 2.07 KU/L.

Atopy and sensitization to cat and dog epithelia are reported in literature in association with alpha-gal syndrome (AGS). In particular, sensitization to cat and dog epithelia is because these are the two sources of allergens containing alpha-gal.[4] In our case, given the appearance of symptoms of allergic rhinitis following exposure to dogs and cats, we hypothesized that our patient had a fairly extensive sensitization to furry animals, probably because of his work-related exposure.

However, owing to the lack of data, we could not find any relationship to explain the potential association between cow's epithelium/dander sensitization and alpha-gal; it can't be denied that cow's dander is an alpha-gal-containing allergen source.

Moreover, our patient was also sensitized to cow's milk. For brevity, we did not report all the results of sensitization to milk and its proteins, which are as follows: IgE to cow's milk was assessed over time and ranged from 6.32 kUA/l to

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1.61 kUA/l; and IgE to α-lactalbumin (α-LA, also known as Bos d4), β-lactoglobulin (BLG, also known as Bos d5), casein (Bos d8), and bovine serum albumin (BSA, also known as Bos d6) repeatedly showed negative results through the years (<0.10 KU/L). Based on the positive IgE results to cow's milk, the patient had stopped intake of milk prior to being evaluated at our clinic and diagnosed with alpha-gal syndrome. As a precaution, the patient was advised to continue avoiding cow's milk, while fresh cheese was allowed for the maintenance of tolerance to dairy products.

Regarding other bovine milk allergens implicated in alpha-gal syndrome (e.g., bovine γ-globulin [BGG], lactoferrin, and lactoperoxidase [LPO]), it was not possible to perform tests for these proteins at our hospital. We appreciate the additional information available on this topic and recognize the need for detailed characterization of patients' molecular allergy profiles when available.

We hope this clarifies and addresses the questions raised.

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