

Correspondence

Omalizumab for drug allergy

To the Editor:

Casale et al¹ have recently shown that pretreatment with omalizumab decreases acute reactions after rush immunotherapy for ragweed-induced seasonal allergic rhinitis. Although the US Food and Drug Administration has approved only specific indications for omalizumab, including treatment of patients with moderate persistent to severe persistent asthma with a positive skin test response to a perennial aeroallergen, anti-IgE appears to provide a therapeutic option for many allergic diseases and conditions in which IgE plays a significant role.² This potential use of omalizumab is being investigated,³ with ongoing trials in patients with allergic rhinitis and studies for treating food allergy, atopic dermatitis, and chronic urticaria under evaluation.³ However, the potential use in severe cases of drug allergy, in which the need for the drug is essential, has not been evaluated.

We present the case of a 27-year-old man with type I diabetes mellitus, intermittent mild allergic asthma with dust mite sensitization, and contact sensitization to nickel sulphate. He was assessed because he was using oral corticosteroids and antihistamines daily for 6 months because of itching, hives, and some episodes of anaphylaxis coinciding with insulin bolus. A diagnosis of insulin allergy was made after positive skin prick test responses to all kind of insulins, *in vitro* testing with positive IgE levels (determined by means of RAST; Phadia, Uppsala, Sweden), and a positive challenge result with 2 U of regular insulin. He required 2.5 IU/kg of insulin per day at the time of diagnosis. Desensitization was performed as described previously.⁴ Six months after desensitization, 0.8 IU/kg of insulin per day was required, and the patient was free of symptoms without medication. Nevertheless, 9 months later, he began to experience similar symptoms after an episode of diabetic ketoacidosis. Antihistamines did not control his full symptoms. Corticosteroids were avoided to prevent any increase in insulin requirement. Omalizumab was offered, and specific written informed consent was obtained from the patient and his family. The hospital committee and Spanish Health Authorities approved treatment. Omalizumab (300 mg) was administered subcutaneously every second week. After 20 weeks, the patient was taking only 5 mg of levocetirizine every 24 hours, with no allergic symptoms.

Omalizumab, an anti-IgE mAb, is designed to treat IgE-mediated diseases.² However, the mechanism of action is not well known, although omalizumab downregulates dendritic cell FcεRI expression on basophils,⁵ B cells, CD4⁺ cells, CD8⁺ cells, and IL-4⁺ cells. Omalizumab is a recombinant humanized mAb that blocks free serum IgE through the high-affinity Fc receptor from attaching to mast cells and prevents IgE-mediated inflammatory changes.¹

Insulin allergy is uncommon, even though 2% of diabetic patients have antibodies against insulin. Switching to other types of insulin or introducing a subcutaneous pump usually solves any problems. In a few cases desensitization is the final approach, with good results. However, symptoms appeared again in this patient. Trying to avoid oral corticosteroids to avoid an increase in insulin requirements, we offered omalizumab as a novel therapy. Although omalizumab is currently approved to treat moderate-to-severe IgE-mediated asthma, its use in the treatment of other IgE-mediated conditions, such as severe drug allergy, has a promising future.²

Victor Matheu, MD^{a,b}

Andres Franco, MD^c

Eva Perez, MD^b

Marta Hernández, MD^c

Yvelise Barrios, MD, PhD^c

From ^aLund University, Lund, Sweden; ^bHospital Universitario NS Candelaria, Spain; and ^cHospital Universitario de Canarias, La Laguna, Spain. E-mail: Victor.Matheu@med.lu.se.

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