

Correspondence

Reply

To the Editor:

We would like to thank Giavina-Bianchi et al¹ for sharing their interesting case of a patient who had generalized urticaria 24 hours after inhalation of house dust mite allergen during specific bronchial challenge. The delayed skin response to inhaled allergen was preceded by a dual (early- and late-phase) asthmatic response confirming specific, IgE-mediated sensitization to the culprit allergen.

Similarly, the immediate bronchial obstruction after challenge with lysine aspirin can be followed by delayed extrabronchial symptoms, such as urticaria. Our report of delayed reactions after aspirin challenge² resembles the case of Giavina-Blanchi et al,¹ even though the aspirin-induced bronchial reaction is not immunologic or IgE dependent. Aspirin reactions are caused by the inhibition of cyclooxygenase-1 and associated activation of inflammatory cells with mediator release.

Three of our 13 patients with positive responses to aspirin had skin symptoms (dermal flush, angioedema, or both) within 2 hours after inhalation of aspirin (early reaction), and another 3 patients had urticaria 3 to 12 hours after the challenge.

Although skin reactions after aspirin occurred earlier than after allergen challenge, the delayed skin reaction was preceded by an immediate bronchial response, as was observed with allergen challenge. This observation suggests that non-IgE-mediated mast cell activation in aspirin-sensitive asthma also is associated with a systemic delayed response similar to that seen with high-dose allergen challenge.

Giavina-Bianchi et al¹ suggested that delayed urticaria after inhalation of a high dose of allergen could result from systemic absorption of allergen from the bronchi, but this mechanism is less likely with aspirin challenge. We observed that only in patients with late reactions, as opposed to early reactors, did an increased recruitment of leukocyte and eosinophil progenitor (CD125⁺CD34⁺CD45⁺) cells into the peripheral circulation occur 24 hours after the challenge. This suggests that the immediate bronchial response after inhalation challenge with either allergen or aspirin can result in the systemic release of factors, such as eotaxin-2, which stimulate the liberation of bone marrow cells associated with delayed generalized reactions.

Regardless of the mechanisms responsible for delayed skin reactions after inhaled allergen or aspirin, both reports stress the possibility of a systemic response to a local challenge.

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