

## Type I hypersensitivity to *Parthenium hysterophorus* in patients with parthenium dermatitis

Sir,

I read with interest the article by Lakshmi *et al.*<sup>[1]</sup> In this article the authors have suggested that both type I hypersensitivity and type IV hypersensitivity are responsible for dermatitis in parthenium dermatitis patients, and they have tried to demonstrate this by doing prick test and serum IgE levels in these patients. The majority of their patients were atopics. It is well known that atopic individuals are more susceptible to develop allergic response to various antigenic stimuli and have elevated IgE levels.<sup>[2]</sup> Immunologic abnormalities of type I and type IV reactions have been described in patients with atopic dermatitis.<sup>[3]</sup> Immunologic triggers are aeroallergens, food allergens, microbial products, autoallergens and contact allergens. They enhance IgE production by B lymphocytes with an increased secretion of interleukin 4, interleukin 5 and interleukin 13.<sup>[2]</sup>

Atopics are more susceptible to develop contact allergy to compositae plants also.<sup>[4,5]</sup> In this study, it seems atopic individuals have developed parthenium dermatitis and this atopic state may have resulted in positive prick test and elevated IgE levels in these patients, which may not have been actually due to parthenium. The situation may have been different in non-atopic parthenium dermatitis patients. Therefore, positive prick test and elevated IgE levels in their patients do not conclusively prove that these were due to parthenium only and not because of some other stimuli. Hence a credible evidence of type I hypersensitivity due to *Parthenium hysterophorus* is lacking in this study. I dare to suggest that the authors should have demonstrated '*Parthenium hysterophorus*'-specific IgE by using methods like ELISA to confirm the presence of these IgE antibodies due to *Parthenium hysterophorus* antigen to suggest the role of type I hypersensitivity in this disease.

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