

potential confounders, such as the antigen used, were not significant.

■ Our data suggest that prolonged pretreatment with topical cromolyn in cream or solution formulation can modify the wheal and flare responses seen in skin prick testing. Immediate pretreatment of the skin has no such effect.

There have been several studies with topical cromolyn in various vehicles. Simultaneous administration of topical cromolyn with antigen did not modulate human allergic skin reactions (2), while pretreatment of the skin with a cromolyn nebulizer solution inhibited human allergic skin reactions (3).

In a randomized, double-blind group trial of topical 10% cromolyn ointment, patients with atopic dermatitis showed significant improvement in cutaneous inflammation, lichenification, cracking, and pruritus (4). More recent, controlled randomized studies reported that cromolyn nebulizer solution was effective in treating atopic dermatitis (5). The success of topical cromolyn in some trials and its failure in others may be related to the concentration of cromolyn, its vehicle, and the duration of the treatment.

Topical cromolyn is remarkably free of adverse side-effects. Because of the risks of prolonged use of topical steroid preparations, particularly in children, it would seem worth pursuing the potential benefits of topical cromolyn. The present results suggest that pretreatment with topical cromolyn can modulate itch, and wheal and flare responses in the skin.

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## Angiolymphoid hyperplasia with eosinophilia associated with immunotherapy

**Key words:** angiolymphoid hyperplasia with eosinophilia; immunotherapy.

**P**ATIENTS receiving immunotherapy can develop atypical localized delayed reactions such as: localized fibrosis (1), subcutaneous nodules in reaction to  $Al(OH)_3$  (2, 3), and localized urticaria a frigore (4). We report one case of angiolymphoid hyperplasia with eosinophilia caused by immunotherapy vaccination.

■ A 42-year-old white woman received 4 years'

*A case of lymphoid nodules at the site of grass pollen immunotherapy injections.*

immunotherapy with gramineous pollen extracts for the treatment of allergic rhinoconjunctivitis. Extracts absorbed onto aluminum hydroxide were used for the first 3 years, and extract absorbed

onto tyrosine was used during the fourth year.

One year after the last dose, she developed three 1-cm superficial and inflammatory nodules in her right arm and one nodule in her left arm. There was no lymphadenopathy and no abnormality anywhere else. Both her chest radiograph and her hematologic profile were normal.

Patch testing with the European standard series and  $Cl_3Al_2$  ( $H_2O$  2%) and the two extracts used (as is) showed no reactions.

Histologic examination showed several large vascular spaces surrounded by a lymphocytic and eosinophilic infiltrate. Plump endothelial cells protruded into the lumina. Lymphoid follicles replete with germinal centers were identified in the dermis and subcutaneous tissues. Angiolymphoid hyperplasia with eosinophilia was diagnosed.

■ Angiolymphoid hyperplasia with eosinophilia is an unusual benign condition. Its cause is uncertain. Originally, angiolymphoid hyperplasia with eosinophilia was thought to be equivalent to Kimura's disease. However, recent clinicopathologic studies have suggested that these are two separate entities with different clinical and histologic features (5). Other theories, such as an origin in benign vascular neoplasm or a secondary result of infectious agents, have been discarded.

An atopic reaction to various agents appears to be an alternative hypothesis. This is supported by

the variable histologic features depending on the site and duration of the lesion, the local tissue eosinophilia, mast cell hyperplasia, a polytypic lymphoplasmacytic infiltrate with reactive germinal centers, and, in some cases, blood eosinophilia and raised serum IgE level (6).

Our patient showed four nodules compatible with angiolymphoid hyperplasia with eosinophilia in the specific sites of immunotherapeutic vaccination. A complete MEDLINE search yielded no similar cases.

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## Allergy to marihuana

**M**ARIHUANA is a derivative of the whole plant *Cannabis sativa*. Despite the current widespread use of marihuana, there have been few reports of hypersensitivity responses to this plant (1). This report documents the case of an atopic patient with immediate rhinoconjunctivitis due to the inhalation of marihuana in whom *C. sativa* sensitization was demonstrated.

■ The patient was a 22-year-old man with allergic rhinoconjunctivitis due to house-dust mites, pollens, and spices. Over the last year, whenever he smoked marihuana cigarettes or was near a cannabis plantation, he immediately developed nose and eye itching, rhinorrhea,

watery eyes, pharyngeal pruritus, and sneezing as well as dry coughing. Symptoms persisted for 30 min, gradually subsiding after avoidance of exposure. Other systemic or organic symptoms, chest tightness, dyspnea, or wheezing were not recorded.

The patient was observed during the asymptomatic period. Clinical examination was normal. Complementary studies (hemogram, biochemical parameters, and sinus and chest radiographs) showed no alteration. Sputum cytology revealed no eosinophils. Basal spirometric data were in the normal range. The methacholine test revealed no bronchial hyperresponsiveness. Total serum IgE was 159 kU/L.

■ Skin prick tests with common inhalants (house-dust mites, storage mites, molds, pollens, and epithelia) were positive to *Dermatophagoides pteronyssinus*, *D. farinae*, and mugwort pollen.

The skin prick test with a crude, unpurified extract from fresh marihuana was performed. The marihuana was extracted in saline solution w/v 1/10 for 1 h; the supernatant was filtered and directly tested by prick test. An immediate wheal of 13 × 10 mm diameter was observed. The same extract was tested on six control subjects (three sensitized to house-dust mites and three sensitized to pollens) with negative results.

■ An inhalatory bronchial provocation challenge test was done with the patient's consent during the asymptomatic period. The method described by Pepys & Hutchcroft (2) for dry powder was used. The study was performed single blinded. The patient was instructed to pour marihuana powder from one tray to another placed 20 cm away for 10 min. The appearance of symptoms was controlled, and FEV<sub>1</sub> was recorded basally and 1, 5, 15, 30, 60, and 120 min after the challenge. Later, PEFR was recorded every hour for the next 8 h.

Immediately after the 10-min marihuana exposure, the patient exhibited pharyngeal pruritus, nose and eye itching, lacrimation, rhinorrhea, nasal congestion, sneezing, and irritative cough; physical examination revealed acute rhinoconjunctivitis; chest auscultation was normal and the FEV<sub>1</sub> did not vary significantly. The reaction was spontaneously controlled in 60 min and no late reaction was observed.

The same challenge failed to evoke any response when carried out in four atopic controls (two house-dust-mite-allergic patients and two sensitized to mugwort pollen).

■ We report an atopic patient with immediate rhinoconjunctivitis induced by marihuana exposure. The clinical history suggested the diagnosis. The

*The rhinoconjunctivitis caused by allergy to cannabis was probably IgE-mediated.*

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