Anaphylaxis induced by ingestion of a pollen compound

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SUMMARY

We report on the case of a 32-year-old atopic patient who showed a severe anaphylactic reaction due to the ingestion of a pollen compound prepared in an herbalist’s. A few minutes after ingestion, generalized pruritus, diffuse erythema, facial edema, cough, hoarseness and dysphonia appeared, and the emergency administration of subcutaneous epinephrine and intravenous methylprednisolone was necessary. Skin tests with a battery of inhalants and food allergens were performed. The patient only showed sensitization to Artemisia vulgaris, Taraxacum officinale and Salix alba. Specific IgE levels were evaluated by FEIA-CAP giving a seric level of CAP class 3 to Artemisia vulgaris and class 2 to Taraxacum officinale and Salix alba. Samples of the pollen compound were shown in the microscopic analysis to be 93% pollen and 6% fungi. In the qualitative study Taraxacum officinale (15%), Artemisia vulgaris (5%) and Salix alba (15%) were the main elements identified. In summary, this case study describes a food-induced systemic reaction due to a pollen compound in an atopic patient with a history of allergic rhinitis. Pollinic patients must be informed on the risks that the consumption of these compounds might cause.

Key words: Anaphylaxis - Pollens - Herbalist

INTRODUCTION

Food allergy and anaphylactic reactions are common in atopic patients (1-3), and sometimes depend on exercise (4-6). Nowadays the consumption of pollen compounds prepared in the herbalist’s is increasing, even in the atopic population.

We report on the case of a 32-year-old man, an atopic patient, who showed a severe anaphylactic reaction due to the ingestion of a pollen compound prepared in an herbalist’s.

Generalized pruritus, diffuse erythema, facial edema, cough, hoarseness and dysphonia appeared 15 min after the ingestion at breakfast time. The urgent administration of subcutaneous epinephrine and intravenous methylprednisolone was necessary. The patient had a suggestive history of seasonal allergic rhinoconjunctivitis by sensitization to pollens.

MATERIALS AND METHODS

Skin tests

A standard prick test was performed with the common inhalant allergens (Lolium perenne, Cynodon dactylon, Phragmites communis, Dactylis glomerata, Secale cereale, Olea europea, Parietaria judaica, Artemisia vulgaris, Salix kali, Plantago lanceolata, Dermatophagoidespteronyssinus, Dermatophagoides farinae, Felis domesticus, Mucor racemosus, Aspergillus fumigatus, Alternaria tenuis, Penicillium notatum, Taraxacum officinale, Salix alba, Fraxinus angustifolia, Quercus pirenaica and Ulmus glabra) and foods (cow’s milk, fish, gluten, peanut, orange, banana, sunflower and strawberry).

Total IgE

Total IgE was measured by FEIA-CAP (Pharmacia, Uppsala, Sweden).

Specific IgE

Specific IgE to inhalants (Lolium perenne, Dactylis glomerata, Olea europea, Artemisia vulgaris, Parietaria judaica, Taraxacum officinale, Salix alba, Dermatophagoidespteronyssinus, Dermatophagoides farinae, Felis domesticus, Canis familiaris, Penicillium notatum, Clado-
sporium herbarum, Aspergillus fumigatus and Alternaria alternata) and foods (cow’s milk, egg, fish, peanut and sunflower) were measured by FEIA-CAP (Pharmacia, Uppsala, Sweden).

Microscopic analysis was carried out with an Olympus CHA microscope.

RESULTS

Skin tests

The results of the skin tests were the following: Artemisia vulgaris: 13 x 7 mm; Taraxacum officinale: 10 x 6 mm; Salix alba: 4 x 4 mm; histamine: 8 x 6 mm; saline and the rest of the allergens: 0 x 0 mm.

Total IgE

Total IgE was found to be 127 KU/l.

Specific IgE

The results of specific IgE testing yielded the following: Artemisia vulgaris: 5.15 KU/l (class 3); Taraxacum officinale: 1.18 KU/l (class 2); Salix alba: 0.82 KU/l (class 2) and the rest of the inhalants and foods: <0.35 KU/l (class 0).

Microscopic analysis of pollen compound

Pollens were found to be 93% of the sample and they included: Taraxacum officinale: 15%; Cruciferae: 15%; Artemisia vulgaris: 5%; Labiatae: 10%; Salix alba: 15%; Rosaceae: 10%; Olea europea: 5%; Liliaceae: 10%; Urticae Plantago, Populus: 10% and unidentified: 5%.

Fungi was 6% of the sample.

DISCUSSION

Food allergy is common in atopic patients, and sometimes severe adverse reactions occur with exercise. Our patient had a previous history of rhinoconjunctivitis, but he had never been studied before the described reaction.

He bought the pollen compound in an herbalist’s and he did not know the real composition of this product, which was only identified by a label saying “pollen.” The in vivo and in vitro tests showed that he was a pollinic patient sensitized to Artemisia vulgaris, Taraxacum officinale and Salix alba.

In the microscopic analysis we observed that pollens were the main component of the product, with Artemisia vulgaris, Taraxacum officinale and Salix alba being about 50% of the product.

In summary, we report one case of a food-induced systemic reaction, due to a pollen compound, which happened to an atopic patient with a history of allergic rhinoconjunctivitis. Patients must be informed of the risks that the consumption of these compounds might cause.

REFERENCES


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