

Immediate hypersensitivity to carob pods

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The carob tree, *ceratonia siliqua*, is a species from the pea family and native to the Mediterranean region. Carob flour (E410) and carob galactomannan are common additives in processed food as thickening and gelling agents (1). Allergic reactions to carob gum are seldom reported. Rarely rhinoconjunctival, asthmatic symptoms, and urticaria after contact with inhalant allergens have been documented (3–4).

Case Story

A 52-year-old male presented with burning sensations, discomfort in his throat, and chest tightness when chewing on carob pods. Rinsing his mouth with water, drinking water and oral levocetirizine 10 mg caused improvement of his symptoms within 30 min. He had a history of allergy to birch pollen as well as to apple and pear consistent with an oral allergic syndrome.

Prick testing with carob pods caused an immediate reaction twice the size of the histamine positive control. A similar reaction was seen to carob pods pounded and resuspended in 0.9% saline (in two different concentrations) (Fig. 1). Total serum immunoglobulin E (IgE) was 830 kU/l, specific IgE to carob gum 30.6 kU/l (Class 4; ImmunoCAP, Phadia, Uppsala, Sweden).

Discussion

Carob pods are used as an animal feed, and carob gum is used as a thickening

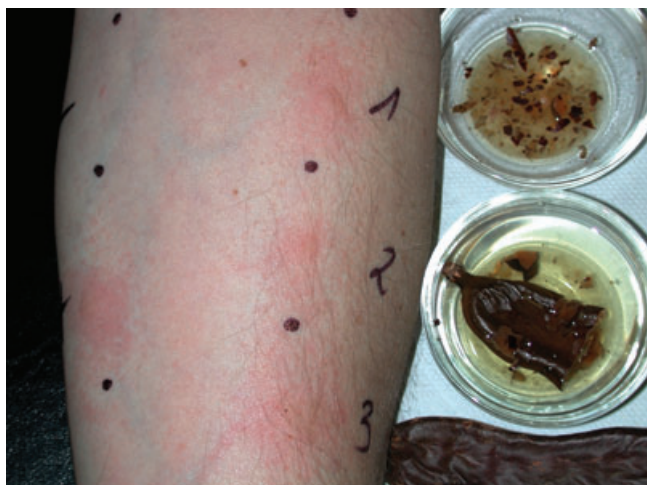


Fig. 1. Positive prick to prick test with the native pod and positive prick tests with suspensions of pounded carob pods (tested at two different concentrations).

and gelling additive in jams, marmalades, yoghurt, meats, infant food as well as for flavouring uncured tobacco. So carob may be stated as a 'hidden allergen'. Despite the broad use of carob gum in the food industry, allergic reactions are seldom reported. Adverse reactions to carob flour were described in adults, who developed rhinitis, asthma, and urticaria during their work in the food industry; allergy to carob was proven by means of skin testing and detection of specific IgE (2–4). One single report of an allergic reaction after ingestion of a milk formula that contained carob gum can be found in the literature. A female infant, suffering from gastroesophageal reflux, developed recurrent vomiting, urticaria, and facial rash after administration of that milk formula, which had been thickened with carob bean gum. Diagnosis was based on case history alone as specific tests had not been performed (5).

Our report is the first to describe immediate allergy to native carob pods. Prick testing of the native pod and of suspensions of pounded pods were useful. Positive skin test results were confirmed by detection of specific IgE to carob gum.

Our patient was advised not to consume carob pods anymore. An emergency kit consisting of antihistamines and steroids was recommended in case of inadvertent eating of carob gum present as a food additive, even though it is unknown whether he would react to such exposure.

Clarification of intolerance reactions to processed food should include testing with carob gum.

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