

Brief communications

Anaphylactic reaction elicited by condurango bark in a patient allergic to natural rubber latex

Wolfgang Pfützner, MD, Peter Thomas, MD, Franziska Rueff, MD, and Bernhard Przybilla, MD *Munich, Germany*

Since the 1980s, immediate-type allergy to natural rubber latex (NRL), frequently used in surgical gloves and other medical devices but also found in a variety of common products that have become part of our everyday environment, has become a serious health problem.¹ In particular, health care workers, other persons professionally exposed to NRL, and patients with multiple medical interventions are affected. In many patients with NRL allergy, hypersensitivity to certain food items has been reported.² We here report on a patient allergic to NRL who experienced anaphylactic reactions elicited by a herbal tea.

A 25-year-old male nurse had generalized urticaria, angioedema, and asthma 30 minutes after he had ingested a herbal tea. He gave a history of seasonal respiratory symptoms caused by pollens. Furthermore, he was known to be allergic to NRL, with exposure causing rhinoconjunctivitis and asthma.

The herbal tea contained blackberry leaves, caraway, fennel, camomile, orange peel, and condurango bark. At the time of skin prick testing, immediate type reactions were found to various aeroallergens (including birch, grass, and mugwort pollens), various food allergens, NRL milk, the herbal tea, and condurango bark. Neither the reaction to the herbal tea nor to the condurango bark were found in 10 control subjects, and the patient did not react to the other constituents of the tea. In the patient's serum specific IgE antibodies were demonstrable by CAP-FEIA (Pharmacia, Freiburg, Germany) to a variety of aeroallergens, a variety of food allergens, NRL (17.2 kU/L), and condurango bark (9.79 kU/L). Oral challenge tests with incremental doses of the herbal tea (20 mg/ml water; ranging up to 100 ml) and condurango bark (3 mg/ml water; ranging up to 100 ml) resulted in both generalized urticaria and asthma starting 30 minutes after the last dose; symptoms cleared quickly with adequate treatment.

To verify the relationship between hypersensitivity to condurango bark and NRL allergy, inhibition tests were performed. Binding of specific IgE antibodies to NRL in

Abbreviation used

NRL: Natural rubber latex

vitro was inhibited up to 57% after preincubation with condurango bark and up to 62% after preincubation with NRL (Fig. 1). Correspondingly, after preincubation with different concentrations (ranging from 0.032 to 32 μ g/ml) of NRL (skin prick test solution; ALK Horsholm, Denmark) the binding of the patient's IgE antibodies to condurango bark was inhibited up to 85%. Control tests showed that binding of the patient's specific IgE to grass, birch, or mugwort pollen was inhibited by at most 20% by condurango bark, whereas inhibition after preincubation with the respective allergens ranged from 80% to 100%.

Marsdenia condurango (family Asclepiadaceae) is a shrub growing in Colombia, Ecuador, Peru, some other parts of South America, and East Africa.³ Condurango bark, also known as eagle-vine bark, contains numerous substances and has been used for centuries as a folk medicine remedy to treat stomach-ache, syphilis, or snake bite. Currently it is used in some preparations for supplementary treatment of gastritis or stomach ulcer. It also can be present in herb-flavored liqueurs or bitter drinks. At higher doses, typical side effects of condurango bark are convulsions and paralysis. To our knowledge this is the first report of IgE-mediated hypersensitivity reaction caused by condurango bark.

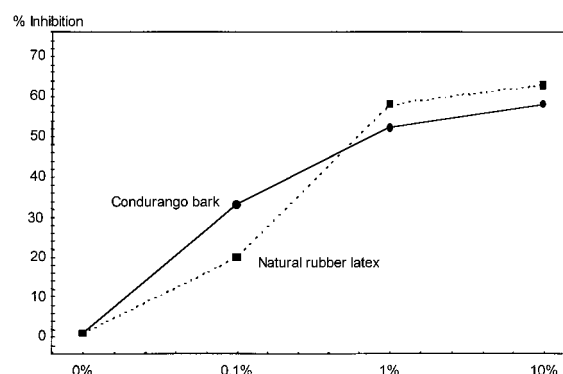


FIG. 1. Inhibition of binding of specific IgE antibodies to NRL caused by preincubation with condurango bark (12 mg/ml) or NRL (skin prick test solution; Bencard, Munich, Germany).

From the Dermatologische Klinik, Ludwig-Maximilians-Universität, Munich.

Reprint requests: Wolfgang Pfützner, MD, Dermatology Branch, NCI, Building 10, Room 12N238, National Institutes of Health, Bethesda, MD, 20992-1908.

J Allergy Clin Immunol 1998;101:281-2.

Copyright © 1998 by Mosby, Inc.

0091-6749/98 \$5.00 + 0 1/54/86355

Inhibition of binding of NRL-specific IgE antibodies by condurango bark indicates cross-reactivity between condurango bark and NRL. Up to now, definite proof of clinically relevant cross-reactivity between NRL and food by both positive oral challenge tests and inhibition tests has been reported only for banana^{4, 5} and chestnut.⁶ We here add condurango bark to the list of orally administered substances with proven cross-reactivity to NRL. In view of the high prevalence of NRL allergy and the not uncommon use of condurango bark, allergic reactions to the latter may be more frequent than this single case report suggests.

REFERENCES

1. Slater JE. Latex allergy. *J Allergy Clin Immunol* 1994;94:139-49.
2. Beezhold DH, Sussman GL, Liss GM, Chang NS. Latex allergy can induce clinical reactions to specific foods. *Clin Exp Allergy* 1996;26:416-22.
3. Koch-Heitzmann I. *Marsdenia condurango*. *Z Phyt* 1987;8:38-41.
4. M'Raihi L, Charpin D, Pons A, Bongrand P, Vervloet D. Cross-reactivity between latex and banana. *J Allergy Clin Immunol* 1991;87:129-30.
5. Domp Martin A, Szczurko C, Michel M, Castel B, Carnillet B, Quilloux L, et al. Two cases of urticaria following fruit ingestion, with cross-sensitivity to latex. *Contact Dermatitis* 1994;30:250-2.
6. Anibarro B, Garcia-Ara MC, Pascual C. Associated sensitization to latex and chestnut. *Allergy* 1993;48:130-1.