

TABLE I. Prevalence of symptoms (IgE, RAST, and skin prick test results) in three patients

Age (yr)	Symptoms	IgE (U/ml)	Latex (kU/L)	Banana (kU/L)	<i>Carica papaya</i> (kU/L)	Papain (kU/L)	Positive SPT results
28	Urticaria, dyspnea, angioedema	180	21	2.8	0	2.53	Banana, latex, papain, avocado
36	Dyspnea, urticaria	7	0.78	0	0	0.5	Banana, kiwi, avocado, latex, papain
45	Rhinitis, angioedema	187	5.9	1.43	0	0.48	Banana, latex, avocado, kiwi, papain

SPT, Skin prick test.

Allergy to latex and papain*To the Editor:*

Immediate hypersensitivity to latex was first reported by Nutter¹ in 1979. During recent years, allergic reactions to latex have been reported with increasing frequency, especially in health care personnel and patients. Sensitization may occur as a result of direct contact with or airborne exposure to latex products.^{2,3}

An association between allergy to latex and allergy to a variety of fruits (banana, avocado, kiwi, apricot, chestnut, grape, passion fruit, and pineapple) has been noted. Papain is also reported to cross-react with bromelain from pineapple.^{4,5} Many reports concern atopic individuals.

A 28-year-old atopic patient was referred to us for treatment of angioedema after ingestion of papaya cake during a party. During the year before consultation, he had also experienced angioedema, urticaria, and acute dyspnea after contact with rubber gloves. We have also documented a case of classical allergy to *Hevea brasiliensis* latex in a chemist who worked with proteolytic enzymes of *Carica papaya* latex (i.e., papain). Results of skin prick tests were positive for latex and papaya. After this possible cross-reaction was recorded, skin prick tests with papaya latex were carried out in two other patients with well-documented allergy to *Hevea* latex, and a positive reaction to papaya was noted. Specific CAP RAST (Pharmacia, Uppsala, Sweden) confirmed positive reactions to papain (Rk201), but responses to papaya (Rf293) were negative in our three patients (Table I). Cross-

inhibition tests with papain latex might solve the problem. It is, however, impossible to perform inhibition with a papain solution because this enzyme degrades IgE antibodies. The simultaneous occurrence of allergy to latex and papain in three patients is noted with clinical and RAST correlations.

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