Allergy to curry: case report∗

To the Editor,

In recent years, the increasing use of spices has resulted in a rise of allergic reactions to them, especially in atopic patients. Curry is a mixture of several seeds such as coriander, onion, curcuma, caraway, cumin or mustard. Most of them belong to the Umbelliferae family. Contact dermatitis, the oral allergy syndrome and some cases of anaphylaxis are the most reported allergic reactions to these allergenic sources.2-5 Various pollen-food syndromes (PFS) have been described in pollinics patients, many of them produced by panallergens, but curry has never been included in them. However, some of the spices present in curry powder (parsley, caraway or coriander) have been reported as hidden allergens and cross-reactivity with mugwort pollens have been described (The celery–mugwort–spice syndrome).6

We describe a 45-year-old woman with rhinoconjunctivitis through May, June and September. She referred several episodes of papular lesions and pruritus in mouth mucosa, itching and erythema in face, palms and neckline immediately after eating several meals containing curry spices. No apparent relationship with other ingredients of the culprit meals as chicken, cous-cous or rice was suspected. The symptoms did not return when the patient ate the same meals cooking without curry. Skin prick test was positive to extracts from curry and coriander (Bial-Aristegui, Bilbao, Spain) (Fig. 1) as well as to pollens from Platanus acerifolia, Artemisia vulgaris and Chenopodium album (ALK-Abelló, Madrid, Spain). It was negative to other curry components: black pepper, laurel, nutmeg, cardamom and clove (Bial-Aristegui, Bilbao, Spain) and pollens from Olea europaea, Cupressus arizonica, Plantago lanceolata and Dactylis glomerata (ALK-Abelló, Madrid, Spain). Serum specific IgE were positive to the spices of the Umbelliferae family present in curry as well as to pollens from the following families: Compositae, Platanacea and Chenopodiaceae. The existence of specific IgE against common panallergens from pollens and plant-derived foods is a widely accepted and experimentally supported explanation for some of the allergenic relationships detected. Some of the responsible cross-reactive molecules for the development of PFS in weed pollinosis have been described in detail as profilin, LTPs, and high MW allergens and/or glycoallergens.9

We present a case of immediate hypersensitivity to curry powder in an atopic patient. Skin prick test and specific IgE were positive to the spices of the Umbelliferae family present in curry as well as to pollens from the following families: Compositae, Platanacea and Chenopodiaceae. Pollens from the Compositae family (Artemisia),9,10 Chenopodiaceae9 and Platanacea pollens11 have been described as a cause of PFS with different fruits (e.g. banana, melon) but allergies to spices have never been associated to Platanacea or Chenopodiaceae pollens.

In this study we found in vitro cross-reactivity with clinical implications among food spices belonging to Umbelliferae family and pollens from the Compositae family (A. vulgaris), the Platanacea (P. acerifolia), and the Chenopodiaceae (C. album), due to allergens with molecular masses between 30 and 97 kDa.

∗Presented in poster session in the XXV Congress of the European Academy of Allergology and Clinical Immunology (EAACI), Vienna, June 2006.
Figure 1  Positive skin prick test with curry (Cu) and coriander (C). Negative skin prick test with curcuma, mustard, cinnamon, onion, garlic, fennel, ginger, black pepper, laurel, nutmeg, cardamom and clove.

Figure 2  SDS–PAGE immunoblotting. Lane P: patient serum, lane C: control serum, incubated with extracts from: curry I (A), curry II (B), curry III (C), fennel (D), aniseed (E), dill (F), caraway (G), cumin (H), coriander (I). M: molecular weight standards.

**Sources of funding**

Authors disclose no financial relationship, which can cause a conflict of interest regarding this article.

**References**


S. Pérez Bustamante a, A. Alvarez-Perea a,b, M. De Barrio a, M. Tomás a, M. Luisa Baeza a, B. Bartolomé-Zavala b

a Allergy Department, Hospital General Universitario "Gregorio Marañón", Madrid, Spain

b Bial-Aristegui, R&D Department, Bilbao, Spain

* Corresponding author.

E-mail address: alberto@alvarezperea.com (A. Alvarez-Perea).

doi:10.1016/j.aller.2010.12.004