

Psychosomatic peanut allergy

To the Editor:

Peanut is the most common and most often life-threatening of all food allergies.¹ Patients who describe symptoms consistent with mast cell degranulation after the ingestion of peanut require evaluation for confirmation of specific IgE antibody and advice on avoidance and treatment of accidental ingestions. We report the case of a patient initially presumed to be allergic to peanut but whose reactions were ultimately believed to be psychosomatic.

The patient is a 27-year-old woman with allergic rhinitis and asthma. She stated that about 20 minutes after eating a peanut butter and jelly sandwich, she had itching and hives all over, as well as shortness of breath and wheezing. She went to the emergency department, where the written description of her physical examination included "diffuse rash over face, chest, back, arms and lower legs ... multiple scratch marks." She was treated with intravenous diphenhydramine, as well as oral prednisone and ranitidine. The next day she ate a peanut butter candy and had a similar reaction. Strongly suspecting that the reactions were due to peanut allergy, she presented to the allergy clinic for evaluation. A skin prick test was performed with a commercial extract of peanut (Hollister-Stier, Spokane, Wash), and the result was negative, with a positive histamine control producing 7-mm wheal and 50-mm flare responses. A crude extract was then prepared by mixing peanut butter with a small amount of saline. A skin prick test with this solution also produced a negative result. Despite the negative test results, given the convincing history, the patient was advised to strictly avoid peanut ingestion pending further evaluation. Serum was sent to a commercial laboratory (Allergy Testing Laboratory, Gainesville, Fla), where specific IgE antibody to peanut was undetectable.

An open challenge with one teaspoon of peanut butter was performed. Fifteen minutes after ingestion, the patient complained of itching and feeling warm. On examination, she was flushed and had hives on her arms and linear welts on her back from scratching. Her vital signs were normal, and she had no wheezing. She was treated with epinephrine and fexofenadine, and her symptoms resolved. Because of the positive open challenge result, additional in vitro testing was performed. Immunoblots for IgE antibody were performed with sev-

eral peanut extracts (by using methods previously described²) but failed to reveal any IgE binding.

The possibility of a psychosomatic reaction was raised in discussion with the patient. It was explained that the reactions were clearly not "all in her head" because the physical reactions had led 2 physicians to conclude that these were allergic reactions. Rather, the reactions were explained as possibly being due to her body's reaction to her mind's logical conclusion that she was allergic to peanut. She agreed to a double-blind, placebo-controlled challenge. Peanuts were chopped and mixed with chopped pecans and walnuts and cinnamon to conceal the taste. A similar concoction without peanuts was used as the placebo. Three blinded control tasters were unable to distinguish the peanut-containing mixture from that without peanuts. Additionally, for the challenge, the patient wore a nose clip to further decrease her sense of taste and used mouthwash immediately after each challenge ingestion. Both the patient and the observing physician were blinded as to the order of the challenge ingestions, 2 with peanut and 2 without. None of the 4 challenge ingestions resulted in any symptoms. The patient was informed of the results. She was subsequently challenged with 5 roasted peanuts and later with a teaspoon of peanut butter and again had no reaction.

On 3 separate occasions this patient had reactions to the ingestion of peanut that were consistent in terms of nature and timing with mast cell degranulation, including flushing, itching, and hives. The results of the first reaction were observed and treated by an emergency department physician. The third reaction, to an open challenge, was observed and treated by an allergist. Only after a negative double-blind, placebo-controlled challenge result did the patient consume peanut without reaction. This appears to represent a psychosomatic reaction. The linear nature of some of her welts suggests that she might have dermatographism, and thus some of her objective skin findings could have been self-induced. However, other findings, such as flushing and nummular hives, could not have been volitional. It is not clear why this patient had the reactions. Perhaps her original episode of hives was idiopathic and just happened to occur shortly after an ingestion of peanut. This could have led to her not illogical conclusion that she was allergic to peanut. After, and presumably as a result of, the negative blinded challenge result, she had no further reactions. Given the commonness and potential lethality of peanut allergy, an exhaustive search for confirmatory evidence of IgE antibody is appropriate in patients with convincing histories, and in most such cases, peanut-specific IgE is demonstrable. However, in some cases the allergic reaction might be psychosomatic. In such a case frank discussion with the patient and a double-blind, placebo-controlled food challenge might lead to a "cure."

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