Second Reported Case of Buffalo Milk Protein Allergy without Cross Reactivity to Cow’s Milk

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Summary

Mozzarella is a soft cheese from Southern Italy made with buffalo milk. This milk is commonly drunk in South Asian countries where Water Buffalos are common. We describe a case of IgE mediated buffalo milk allergy in a patient without clinical or skin test sensitivity to cow’s milk.

To the Editor

We present a 34 year old Caucasian patient who reported a 12 month history of lip and tongue swelling occurring within five minutes of consuming mozzarella or ricotta cheese. On one occasion she described lip swelling after kissing her husband who had just eaten a pizza. The patient was able to tolerate cow and goat’s milk as well as yoghurt and cheese made from these milks. She had a long history of seasonal rhino conjunctivitis and oral itching after eating peaches compatible with an oral allergy syndrome. Perioral and periocular eczema was evident intermittently.

There was a past medical history of childhood asthma. She was not on any regular medication. There was a strong family history of food allergy.

Routine investigations including full blood count, autoantibody screen and complement C3 and C4 were normal. Coeliac screen was negative. The total IgE was 671 kU/L. Specific IgE tests to egg white, cheddar cheese, soya bean and cow, goat and sheep’s milk were negative (<0.35kAU/L). However, skin prick testing with fresh mozzarella cheese was highly positive with a 7mm wheal.

Our patient was diagnosed with buffalo milk allergy and her reactions to pizzas were attributed to the mozzarella cheese that is frequently used. She was advised to avoid buffalo milk and products such as mozzarella that are made from this. She was also advised to keep antihistamines at hand; especially if she was eating out at Italian restaurants.

IgE mediated cow’s milk allergy (CMA) involves a rapid immune response to proteins in the casein and whey fractions [1]. There is frequent cross reactivity between these proteins and those from different animals such as goat and sheep [2]. CMA is common in childhood and affects 2% of children under 1 year of age. Fortunately most children will outgrow this by about 8 years of age although a minority suffer symptoms into adolescence.

Buffalo milk allergy is exceptionally rare even in those with allergy to cow and goat’s milk. As far as we know our patient is the second reported case of isolated allergy to buffalo milk protein. The first case was described by Broekaert et al in 2008 and involved a 70 year old German gentleman who experienced two allergic reactions [3]. The first was characterised by pruritus and oropharyngeal swelling. The second occurred a year later and involved an urticarial rash with severe oedema followed by loss of consciousness. It occurred 15 minutes after the patient ate a salad that included Mozzarella cheese. In this case skin prick tests to extracts from Cow’s milk and Goat’s milk were negative. They were positive to buffalo milk protein and a double blinded, placebo controlled challenge test confirmed the allergy. In our case the number of reactions involving mozzarella suggested that provocation testing was unnecessary.

With an increased consumption of takeaway foods such as pizza and people seeking alternatives to cow’s milk, we speculate whether buffalo milk allergy will become more frequent in the future.

References


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