Anaphylaxis to banana: a pediatric case report

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Background: Food allergy is the most common cause of anaphylaxis in children. Banana is not considered a highly allergenic food and it is usually one of the first fruits introduced in the diet of infants.

Report: A 2-year-old boy had an anaphylaxis episode immediately after eating a banana. He presented with oral discomfort, facial and tongue angioedema, emesis and rash on his legs. On route to the emergency department, his aunt, an Allergist, gave instructions to administer dimethindene and betamethasone with symptom improvement. He remained in observation at the hospital and an adrenaline auto-injector, antihistamine and oral steroid were prescribed on discharge.

He had eaten bananas before, but always in small quantities because he did not like bananas and he would refuse to eat them. He tolerates apple, pear, mango, pineapple, melon, clementine and vegetables. His medical history includes atopic dermatitis and the use of a helmet during six months for the correction of plagio-brachycephaly under the supervision of neurosurgery.

Skin prick tests (SPT) with commercial extracts were positive for kiwi and banana; and negative for D. pteronyssinus, grass pollens, Pru p 3 and latex. The skin prick-prick tests with banana were also positive. Total IgE and basal tryptase were normal; specific IgE to banana 2.85 kU/L and negative to latex. Sodium dodecyl sulfate polyacrylamide gel electrophoresis (SDS-PAGE) immunoblotting with banana extract and the patient’s serum was performed and an IgE-binding band with a molecular mass of 20 kDa was detected which suggests sensitization to banana.

Clinical Relevance: Although banana allergy is well established in adults, often associated with latex allergy in the latex-fruit syndrome, there are few case reports of anaphylaxis to banana in children. Banana pulp is rich in thauvatmin-like protein (TLP), an allergen with 20 kDa of molecular mass; it is probably the sensitizer in this case. Curiously, SPT with kiwi extract was positive although he never ate kiwi. This may be explained by the cross-reactivity described among the TLPs.