Anaphylaxis after Avocado ingestion in a patient located in the Rio Grande Valley

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Background

The avocado is an integral part of the Tex-Mex cuisine, especially in the Rio Grande Valley. Cases of severe anaphylactic reaction related to avocado mostly occur with previous history of latex-sensitization, also known as “latex-fruit syndrome,” rather than caused by avocado alone. One of the major identified avocado allergens is the protein Prs a 1, a chitinase that helps the plant for protection and has cross-reaction with natural rubber latex allergens. According to the most recent national survey done in 2014, the prevalence of anaphylaxis in the United States ranged from 1.6% to 5.1%. Food reactions accounted as the second most common cause of anaphylactic reactions, being peanuts, cow’s milk, and Hen’s egg the most frequently implicated substances.

Case Presentation

A 71-year-old female with history of hypertension, obesity and urticarial episodes induced by avocado presented to the emergency via ambulance with an erythematous rash, acute shortness of breath, facial and tongue swelling after eating substantial amounts of avocado. Symptoms began 10 minutes before arrival and had progressively worsened with severe alertness reduction. Emergency medical services (EMS) administered intramuscular epinephrine, oral diphenhydramine, inhaled albuterol, and bag-valve-mask ventilation while she was in-route without therapeutic response. Upon arrival to the emergency-room, she was found unresponsive, with a diffuse erythematous rash, facial and tongue edema, rapid sequence intubation was performed for airway protection. A diagnosis of acute respiratory failure secondary to avocado induced anaphylaxis was made, and she was directly admitted to the intensive care unit (ICU) on mechanical ventilation She received fluid resuscitation with 1 liter of normal saline, repeated intramuscular epinephrine,

diphenhydramine, famotidine, and Methylprednisolone in the ED (Emergency Department). In the ICU, the patient continued mechanical ventilation and sedated with multiple unsuccessful extubating attempts due to absence of cuff leak and important facial and tongue edema. On the second day of her ICU stay, a latex IgE was requested due to her persistent angioedema and history of allergy to avocado, patient was also empirically placed on latex allergy precautions. The next day, an improvement of the angioedema was noted, patient passed all steps of extubating trial, including presence of cuff leak, was successfully extubated, and placed on Nasal cannula at 4 Liters per minute. On her 4th day of hospital stay, the patient was downgraded to the telemetry floor as her oxygen requirements continued decreasing and her angioedema improving. The patient was discharged the next day with a short course of prednisone and as needed inhaled albuterol. Her latex IgE levels were available after discharge, with a result of 0.71 kU/L, which was compatible with moderate levels of allergy to latex. Records were sent to her primary care physician.

Conclusion

This case reveals the importance of doing a thorough allergy and immunologic investigation in patients with plant-triggered anaphylactic reactions. Especially, when they are unable to provide information and failure for a rapid resolution of symptoms are not noted despite adequate treatment. It also enhances making timely decisions in patients with uncommon presentations.