WHEN SHOULD CANNABIS CROSS YOUR MIND? A CASE REPORT OF ANAPHYLACTIC SHOCK INDUCED BY MARIJUANA-TOMATO CROSS REACTIVITY

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INTRODUCTION: With the increased prevalence of recreational and medical marijuana use throughout the United States, patients with severe food allergies are particularly vulnerable to severe and devastating allergic reactions from its use. Nonspecific lipid transfer proteins, which can be found on the Cannabis sativa leaf, are also found on a variety of fruits and legumes, providing a mechanism for cross-reactivity in those susceptible to certain food allergies.

CASE PRESENTATION: We present a case of a 35-year-old female with a past medical history of OSA on CPAP, hypertension, and anxiety with complaints of shortness of breath and wheezing. The night prior, she attested to having a glass of wine and smoking half of a marijuana joint. Shortly after she smoked, she began to complain of an itchy throat and an itching sensation throughout her body. She perceived the symptoms as only mild and went to bed with her CPAP machine, hoping that her symptoms would resolve spontaneously. Hours later, she suddenly woke up with severe dyspnea and respiratory distress, prompting her to call EMS. Initial vitals were BP 120/62, HR 75, RR 28, and SpO2 98% on non-rebreather mask. Her chemistry profile was unremarkable with normal renal and liver indices. EKG showed normal sinus rhythm with a ventricular rate of 86 bpm. Her listed allergies included angioedema to Lisinopril, urticaria to aromatic oils, and hives to tomatoes. Family history was non-contributory. Chest X-ray showed no acute pulmonary findings. On physical exam, she was in severe respiratory distress and barely able to complete any sentences. There were no adventitious sounds on auscultation of her lung fields, although severe upper airway stridor was appreciated. Diffuse urticaria was also noted over her extremities. She required urgent endotracheal intubation and mechanical ventilation for severe respiratory distress and upper airway edema, attributed to severe anaphylaxis. At the time, the precipitating agent that caused her to clinically deteriorate was unclear. Two doses of epinephrine IM, benadryl 50 mg IV, and Solumedrol 125 mg IV were administered. Within 24 hours, the patient’s airway edema markedly improved and she passed a leak test prior to extubation. She was successfully discharged home the following day on a steroid taper and H2 inhibitor.

DISCUSSION: Review of literature demonstrates a well established cross reactivity between the cannabis sativa leaf and multiple plant-food allergens, including tomatoes, peaches, and apples (1). Patients who are sensitized to non-specific lipid transfer proteins, found on the surface of these and other fruits, may develop a cross-reaction when marijuana is ingested, leading to a wide range of allergic reactions (2).

CONCLUSIONS: A thorough history, physical, and review of potential cross-reactions between a patient’s known allergies & recently ingested foods or substances is imperative to an accurate diagnosis.


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