

Silent Threats: Unveiling Anaphylaxis in the Absence of Known Allergies: A Comprehensive Case Study and Literature Review

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Abstract

We present the case of a 63-year-old female who presented to the emergency room in a gasping state with visible swelling of the face. She had no known allergies and was not a chronic consumer of any metallic substance. The patient reported the onset of symptoms shortly after ingesting sweets from the refrigerator. Initial assessment revealed severe respiratory distress, hypotension, and low oxygen saturation. Anaphylactic shock was diagnosed, and immediate resuscitative measures were initiated, including intravenous fluids, adrenaline, antihistamines, and corticosteroids. The patient required endotracheal intubation due to compromised airway and was subsequently transferred to the ICU. Diagnostic imaging and endoscopy revealed multiple foreign bodies. This case highlights the importance of early recognition and prompt management of anaphylactic shock, even in patients without a known history of allergies. Weal so provide are view of the literature on anaphylaxis and food allergies.

Keywords: Anaphylaxis, Emergency medicine, Foreign body, Anaphylactic shock, Food allergies.

INTRODUCTION

Anaphylaxis is a severe and potentially life-threatening allergic reaction that requires immediate medical attention. Food allergies are a common cause of anaphylactic

shock, typically mediated by immunoglobulin E (IgE) mediated mechanisms. This case report describes a patient who presented with anaphylaxis after ingesting sweets, despite having no known allergies or history of chronic consumption of metallic substances. We also provide a review of the literature on anaphylaxis and food allergies to enhance our understanding of this condition.

CASE PRESENTATION

A 63-year-old female with no known allergies presented to the emergency room in a gasping state with facial swelling. She reported developing a rash, shortness of breath, and facial swelling immediately after consuming sweets from the refrigerator. Upon arrival, her blood pressure was

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not recordable, pulse rate was 120 beats per minute, oxygen saturation was 60%, respiratory rate was 6 breaths per minute, and random blood sugar was 156 mg/dL. The patient was immediately started on intravenous fluids, adrenaline, ranitidine, and corticosteroids.

Endotracheal intubation was performed due to the patient's deteriorating condition and Cormack Lehane Grade 3 airway visualization. After fluid resuscitation, the systolic blood pressure remained low, requiring the initiation of noradrenaline and vasopressin. Radiographic imaging and endoscopy later revealed multiple foreign bodies (Images attached).



Fig. 1: Chest X-Ray

Fig.2 Endoscopic view of Foreign Body



Fig 3, 4, 5 - Endoscopic view of metallic foreign body.

DISCUSSION

Anaphylactic reaction triggered by food allergies are known to be severe and life-threatening.¹ The release of inflammatory mediators from mast cells and basophils, mediated by IgE antibodies, contributes to the pathophysiology of anaphylaxis. Although our patient had no known allergies, the onset of symptoms immediately after ingesting sweets and the subsequent imaging and endoscopy findings were suggestive of a different etiology.² Two patterns of IgE sensitization in food allergy have been recognized, primary and secondary sensitization. Primary sensitization occurs through direct ingestion of the allergenic food, while secondary sensitization can occur through cross-reactivity with aeroallergens. Prompt recognition and treatment are crucial in managing anaphylactic shock, even in patients without a known history of allergies.

Review of Literature

Anaphylaxis is a well-known clinical entity associated with food allergies. The prevalence of food allergies has been increasing in recent years, with a significant impact on public health.³ The most common food allergens include peanuts, tree nuts, milk, eggs, fish, shellfish, soy, and wheat. IgE-mediated mechanisms play a central role in the development of anaphylactic reactions, characterized by the cross-linking of allergen specific IgE antibodies bound to mast cells and basophils.⁴

While primary sensitization to food allergens occurs through direct ingestion, secondary sensitization can occur due to cross reactivity with aeroallergens.⁵ This phenomenon, known as oral allergy syndrome, is characterized by localized allergic reactions in the oral cavity, lips, and throat after ingesting specific fruits, vegetables, or nuts. In rare cases, systemic anaphylaxis can occur as a result of secondary sensitization.⁶

The diagnosis of anaphylactic shock is based on clinical presentation and supported by laboratory investigations, such as serum tryptase levels and specific IgE testing.⁷ Prompt management includes the administration of epinephrine as the first line treatment, followed by supportive measures such as airway management, intravenous fluids, antihistamines, and corticosteroids.⁸

CONCLUSION

This case report emphasizes the importance of considering anaphylactic shock as a differential diagnosis in patients presenting with acute respiratory distress and systemic manifestations, even if they do not have a known history of allergies. Early recognition and initiation of resuscitative measures are crucial to prevent morbidity and mortality associated with anaphylactic reactions. Further investigations are needed to identify the exact cause of the anaphylactic reaction in this patient and to prevent future occurrences. The review of the literature highlights the underlying mechanisms, epidemiology, and management of anaphylaxis associated with food allergies, providing additional insights into this condition.

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