



Anaphylactic Shock due to Mushroom Soup

Attila Aydın¹, Sedat Bilge¹, Cemile Aydın², Erdem Çevik³, Güçlü Aydın¹, Emre Tekgöz⁴

¹Department of Emergency Medicine, Gülhane Military Medical Academy, Ankara, Turkey

²Department of Internal Medicine, Etimesgut State Hospital, Ankara, Turkey

³Department of Emergency Medicine, Van Military Hospital, Van, Turkey

⁴Department of Internal Medicine, Gülhane Military Medical Academy, Ankara, Turkey

ABSTRACT

Introduction: Adverse reactions to food have existed for years. Common conditions relating to food allergy are topic dermatitis, urticaria, and angioedema. We report a case of acute onset angioedema and anaphylactic shock after the intake of packed cream mushroom soup.

Case Report: A 20-year-old man had complaints of diffuse abdominal pain and vomiting shortly after eating cream of mushroom soup. Physical examination revealed uvula and mucous membrane edema and swelling of the lips. Despite the implementation of fluid resuscitation, hypotension and hypoperfusion persisted. Fluid resuscitation and vasopressor therapy was continued. Forty minutes after the application, hypoperfusion signs recovered. He regained consciousness but has low blood pressure. He was then transferred to the intensive care unit.

Conclusion: A large number of anaphylaxis cases caused by food have been reported; however, to the best of our knowledge this is the first reported case of anaphylaxis due to cream of mushroom soup. Emergency care physicians should know and understand anaphylaxis management and the necessity of prompt treatment.

Keywords: Anaphylactic shock, angioedema, mushroom

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Introduction

Adverse reactions to food have existed for years. Food allergies affect 6% of children <3 years of age, but this ratio decreases by half for adults. Allergic reactions are commonly caused by egg, milk, wheat, and soybean in children and peanuts, hazelnuts, and seafood in adults (1). Common conditions relating to food allergy are topic dermatitis, urticaria, and angioedema. Angioedema is the swelling of the subcutaneous and submucosal tissue and often involves the lips, tongue, larynx and base of the mouth. It occurs occasionally but can be life-threatening (2). We report a case of acute onset angioedema and anaphylactic shock following the intake of packed cream of mushroom soup.

Case Report

A 20-year-old man had complaints of diffuse abdominal pain and vomiting shortly after eating cream of mushroom soup. Forty minutes after the onset of his first complaint he began to exhibit signs of periorbital edema and syncope and was admitted to our emergency department. He had no history of any chronic illness, allergy, or drug use. His arterial blood pressure was 60/30 mmHg, saturation was 92%, pulse rate was 98 beats/min and body temperature was 37°C. Physical examination revealed uvula and mucous membrane edema and swelling of the lips (Figure 1). Lung sounds were diminished on both sides. Suspecting anaphylaxis, the patient was intramuscularly administered 0.5 mg epinephrine to the lateral aspect of the thigh. The lower limbs were lifted, and he was placed in the supine position. Next, 120 mg methylprednisolone, 50 mg diphenhydramine, and 50 mg ranitidine were intravenously administered. Despite the implementation of fluid resuscitation, hypotension and hypoperfusion persisted. Further, 0.1 mg of epinephrine (1/10000) was intravenously administered. Fluid resuscitation and vasopressor therapy was continued. Forty minutes after the application, hypoperfusion signs recovered. He regained consciousness but had low blood pressure. Gastric decontamination was carried out to reduce allergen exposure. The patient was transferred to the inten-

Address for Correspondence:

Attila Aydın, Department of Emergency Medicine, Gülhane Military Medical Academy, Ankara, Turkey
E-mail: drattilaaydin@gmail.com

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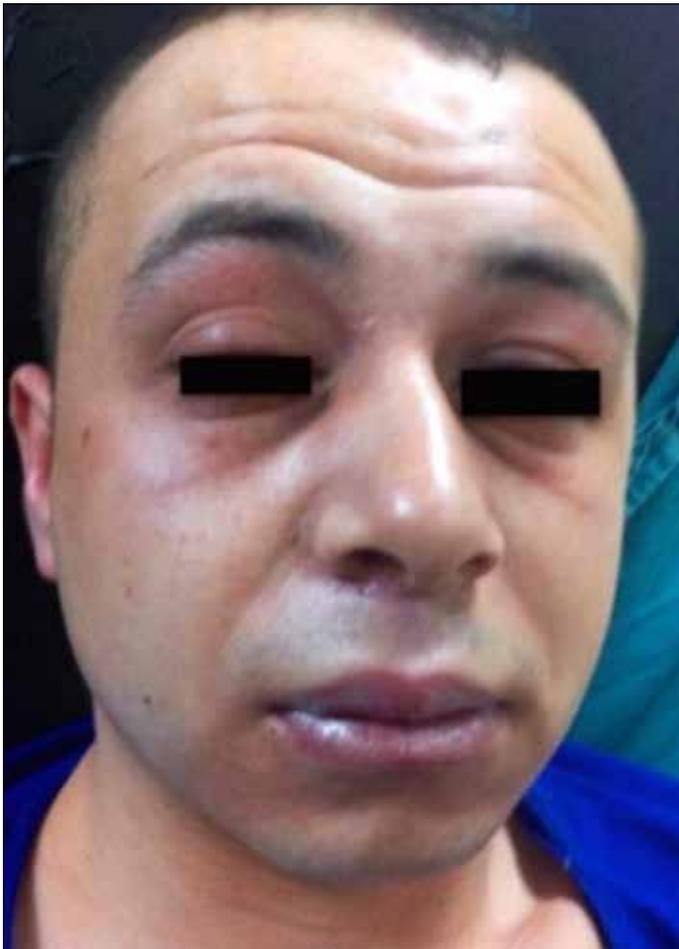


FIGURE 1. Mucous membrane edema and swelling of the lips

sive care unit and following medical treatment was discharged from the hospital. The patient filled the informed consent form for his data to be used in this case report.

Discussion

Anaphylaxis is a life-threatening systemic allergic reaction that affects the respiratory and cardiovascular systems by the sudden degranulation of the mast cells and basophils. Anaphylaxis is diagnosed on the basis of the patient's history and physical examination. The food consumed prior to the event must be identified. Allergic food, drugs, and insect bites are the most common causes of anaphylaxis. A large number of anaphylaxis cases caused by food have been reported; however, to the best of our knowledge this is a first report of anaphylaxis caused by cream of mushroom soup. Skin lesions are observed in 90% of patients with anaphylaxis. Severe anaphylaxis can quickly develop into a life-threatening situation without skin findings (3, 4). Skin lesions were evident in our case, which was considered to be severe anaphylaxis. In most cases, tachycardia is observed; on rare occasions, cases are bradycardic. Delay in diagnosis and treatment may result in hypoxic-ischemic encephalopathy and death (2). Hemodynamic and cardiac monitoring should be performed, and vascular access should be opened. Oxygen therapy, at 100%, with a mask should be initiated. The patient should be placed in the supine position, and the legs

should be lifted to prevent circulatory collapse. The passive leg-raising maneuver was implemented in our patient to place him in the sitting position; otherwise, the empty inferior vena cava/empty ventricle syndrome can cause cardiac arrest (5). Epinephrine (0.3–0.5 mg IM 1/1000 solution) is the first-use drug in acute anaphylaxis, but at Pumphrey's study they found that only 14% of patients are administered epinephrine before cardiac arrest (6). In our case, we immediately administered epinephrine. It should be kept in mind that the delayed administration of adrenaline may lead to biphasic anaphylaxis. Vasopressor drugs should be administered via infusion to patients with ongoing hypotension. There is no difference between the different vasopressor drugs (7). Gastric decontamination reduces the need for vasopressors. Patients with hypotension, despite ongoing treatment, gastric decontamination should be repeated, and β -blocker intake should be considered. In our case, non-invasive monitoring was performed for 72 h in the intensive care unit because of the risk of biphasic anaphylaxis; antihistamine drugs and corticosteroid treatment were continued during this period. Anaphylactic shock should be suspected in patients with cyanosis, syncope, and dizziness, and the emergency care team should immediately implement clinical procedures

Conclusion

Anaphylaxis is a life-threatening situation that can occur because of many allergens. Emergency care physicians should know and understand anaphylaxis management and the necessity of prompt treatment.

Informed Consent: Written informed consent was obtained from patient who participated in this case.

Peer-review: Externally peer-reviewed.

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