

Acute urticaria and angioedema caused by horse-chestnut (*Aesculus hippocastanum*) ingestion: a case report

At kestanesi (*Aesculus hippocastanum*) yenmesine bağlı gelişen akut ürtiker ve anjiyoödem: olgu sunumu

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Abstract

Acute urticaria and angioedema, which can develop due to various causes, are common life threatening condition seen in emergency departments (EDs). The literature includes reports of angioedema cases developing after contacting various plants and seeds. We present the case of a 47-year-old male patient who developed acute urticaria and angioedema after eating horse-chestnut (*Aesculus hippocastanum*). The patient presented to the ED with redness and irritation spread around the body and swelling of the tongue, all of which had started approximately one hour after consuming horse-chestnut. The patient was found to have a minimal uvular and upper lip edema, bilateral teeth marks on his tongue, and widespread maculopapular eruptions all over his body. He was treated with intravenous steroid and antihistaminic. After an 8-hour observation period, the signs and symptoms of the condition abated and the patient was discharged with suggestions.

Keywords: Acute urticaria; angioedema; horse-chestnut

Özet

Birçok sebebe bağlı gelişebilen akut ürtiker ve anjiyoödem acil servislerde sık karşılaşılan yaşamı tehdit edebilen durumlardan biridir. Birçok bitki ve tohumlarına bağlı anjiyoödem olguları bildirilmiştir. Biz at kestanesi (*Aesculus hippocastanum*) yedikten sonra akut ürtiker ve anjiyoödem gelişen 47 yaşındaki hastamızı sunuyoruz. Hasta acil servise at kestanesi yedikten yaklaşık 1saat sonra vücutta kızarıklık kaşıntı, dilde şişme şikâyeti ile başvurdu. Fizik muayenesinde de minimal uvula ödemi, tüm vücutta yaygın, makulopapüler döküntüsü tespit edildi. Hasta intravenöz steroid ve antihistaminikle tedavi edildi. Belirti ve bulguları 8 saat sonunda gerileyen hasta gerekli öneriler ile taburcu edildi.

Anahtar kelimeler: Akut ürtiker; anjiyoödem; at kestanesi

Introduction

Horse-chestnut (*Aesculus hippocastanum*) is a plant of the family *Hippocastanaceae*, which includes approximately 25 species of trees and bushes, which patch off their leaves during winter (1). The horse chestnut is native to the Balkan Peninsula; it started to spread across Europe around the seventeenth century and is now widespread in the northern hemisphere. The seeds of *Aesculus hippocastanum* are used to treat such conditions as phlebitis, hemorrhoids, painful vessels, varicose veins, skin striae, and leg ulcers. It can be consumed after boiling or by peeling off the skin of the fruit (2). The literature includes reports of urticaria caused by topical use of horse-chestnut. We report on a case of acute urticaria and angioedema that developed after consuming horse-chestnut.

Case Report

A 47 year-old male patient was admitted to the ED with redness and irritation spread around the body and swelling of the tongue. Patient history revealed the complaints had begun approximately one hour after consuming horse-chestnut, which was prepared as a meal. The patient had no history of any illness or allergy. His overall condition was good, he was conscious, fully oriented and cooperative, with a Glasgow Coma Scale (GCS) score of 15. His vital signs

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revealed a heart rate of 98 beats/min, blood pressure of 130/80 mmHg and SpO₂ of 96% on room air. Physical examination found a minimal uvular and upper lip edema, and bilateral teeth marks on the tongue. Thoracic examination showed bilaterally clear and equal lung sounds, with no rales, rhonchi or wheezing. There were widespread maculopapular eruptions all over his body, turning pale when pressure was applied. The patient's vital signs were monitored, and an intravenous line was started. Methylprednisolone (1 mg/kg), diphenhydramine (50 mg), ranitidine (50 mg) and 500 ml of normal saline were administered to the patient. During the observation period, the patient's vital signs remained stable, and he did not require additional drug therapy. The patient's lesions and uvular edema relieved at the 8th hour of observation, and he was discharged with suggestions.

Discussion

Urticaria and angioedema are common clinical presentations at the EDs. The severity of these clinical conditions can range from simple skin rash to life threatening uvula edema. The etiology may be related to inhaled or ingested allergens, drugs, certain medications, trauma, infection, tumors, radiotherapy, certain diseases or physical agents (3,4). Toxins or allergens contained in plants are occasionally reported as factors triggering a toxic or allergic reaction in subjects who undergo folk remedies or ingest these plants (5,6). Treatment of uvular edema is similar to anaphylaxis or severe allergic

reactions (3). Our patient's symptoms relieved with intravenous steroid and antihistaminic therapy.

Horse-chestnut (*Aesculus hippocastanum*), a tree with a large trunk and an average height of 15-20 meters, produces fruits similar to chestnuts. It is mostly grown as an ornamental tree (2). Seed extract of *Aesculus hippocastanum* is widely used throughout Europe, and has been used to treat a variety of medical conditions. Various oils, antioxidant materials, flavones, glycosides (esculin) and triterpenoid saponins (escin) can be extracted from horse-chestnut fruits (seeds). One extract, escin, has effect on vessels. It is used to treat body puffiness, especially during hemorrhoids and varicosis therapy. The most common indication for the use of escin is chronic venous insufficiency, for which conventional therapy includes the use of compressors. The extracts are also used for rheumatic diseases, rectal complaints, urinary bladder and stomach diseases and leg cramps, as well as antipyretics (7).

Horse-chestnut seed extract is generally well tolerated and has a good safety margin. The most frequently reported adverse events are gastrointestinal symptoms, dizziness, headaches, and itching. Gastrointestinal side effects are more often associated with the use of high doses of horse-chestnut extract (1). Reports about the use of horse-chestnut for chronic venous insufficiency are present in the literature (8,9). However, there are only a few reports in the literature of poisoning related to horse-chestnut ingestion in humans. Several veterinarian reviews reported horse-chestnut poisoning in chickens, hamsters and goats (10). It was reported that horse-chestnut could rarely cause redness and irritation during topical use. Another case reported a rare incidence of acute anaphylactic reaction to topical application of escin (11). In our case report, the patient was exposed to the irritant at a factory producing anti-inflammatory and venotonic drugs. Occupational

asthma, related to chronic exposure to escin, was the final diagnosis for our patient. However, this case differs in that acute urticaria and angioedema, which developed after eating horse-chestnut, had improved. The dermatological, life-threatening adverse effects of horse-chestnut must be considered after oral intake.

In the light of this case report, emergency physicians should keep in mind the possibility of life threatening complications of horse-chestnut consumption, both as herbal remedies and as a meal.

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