

Uvular Edema Resulting from Use of *Ecballium elaterium*

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Abstract

Ecballium elaterium, common name squirting cucumber juice is used for the symptomatic treatment of rhinosinusitis in folk medicine. There are reports of allergic reactions of this plant in the literature. It has strong anti-inflammatory effect and people in the eastern Mediterranean region widely use this fruit juice for rhinitis and sinusitis. We presented a case of uvular edema caused by this plant.

Keywords: Uvula edema; *Ecballium elaterium*

Introduction

Acute edema of the uvula may cause respiratory distress and several causes of it is known. We describe a case of uvular edema in a patient who used an *Ecballium elaterium* as a remedy.

Ecballium elaterium is also known as squirting cucumber. Usually the fruit of the *Ecballium elaterium* is used to treat sinusitis because of its anti-inflammatory properties [1]. However the undiluted use of squirting cucumber causes severe upper airway edema, neurotoxicity, renal toxicity, cardiorespiratory failure [2].

Case Report

A 51 years old man presented to the Emergency Department with difficulty in breathing and dysphagia. He was conscious, blood pressure was 120/80 pulse 96 beats/min, respiration rate 14/min, saturation %94. His physical examination confirmed uvular edema and erythema of the oropharynx and nasal mucosa (Figure 1). His lung auscultation was normal. Other systematic evaluation was normal. The patient's history revealed that, he applied a juice of squirting cucumber by intranasal 8 h previously, without diluting it, because of his self-diagnosed sinusitis and headache. His laboratory findings were within normal limits. Chest X-ray was normal.

Oxygen was given by mask. 45.5 mg of pheniramin maleate, 50 mg of ranitidine, 80 mg of prednisolone were administered intravenously. As there was no regression in their complaints, 40 mg of prednisolone was administered intravenously in addition. Shortness of breathe got better, but uvula edema retarded not much. The next day 40 mg of prednisolone was administered again. The patient's complaint recovered completely and was discharged at the third day of treatment.



Figure 1: Uvular edema and erythema of the oropharynx and nasal mucosa

Discussion

Ecballium elaterium is a plant that grows in the Mediterranean countries. It belongs to the Cucurbitaceae family. The juice of the fruit of *Ecballium elaterium* has been known as an anti-inflammatory, cathartic, analgesic agent and it has been used for treatment constipation, pulmonary edema, ascites and especially sinusitis in the Mediterranean region [3].

The most known active substance of *Ecballium* is Elaterin. Elaterin is in high concentrations increases capillary permeability and it can causes severe edema of the nasal and pharyngeal mucosa and even obstruct the respiratory tract [4,5]. Another component of *Ecballium* is cucurbitacine B which has an anti-inflammatory principle [1].

Kloutsos et al. [6] have reported that 42 exposures to *elaterium* and 93% of them had a previous history of allergic reaction. Eken et al. [7] has reported a case with nasal mucosa necrosis caused by direct toxic effect of *E. elaterium*. It is unknown whether the cause of uvula edema of *Ecballium elaterium* is the direct toxic effect or allergic reaction.

Extract of *Ecballium* must be use diluted form, which by almost 10-fold [8]. Its undiluted form, possibly with of IgE-mediated hypersensitive reaction and direct toxic effects, may damage the mucous membranes. [5,9] The use of undiluted juice or higher doses of *Ecballium elaterium* can cause severe adwers effects like uvular angioedema, vomiting, diarrhea, neurotoxicity, anuria, uremia and cardiorespiratory failiure [2]. One case who developed renal failure after nasal aspiration of the *Ecballium* has also been reported in literatüre [10].

Isolated uvular angioedema was first defined by Quincke in 1882 [11]. It is a rare presentation of angioedema. Uvular angioedema manifests as sore throat, hoarseness, and dyspnea. There are hereditary angioedema, trauma, inhalation exposure, medication reactions and infectious causes of the uvular edema. (3) It may lead to complete airway obstruction if treatment is delayed. Uvular edema should be managed as anaphylaxis or severe allergic reaction [12].

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