

Anaphylaxis to Taro

V Wiwanitkit

Citation

V Wiwanitkit. *Anaphylaxis to Taro*. The Internet Journal of Asthma, Allergy and Immunology. 2005 Volume 5 Number 1.

Abstract

Colocasia esculenta, also known as elephant ear or Taro is a tropical plant in Arum family [1]. It can be found in Tropical Asia. It poses a large underground potato-like stem (root?) and this is used as an ingredient for many local dishes in tropical countries. In the tropical Pacific Islands, Poi is a pasty starch made from the cooked, mashed (root?) of the plant [2]. In Southeast Asia, a curry dish called Kang Born is a common local dish that contains Taro root. There has never been any report of allergy to Taro. In this article, the author reports a case of anaphylaxis to Taro.

CASE REPORT

A 45-year-old female presented to a clinic with a 30-minute history of patchy, pruritic erythema of the face, chest, abdomen and extremities. Periorbital edema and wheezing was also present.

The patient's blood pressure was 100/60 mmHg. She related that her symptoms had begun suddenly after ingestion of a dish of Kang Born, which contains Taro root. She had never previously eaten this dish, and her symptoms developed suddenly after eating the Taro in the dish. The only ingredient in this dish that was not commonly ingested by the patient was the Taro root. No other food, drink, or condiment had been ingested at that meal aside from the Kang Born. The patient denied any history of contact urticaria or new household or personal care products. Additionally, the patient did not have a history of either food/drug allergies or urticaria/angioedema. Also, she did not take any NSAIDs or aspirin. The patient reported that the reaction occurred within 15 minutes of eating, and began with a sudden sensation of itching, following by periorbital edema and difficulty breathing. Then she was taken to the clinic.

In the clinic, the patient was administered intravenous dexamethasone, adrenaline and a single 50 mg dose of oral prednisolone, and referred to the emergency room. There, she was given intravenous dexamethasone. Symptomatic improvement was seen over the course of 1 day. The patient refused allergy testing using Taro extract.

DISCUSSION

A wide range of plants are grown for their edible tubers, but

only five species, including Taro, together account for almost 90 % of the total world production [3]. Due to its wide consumption, allergy to Taro is possibly of great public health concern, should it become more common or frequently documented. Taro contains two major types of storage protein: a trypsin inhibitor related to sporamin and a mannose-binding lectin [3]. Mannose-binding lectin has been studied in patients with asthma. Uguz et. al. found that mannose binding lectin contributes to the pathogenesis of asthma by contributing to airway inflammation or by increasing the risk of developing asthma [4].

In this report a case of possible Taro allergy is documented. Although any food can cause anaphylaxis, this is to our knowledge, the first reported case of anaphylaxis related to Taro ingestion. Although confirmatory allergy testing was not performed, it is unlikely that the other ingredients of the dish provoked the reaction, as they are common constituents in local cuisine, and thus probably would have been encountered previously.

Taro is believed to be a safe food and has not been previously been suspected as an allergenic food. Poi, a pasty starch made from the cooked, mashed (root?) of the taro plant, shows promise for use in infants with allergies or failure-to-thrive [5]. This case report raises the possibility that consumption of Taro can cause a systemic allergic reaction, which may be significant due to its wide consumption.

CORRESPONDENCE TO

Viroj Wiwanitkit, M.D. Department of Laboratory Medicine,
Faculty of Medicine, Chulalongkorn University, Bangkok

Thailand 10330 Email: wviroj@yahoo.com

References

1. Kreike CM, Van Eck HJ, Lebot V. Genetic diversity of taro, *Colocasia esculenta* (L.) Schott, in Southeast Asia and the Pacific. *Theor Appl Genet.* 2004;109:761-8.
2. Brown AC, Valiere A. The medicinal uses of poi. *Nutr*

- Clin Care.* 2004;7:69-74.
3. Shewry PR. Tuber storage proteins. *Ann Bot (Lond).* 2003; 91:755-69.
4. Uguz A, Berber Z, Coskun M, Halide Akbas S, Yegin O. Mannose-binding lectin levels in children with asthma. *Pediatr Allergy Immunol.* 2005;16:231-5.
5. Brown AC, Valiere A. The medicinal uses of poi. *Nutr Clin Care.* 2004;7:69-74.

Author Information

Viroj Wiwanitkit, M.D.

Department of Laboratory Medicine, Health Unit; Faculty of Medicine, Chulalongkorn University