

A Rare Case of Allergy to Guava Fruit in a 60 Years Old Negro Man from Zambia, Friend or Foe? A Case Report

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Abstract: Allergy to guava fruit ingestion is a rare occurrence. We report on a case in a 60 years old Negro man in Zambia. We conclude that guava fruit allergy should be considered a differential diagnosis of causes of flu-like illness in the fruit season in tropical regions. In addition, the guava fruit might have some beneficial effect on the prostate in older men.

Keywords: Guava, fruit, allergy, prostate, hyperplasia.

1. INTRODUCTION

Allergy to food is a major health problem affecting up to 6% of young children and up to 3-4% adults globally [1]. Food allergy may be defined as an immunoglobulin E-mediated immune response to food proteins. One of the foods some people develop allergy to is the guava fruit. Guava (*Psidiumguajava* Linn) is a tropical fruit [2]. It has high nutrient density and functional importance. It contains Vitamin A and C that are important to skin integrity. Other chemicals contained include Guaijaverin, Quercetin, Gallic acid, Catechin, and Epicatechin[3]. These chemicals have other functional effects. In addition there are other chemicals such as Naringenin and specific lecithins[4,5]. All these chemicals play important roles in preventing disease in the body. An allergy occurs when there is a sudden reaction of the body immune system for external substances entering the body, and in this case eating a guava fruit. Occurrence of Guava fruit allergy is rare. The allergic reactions, however are associated with Oral Allergy Syndrome (ORS) also known as Pollen food allergy [6,7]. This means that if one has a pollen allergy, then there is a high risk of that person being allergic to guava fruit [8, 9]. We present a case of guava fruit allergy in this case report.

2. THE CASE REPORT

A 60 years old Negro man presented to our clinic on 13th January 2023, which is in the

middle of the rainy season in Zambia, with complaints of throat irritation, sneezing, productive cough, slight difficulty in breathing, and diarrhea. These symptoms were for 4 days. There was no history of fever, headache, skin rash, vomiting, and abdominal pains.

2.1. Chronology of Symptoms

The patient gave a history of consuming one whole guava fruit straight from a tree without washing it. Almost immediately after finishing eating the fruit he felt an unpleasant irritation in the throat. This irritation wasn't relieved by drinking any type of drink or ingesting any food. The irritation continued on second day of the illness. Later in the day the irritation turned into a flu-like illness. On the third day of the illness the patient developed sneezing, slight difficulty in breathing, productive cough, and diarrhea. The patient also observed that the frequency of nocturnal urination had reduced from average of four times per night to once per night since onset of the illness. On the fourth day of the illness the patient presented himself to our clinic.

2.2. Physical Examination

The patient was fully conscious, oriented in time, place, and person. All vital signs were within normal range. Because of the patient's details linking his illness to consumption of unwashed guava fruit, a provisional diagnosis of Guava fruit allergy was made. No

laboratory investigations and skin test were done. The patient was put on the following medication orally: clindamycin at 150 mg four times per day for 5 days, chlorpheniramine 2 mg three times per day for 3 days, paracetamol at 500 mg three times per day for 3 days, and phenylephrine hydrochloride at 2 mg three times per day for 3 days.

2.3. Outcome of Treatment

The patient made a full recovery at the end of the treatment course.

3. DISCUSSION

Guava fruit allergy is not a common occurrence. Factors precipitating an allergic reaction to guava fruit vary from person to person. These factors include dose, exposure time, genetic factors, individual immune system factors, age, and health status of the individual. In our patient age and immune status might be the factors that precipitated the allergic reaction to ingesting the guava fruit. Family history may also be a risk factor of guava fruit allergy [10]. In addition consuming guava fruit without washing it may also be a risk factor when the surface of the fruit contains pollen grains and dust. Symptoms of guava fruit allergy include: cough, sneezing, dyspnea, oedema of the throat, tongue, lips, face, and neck, tingling or itching in the throat, abdominal pain, diarrhea, vomiting, and restlessness [11]. Severity of these allergic reactions depends on factors such as: time of exposure, amount of fruit consumed, individual sensitivity to guava fruit, individual health, and age. Treatment of guava allergy includes use of immunotherapy, steroids, epinephrine drugs and antihistamines [12].

Guava fruit allergy should be considered a differential diagnosis of flu-like illness in tropical regions during the fruit season. Guava fruit allergy could partly be prevented by thorough washing of fruit before consumption. Further, the whole skin cover of the fruit could just be peeled off and discarded and only the inside of the fruit consumed.

Of interest in our patient was the apparent reduction in the frequency of nocturnal urination during the allergy period. For a male individual at 60 years of age, there is a high chance of Benign Prostate Hyperplasia (BPH) which could explain the high frequency of nocturnal urination prior to the guava allergy. It

seems therefore that allergy to guava fruit, apparently, led to a marked reduction in the size of the prostate gland leading to reduction in the symptoms of obstruction to flow of urine from the urinary bladder. Allergy to guava fruit might have developed to the skin of the fruit while chemicals inside the fruit had beneficial effect on the prostate size. There is therefore need for more research on the beneficial effects of chemicals in the guava fruit for older men. The guava fruit might turn out to be either a friend or foe in older men.

4. CONCLUSION

Even though guava fruit allergy is rare it does occur. There is need therefore to minimize the risk of occurrence by way of thorough washing the fruit, just like any other fruit, before consumption. There seems to be beneficial effects of consuming guava fruit on the prostate size in older men.

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