World Journal of Pharmaceutical Sciences
ISSN (Print): 2321-3310; ISSN (Online): 2321-3086
Available online at: http://www.wjpsonline.org/
Review Article

Allergic foods to be avoided in eczematic patients -A Siddha perspective

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Received: 11-04-2018 / Revised Accepted: 26-04-2018 / Published: 01-05-2018

ABSTRACT

Food allergy is an immune system reaction that occurs soon after eating a certain food. Even a small amount of allergy causing food can trigger signs and symptoms such as digestive problem, skin problems, respiratory disturbances and sometimes anaphylactic reactions. Some of the foods which cause allergic reaction include egg, peanut, milk, fish and nuts. Food allergy affects an estimated 6 to 8 % of children under age 3 and up to 3% of adults. The only management of this food allergy is to avoid the particular allergen producing food. Siddha, the traditional and Indian system of Medicine had listed a group of foods viz. *Sorghum vulgare* (great millet), *Pennisetum glaucum* (pearl millet), *Paspalum scrobiculatum* (kodo millet), *Musa paradisiaca* (plantain tree), *Momlordicacharantia* (bitter gourd) and catfish to be avoided by the eczematic patients. Restricting the foods mentioned will help to solve either the cause of disease or will not aggravate the disease. Though it has been mentioned in Siddha literatures it is our responsibility to explore the scientific rationale behind it. This paper aims to scientifically validate the importance of the diet restriction mentioned by the Siddhars.

Keywords: Food allergy, Siddha, Karappan, *Kambu, Sollam, Varagu, Valaikkai,* Eczema

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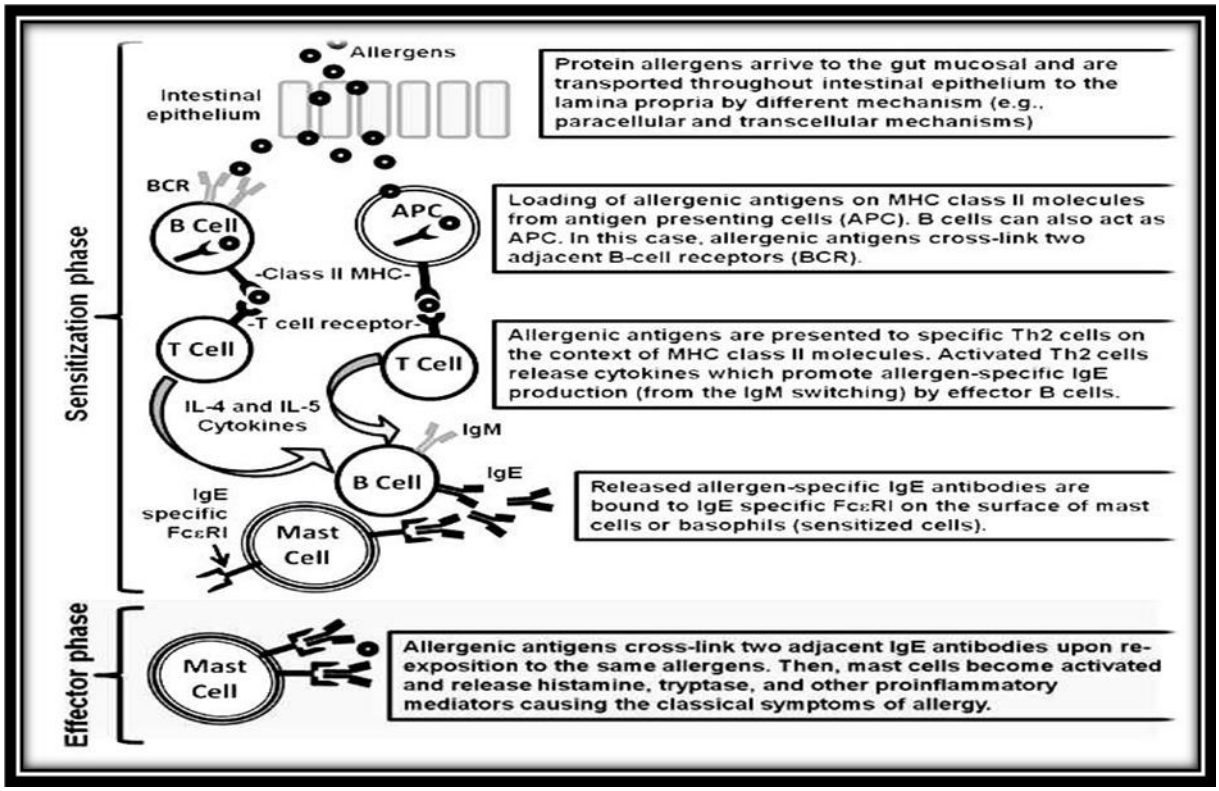
How to Cite this Article: R. Meera and K. Sivaranjani. Allergic foods to be avoided in eczematic patients -A Siddha perspective. World J Pharm Sci 2018; 6(5): 70-73.

INTRODUCTION

Eating a balanced diet is vital for good health and well being. Food provides our body with energy, protein, essential fats, vitamins and minerals to live, grow and function properly. We need a wide variety of different foods to provide the right amount of nutrients for good health. Food plays a vital role in maintaining health as well as during ailments. The diet, which disturbs the balance among the body elements is called unbalanced diet. Unbalanced diet causes diseases on continuous indulgence. [1]

A food allergy is an adverse reaction to food involving an immunological mechanism. In 2003, the World Allergy Organization proposed a revised nomenclature for allergic and allergic-like reactions. According to this, adverse non-toxic reactions to food should be termed food hypersensitivity. When an immunological mechanism has been demonstrated appropriate term is food allergy. Food allergy can further be characterized by whether the immunological mechanism involves IgE antibodies or not. Other reactions to food, previously referred to as "food tolerance" should be called non-allergic food hypersensitivity.[2]

MECHANISM OF FOOD ALLERGY:



According to principles of Siddha, diet plays a major role in our (*naallu ozhukkam)* everyday activity. Diet acts as the source of vital nutrients to gain energy and it builds our body. Improper diet habits cause disturbances in equilibrium of the three humours (uyir thathukkal) and physical constituents (udal thathukkal) in turn causing several diseases.[3] One of our siddha literature had quoted a verse which mentions foods that causes eczema

" *Perugum cholam irungum perumkambu*
Varagu karudan vazhaiyin kayodu
Uraikol paagar kelitrumeen undydil
Viriva thaikarrapanum migunthatahe." [4,5]

The above verse is mentioned in the textbook of Kuzhanthai Maruthuvam and Sirappu Maruthuvam. The allergic foods mentioned are *Sorghum vulgare* (great millet), *Pennisetumglaucum* (pearl millet), *Paspalum scrobiculatum* (kodo millet), *Musa paradisica* (plantain), *Momordica charantia* (bitter gourd) and catfish.

In Siddha system of medicine, *Karappan noi* can be corelated to Eczema. There are seven types of Karappan mentioned in Yugi muni's classification based on the humors affected. But in clinical practice mainly two types *Vatha Karappan*(dry type) and *Varal Karappan*(wet type) are seen. In dry type, itching is seen followed by scaling, hyperpigmentation, hyper keratinisation. In wet

type itching followed with vesicles , oozing , then hyperpigmentation and only in later stage hyperkeratinisation is seen. According to Yugi Muni *Karappan*(eczema) the primary humor involved is pitham. The aggravated *Pitham* initiates the disease process by accumulating in the *rasa dhatu, raktha thathu* and finally into the *mamisa thathu* especially the skin in the form of heat, inflammation or redness. The aggravated *Pitham*inturn alters the *Vatha* humor.The foods restrictions mentioned for eczema is rich in protein and hence aggravates the Pitha dhosha. The aim of this review is to scientifically validate the allergens mentioned in the Siddha literatures by correlating them with modern concepts / pharmacological studies.

CHEMICAL CONSTITUENTS AND STUDIES ON ALLERGIC FOODS:

Sorghum vulgare **(Great Millet/Corn):** Corn contains nutrition of carbohydrate-143g, fat-6.3g, protein-21.7 g and calorie- 33% in amounts per 1 cup (192g). In the 2006 study nine participants reacted to corn in a double-blind placebo-controlled food challenge (DBPCFC) and reported the following symptoms: erythema (reddening, flushing), pruritis (itching), urticaria (hives), itching and blistering in the oral cavity, throat tightening, flare of atopic dermatitis (eczema) and abdominal pain.[6]

Pennisetum typhoideum **(Pearl Millet/ Bajra):** The nutritional content of pearl millet is water-17.3g, ash-6.5g, calories-756, carbohydrates-146g, fat-8.4 g and protein-22 g per 200 g of weight. Bajra allergies vary among individuals. There are people who have very mild allergic reaction that symptoms aren't noticeable such as simple skin itchiness that would subside after few minutes. Below are typical food allergy symptoms: sneezing, cramps, vomiting, skin rashes, stomach pain. However, there are grave instances of bajra allergy which includes difficulty in breathing and queasiness. There are allergic people who even get high fever. The patient may experience severe nausea and in that case, immediate medical assistance is necessary. Severe allergic reactions may also lead to negative reactions inside the body that may lead to the patient's death.[7]

Paspalum scrobiculatum **(Kodo Millet):** One cup of cooked kodo millet contains calories-626, total carbohydrates-80 g, total fat- 3g, dietary fiber-7 g, cholesterol-24 mg, sugars-26 g, sodium-577 mg, potassium-500 mg and protein-19 g. Allergic reactions have been described after ingestion of millet and after inhalation of bird seed dust by people who keep caged birds. A study evaluated 7 individuals who all kept caged birds and had experienced allergic reactions after ingestion of millet containing food, with adverse reactions ranging from oral allergy syndrome to anaphylaxis. Symptoms include conjunctivitis, collapses, dyspnoea, hypotension, nausea, oral allergy syndrome, rhinitis and urticaria.[8]

Musa paradisica **(Plantain)**: The nutrition present in plantain are water-65.280 g, energy-122 kcal, protein-1.3 g, total lipid- 0.370 g, ash-1.170 g, carbohydrate-31.890 g, dietary fiber-2.300 g and total sugars-15 g in an average amount in 100 g. At times, the immune system considers these from plantains as foreign substances. The blood proteins in form of antibodies fight against the plantain proteins and cause allergic reaction to the body. Histamines produced as a result of the fight between antibodies and plantain proteins cause allergic reaction symptoms anywhere in different parts of the body. There are various symptoms occur due to plantain allergy: nasal congestion, sinusitis, headache, hives, eczema, skin itching & inflammation, skin rashes, breathing problem, wheezing & asthmatic symptoms, watery eyes and throat swelling.[9]

Momordica charantia **(Bitter melon)**: The nutritional content of bitter melon is calories-34, total fat-0.2g, cholesterol-0, sodium-13 g, potassium-602 mg, total carbohydrate-7 g, dietary fiber-1.9 g, sugar-1 g, protein-3.6 g in amount per 100g. People with glucose 6 phosphate dehydrogenase deficiency might develop "favism" after eating bitter melon seeds. Favism is a condition named after the fava bean , which is thought to cause anemia, headache, fever, stomach pain and coma in certain people. A chemical found in bitter melon seeds is related to chemicals in fava beans. [10]

CATFISH: Catfish contains nutrition per serving size-3 oz (85g) of total fat-9%, saturated fat-8%, cholesterol-18%, sodium-4%, total carbohydrate-0, fiber-0, protein-16 g. Sicherer found that both fish and shellfish allergies were commonly found among adults ages 40 to 60. Also: 6% of households had atleast one person with a sea food allergy. 3% of adults had any seafood allergies compared with 0.6% of children. 4% of women had any seafood allergies compared with 2% of men. 40% of fish allergies and 60% of shellfish allergies began in adulthood. Hives, swelling, difficulty breathing and tightened throat were the most common symptoms. Salmon, tuna, catfish and cod were the fish that most commonly caused reactions. Shrimp was the most common type of shellfish that caused reactions.[11]

CONCLUSION

Here I conclude that all the above foods are protein rich. In spite of their higher nutritious value, the particular proteins in those foods act as an allergen and produce various allergic reactions corresponding to eczema. Once an individual got hypersensitized to a particular food, the only preventive measure is avoidance of that particular allergic food to protect them from hypersensitivity or anaphylactic reactions.

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