

# Atopic Dermatitis Related to Anisakis Simplex Allergy

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In 2013, Japanese traditional cuisine (Washoku) is an UNESCO Intangible Cultural Heritage of Humanity designation. One character of Japanese foods is using raw fish in cooking. With washoku becoming more popular around the world, the number of people consuming raw fish is increasing. *Anisakis simplex* (AS) parasite in sea creature and AS allergy is one potential causing urticaria, angioedema and itching. A traditional Japanese proverb says, "Eating blue or shiny fish sometimes may cause itching". This meaning may be related with *Anisakis simplex* (AS) allergy. The custom of consuming raw fish is common in Japan and Spain, since some gastric anisakiasis and other anisakis-related diseases were reported [1-5] in these countries. Since the 1980s, many cases of allergic reactions by anisakis and the results of specific IgE to anisakis have been reported [6-9].

Analyzing our data of the dermatoses and specific IgE score to AS were AD and urticaria were 17.3% and 12.4%. From the dermatoses with itching, urticaria or atopic dermatitis, it was interesting that there were a larger number of AD patients than urticaria patients with a positive score to AS [10]. AS allergy should be considered as developing disease in some cases of AD. Determining IgE score to AS is useful for treatment of AD than urticaria, especially in older male patients with these diseases. One reason for the highest ratio of positive IgE score to AS in AD patients may have been cross-reactivity to other allergens, dust mites [11,12] and chironomids [13]. Recently, 13 AS allergens have been established, *Anisakis 3*, a notable allergen, is a tropomyosin and could be related to cross-reactivity. The tropomyosins of invertebrate animals in particular are recognized as important and major allergens [14]. Because tropomyosins are similar to the molecules in dust-mites [15] and believed to possess cross-reactivity with anisakis and mites [11,16] some AD patients have cross-reactivity between AS and mites.

In the case of treatment for AD patients, determination of specific IgE against AS is helpful. *Anisakis simplex* is an important allergen, and may be a hidden allergen in allergic food reactions.

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## Curriculum Vitae



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### Personal Data (Biography)

Dr Keiji Sugiura is a director of department of Environmental Dermatology and Allergology, Daiichi Clinic in Japan. His main research area is Langerhans cell in cutaneous disease. Specialty is skin surgery and cutaneous allergy. Now he is an editor and reviewer of some international medical journal. His currently interesting is allergy peculiar to Japanese foods (ex. soy sauce, raw fish) and occupational allergy.

### Scientific Titles and Degrees

Receiving or nomination date: MD & PhD (2001-10-03)

Title: "An Experimental Study on Atopic Dermatitis, Using a Model Mouse"

### Specialties

Dermatology, Skin surgery, Allergology

Scientific Prizes: The Japanese Society of Contact Dermatitis

Date of Recognition: 2000-12-02, National

Activity: Scientific Achievement

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