

patient, positivity to five out of six cephalosporins tested with different side-chains was observed, suggesting the presence of a common antigenic determinant. Further studies on the pathogenesis of allergy to cephalosporins are required.

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Predictors of *Anisakis simplex* symptoms

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Key words: *Anisakis simplex*; children; prevalence; sensitization.

● THE prevalence of sensitization to *Anisakis simplex* (AS) (nematode belonging to the Anisakidae family, found as a parasite in fish, crustaceans, cephalopods, and marine mammals) has been investigated in adult patients, and ranges from 6% to 56% according to various studies (1–4). There are no studies on the prevalence of sensitization to AS in a pediatric population.

The aim of this study was to determine the prevalence of, and the risk factors associated with, AS sensitization in a total of 805 (324 female, 481 male) consecutive children (mean age [SD] 7.9 [3.8] years, range 0.52–17.61) referred to our center for evaluation of allergic symptoms.

Parents and/or patients answered a questionnaire supervised by a pediatric allergist that revealed any presence of

A positive SPT was not associated with clinical symptoms.

IgE-mediated diseases such as rhinoconjunctivitis, asthma, atopic dermatitis, urticaria, and clinical manifestations (urticaria, angioedema, anaphylactic reactions, or other symptoms) after the ingestion of fish, cephalopods, and crustaceans. Every child underwent skin prick tests (SPT) with commercial extracts of AS (supplied by International Pharmaceutical Immunology, SA, Madrid, Spain: protein concentration was 1 mg/ml), 13 aeroallergens (*Dermatophagoides pteronyssinus*, *D. farinae*, horse, cat, and dog dander, *Alternaria tenuis*, *Cladosporium herbarum*, grass pollen, *Parietaria officinalis*, *Artemisia vulgaris*, olive pollen, cypress pollen, and plane-tree pollen) (Bayer, Milan, Italy), six food allergens (milk, egg white, tomato, peanut, wheat, and soybean) (Bayer, Milan, Italy), and six seafood allergens (dogfish, sole, salmon, shrimp, tuna, and codfish) (Laboratorio Lofarma, Milan, Italy). SPT results were assessed as positive (wheal response $\geq 2+$) according to the recommendations of the European Academy of Allergology and Clinical Immunology (5).

The chi-square test, Fisher's exact test, and Student's *t*-tests were used for statistical analysis, with $P < 0.05$ considered to be significant. Multivariate analysis was performed by logistic regression. Variables

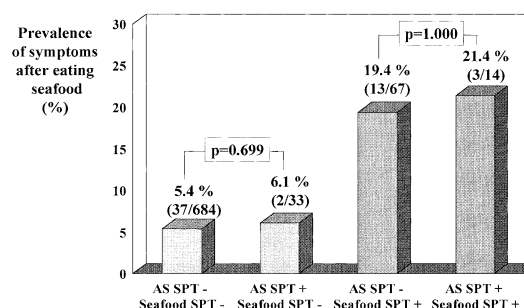


Figure 1. Prevalence of symptoms after eating seafood by skin test reactivity to *Anisakis simplex* and seafood allergens (absolute numbers in parentheses). Notes: AS SPT- =negative skin prick test to AS; AS SPT+ =positive skin prick test to AS; seafood SPT- =negative skin prick tests to one or more of six seafood allergens; seafood SPT+ =positive skin prick tests to one or more of six seafood allergens. *P* values are calculated by two-sided Fisher's exact test. Seafood SPT- vs seafood SPT+: $P < 0.001$ among AS SPT-negative subjects, $P = 0.148$ among AS SPT-positive subjects.

were included in the multivariate models when they were significant in the univariate analysis. All data were elaborated by a commercially available statistical computer software package (SPSS, Chicago, IL, USA).

Forty-nine of 805 children (6.1%) had positive *AS* SPT responses. *AS* sensitization was not significantly associated with the presence of symptoms after the ingestion of fish, cephalopods, and crustaceans. Among both seafood SPT-positive and seafood SPT-negative patients, *AS* SPT-positive children were not more likely to have clinical symptoms after eating seafood than *AS* SPT-negative children (Fig. 1).

Eighty-one of 805 children (10.1%) had positive SPT response to one or more seafood allergens.

In the univariate analysis, male sex, SPT reactivity to aeroallergens, SPT reactivity to food allergens, and SPT reactivity to seafood allergens were significantly associated with *AS* sensitization, while older age and atopy (defined as the presence of one or more positive SPTs to aeroallergens and/or food allergens and/or seafood allergens) showed a marginally significant association with *AS* sensitization.

Multivariate analysis showed that only positive SPT responses to house-dust mites ($P=0.050$), *Alternaria tenuis* ($P=0.029$), codfish ($P=0.003$), and soybean ($P<0.001$) were significantly and independently associated with *AS* sensitization.

In conclusion, we found that the prevalence of *AS* sensitization was 6.1% among children seen in a university hospital allergy clinic. *AS* sensitization was not associated with clinical symptoms after the ingestion of seafood. After adjusting for the other covariates, *AS* sensitization was significantly and independently associated with SPT reactivity to house-dust mites, *A. tenuis*, codfish, and soybean. Further

studies are needed to evaluate the allergenic importance of *AS* in children.

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Sensitization to latex and burns

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Key words: allergy; burns; IgE; latex.

● THERE are two reasons why the prevalence rates of sensitization and allergy to latex might be increased in children with severe burns: 1) it has been reported that immunoglobulin E (IgE) levels are raised after burns (1–3); 2) nursing involving latex gloves in contact with extended areas of damaged skin may predispose to sensitization to latex.

Children with severe burns are not at special risk of latex allergy.

Therefore, this study aimed to investigate the time course of IgE levels in children with severe burns.

Fifteen consecutive children (four girls, 11 boys) visiting the intensive care unit for severe burns were included in the study. Their ages ranged from 8 to 180 months (median age 72 months). All infants suffered from severe accidental burns. Within 48 h of admission, a blood sample was drawn and frozen at -20°C until analyzed. A second blood sample was taken after at least 1 month, since IgE production takes around 4 weeks.

Concentrations of total IgE and latex-specific IgE antibody titers in serum were determined by FEIA with the Pharmacia CAP-System (PCS) (Kabi-Pharmacia, Uppsala, Sweden) (4). The detection limit was 0.35 kU/l IgE; children were regarded as sensitized if specific IgE was above the detection limit. To establish atopic status, inhalant (SX1) and nutritional (fx5) allergens were investigated by screening tests using the same automated IgE assay (5).

Burned areas ranged from 10% to 70% of body surface area (median 30%). Total