

negative results and just one false positive. Even if the results of a small group of 26 patients may not be extrapolated to the whole rhinitis population, they make it possible to validate a strategy to diagnose asthma based on a questionnaire and not based on pulmonary function tests in this patient population. This is of importance for a couple of reasons: firstly asthma guidelines (1–3) only list the means to diagnose asthma and do not categorize them; secondly, rhinitis patients frequently have asthma-related symptoms such as cough, chest tightness and nocturnal awakenings and may not all be asthmatics as in the present study. The intention of this study was to show that a self-questionnaire could make it possible to determine which patients might benefit from pulmonary function tests. These tests are however mandatory to assess asthma severity and set the level of treatment.

Very often asthma is underdiagnosed (5) and rhinitis patients present asthma-related symptoms (6), thus providing a window of diagnosis opportunity. Moreover, clinical history is accessible to all doctors and can become facilitated with the use of a self-administered questionnaire. Therefore, the place of pulmonary function tests in the diagnosis of asthma in allergic rhinitic patients has not been confirmed. They may only be needed for a patient population previously selected by a self-administered asthma questionnaire. Addressing this question requires a much larger study.

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Allergy due to *Ensis macha*

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Key words: *Ensis macha*; cross-reactivity; tropomyosin.

Ensis macha is a mollusc that belongs to class Bivalvia, family Solenidae. The existence of cross-reactivity among molluscs and arthropod groups (such as

mites, mosquitoes, and crustaceans), is well established (1).

Tropomyosin, a kind of muscle protein of about 37 kDa, which sensitizes predisposed individuals via food or house dust, may be the panallergen responsible for this cross-reactivity (2–5).

We describe an uncommon case of a 55-year-old female who presented three episodes with generalized pruritus and facial angioedema in the last year. These symptoms appeared after the intake of razor clam *Ensis macha*, with more intensivity each time, and the reaction stopped after treatment (epinephrine, corticosteroids and antihistamines).

Skin prick test (SPT) with shellfish extracts (clam, squid, prawn, mussel, oyster and lobster), *Anisakis simplex*, house-dust mite (*D. pteronyssinus*, *D. farinae*) and cockroach (*Blattella germanica* and *Periplaneta americana*) were negative. Prick by prick with the implicated *Ensis macha* were positive and control test performed in six patients were negative. The diameter of the wheal induced by razor clam was 7 × 6 mm.

Total serum IgE was 14 kU/L. Specific IgE antibodies levels against *Ensis macha* were 4.2 kU/L and were below the detection limit of the assay (<0.35 kU/L) against clam, prawn, mussel, stroke, oyster, *Anisakis simplex*, roundworms and lobster.

Protein extracts of razor clam (*Ensis macha*), clam (*Meretrix meretrix*), snail

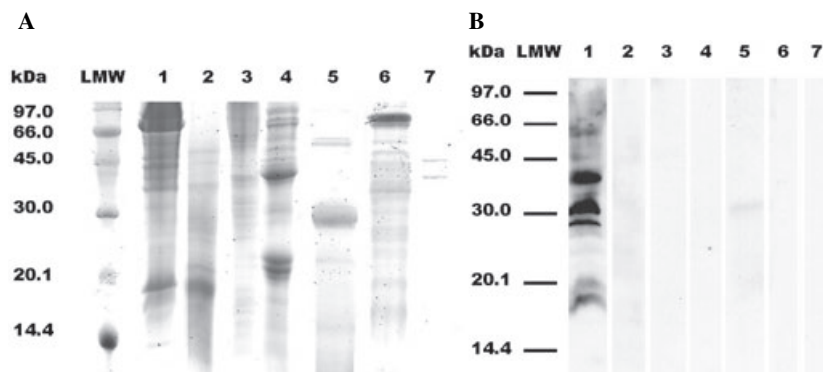


Figure 1. (A) Protein separation by 12.5% sodium dodecyl sulphate-polyacrylamide gel electrophoresis (reducing conditions). LMW, Molecular weight standard. Lane 1, *Ensis macha*; lane 2, *Meretrix meretrix*; lane 3, *Helix aspersa*; lane 4, *Paniscus aztecus*; lane 5, *D. Pteronyssinus*; lane 6, *Blattella germanica* and lane 7, tropomyosin. Coomassie blue staining of the gel. (B) IgE-Inmunoblotting. Lane 1, *Ensis macha*; lane 2, *Meretrix meretrix*; lane 3, *Helix aspersa*; lane 4, *Paniscus aztecus*; lane 5, *D. Pteronyssinus*; lane 6, *Blattella germanica*; and lane 7, tropomyosin.

A case report of an allergy to *Ensis macha*.

(*Helix aspersa*), shrimp (*Penaeus aztecus*), house dust mite (*D. pteronyssinus*), cockroach (*Blattella germanica*) and tropomyosin were separated by sodium dodecyl sulphate-polyacrylamide gel electrophoresis (SDS-PAGE). The binding of IgE antibody to allergens was analyzed by Western blot using serum from the allergic patient and anti-human IgE peroxidase conjugate (Dako, Carpinteria, CA, USA).

Protein separation by SDS PAGE showed several bands between 30 and 45 kDa in all extracts and IgE-immunoblotting experiments performed with serum from this patient revealed three major bands of 28, 31 and 40 kDa in the *Ensis macha* extract (Figure 1B).

To our knowledge, this is the first description of allergy to *Ensis macha*. It seems to be a primary sensitization since no cross-reactivity was detected with tropomyosin, house-dust mite, cockroach, mollusc or crustaceans.

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Plasma concentration of TARC/CCL17 is elevated in nonepisodic angioedema associated with eosinophilia

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Key words: chemokine; eosinophilia; nonepisodic angioedema associated with eosinophilia; thymus-and activation-regulated chemokine.

Episodic angioedema associated with eosinophilia (EAE) is characterized by recurrent episodes of angioedema, urticaria, fever, weight gain, leukocytosis, eosinophilia, and elevated

serum IgM, and usually follows a benign clinical course without internal organ involvement (1). Nonepisodic angioedema associated with eosinophilia (NEAE) was reported as a clinical entity similar to EAE and characterized by clinical features consistent with EAE except for the occurrence of only a single episode of angioedema that was responsive to low-dose corticosteroids or antihistamines (2). The pathogenesis of angioedema with eosinophilia has not yet been clarified. Immunological studies have suggested that activated T helper type 2 (Th2) cell-derived cytokines, mainly IL-5, are involved in the migration and activation of eosinophils in the skin (3). Thus, EAE and NEAE appear to be diseases in which the actions of peripheral Th2 cells predominate over T helper type 1 (Th1) cells. To assess the extent of Th2 predominance in NEAE, we measured the plasma concentrations of thymus-and activation-regulated chemokine (TARC/CCL17), a high-affinity ligand for CCR4, a chemokine receptor predominantly expressed by Th2 cells and compared the results to those from other diseases (4).

Plasma samples were obtained from nonatopic women with NEAE ($n = 4$, median age 25.5 years), and from patients with other diseases: eosinophilic

fasciitis (EF) ($n = 4$, median age 34.3 years); systemic lupus erythematosus (SLE) ($n = 38$, median age 29.6 years, range 20–41); systemic sclerosis (SSc) ($n = 12$, median age 38.5 years); and rheumatoid arthritis (RA) ($n = 20$, median age 48 years, range 22–71). Plasma samples were also collected from five healthy controls (HC) (median age 28 years, range 21–42).

Informed consent was obtained from all study participants. Plasma concentrations of TARC/CCL17 were determined by ELISA, using the Quantikine human TARC Immunoassay (R&D Systems, Minneapolis, MN, USA).

Results showed that TARC/CCL17 plasma levels were dramatically higher in NEAE patients than in patients with EF, SSc, SLE, or RA, or in healthy controls [NEAE: 3512.50 ± 1340 pg/ml (mean $\pm$ SD), EF: 57.50 ± 7.59 pg/ml, SSc: 71.91 ± 47.78 pg/ml, SLE: 116.18 ± 127.42 pg/ml, RA: 49.22 ± 18.46 pg/ml, HC: 51.88 ± 43.29 pg/ml; by Mann–Whitney U-test, Figure 1A].

Case A was a 22-year-old woman who presented with a 2-week history of subcutaneous swelling on her lower legs and feet associated with weight gain of up to 3 kg. The use of any drugs, including L-tryptophan, was denied. She was otherwise healthy and there was no evidence of cardiovascular or nervous system involvement. Laboratory findings showed a white blood count of $13.7 \times 10^9/l$ with 38.5% eosinophils (absolute count, $5.27 \times 10^9/l$), 47.5% neutrophils, 13.0% lymphocytes, and 1.0% monocytes, and also normal hemoglobin and platelet counts. Liver function was within normal limits, except for an increased lactate dehydrogenase (LDH) level (619 IU/L; $n < 438$). Antinuclear antibody was negative, and serum levels of IgG, IgM, IgA, and IgE were normal. Serum level of eosinophilic cationic protein (ECP) was 57.0 mg/L, while IL-5 was < 7.8 pg/ml. Based on these findings, a diagnosis of NEAE was made. Her clinical and laboratory findings improved without therapy. As disease activity declined, her plasma TARC/CCL17 levels decreased, which correlated with the fall in eosinophil counts (Figure 1B).