

Contact urticaria from chironomids

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Aquarists often feed larvae of *Chironomus* species, a non-biting midge (order: Diptera; family: Chironomidae) (1), to their fish. Hemoglobins (Chi t I) of these larvae are well-characterized allergens, causing IgE-mediated diseases in humans (2), predominantly rhinitis, conjunctivitis, asthma and urticaria (2, 3).

Case Report

A 35-year-old man, with a previous history of propifenazone allergy, worked in a chemist's, but as a hobby, kept fish in an aquarium at home. He fed these fish with dried (*Chironomus plumosus*) and frozen (*Chironomus* spp.) red midge larvae. He gave a 6-year history of contact urticaria 15 min after handling such fish food: conjunctivitis and eyelid edema could also occur. Urticaria resolved spontaneously in 1 to 2 h. He now handled frozen *Chironomus* spp. with latex gloves, without any problems.

Specific IgE for *Chironomus thummi* (CAP, Pharmacia) was strongly positive at 56.1 kU/l (class 5); total IgE was normal (86.5 kU/l). He showed a positive prick test to *Olea* pollen (without clinical relevance). *Chironomus* extract was obtained from both frozen and dried red midge larvae. 2 g of each were homogenized with 20 ml saline; after filtration and centrifugation, the fluid was passed through a Millipore filter, at 1/10 w/v concentration. There were strong positive reactions to prick tests with both frozen and dried *Chironomus* extracts: dried extract wheal 22×10 mm, frozen extract 25×19 mm (histamine 10 mg/ml 7×7 mm, negative saline control). No such positive reactions were obtained in 10

healthy and 10 atopic subjects. A rub test with both kinds of fish food showed local urticaria after 15 min.

Discussion

In Europe, allergy to chironomids has been reported only from handling their larvae as fish food (4). Prick test, serum-specific IgE, and provocation tests have all proved diagnostic (1, 2, 4). We report the case of an aquarist with contact urticaria on exposure to fish food containing red midge larvae (*Chironomus*), who could also get conjunctivitis from either airborne exposure or finger contamination. To our knowledge, this is the 2nd case of *Chironomus* allergy to be reported from Spain (5).

References

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