

Short Communication

Airborne contact dermatitis from *Tyrophagus putrescentiae*

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Airborne contact dermatitis is an acute or chronic dermatosis of the exposed parts of the body, caused by a substance that is first released into the air and then settles on exposed skin (1). Its causes include vegetable and wood allergens, plastics, rubber and glues, metals, pharmaceutical chemicals, insecticides, animal feed additives, and solvents, among others (2). Exposure to mites can induce worsening of atopic dermatitis in mite-allergic patients (3).

Case Report

A 42-year-old rural worker complained of itchy erythematous papules over her face and forearms, which had repeatedly appeared in spring and winter for 10 years. She had noted that, on the last 2 occasions, symptoms had been related to harvesting.

Prick tests, performed with a series of commercial inhalant allergens, including grass, plant and tree pollens, animal dander, moulds and storage mites, were positive to *Tyrophagus putrescentiae*. Total serum IgE was 183 IU/ml. Serum-specific IgE to *Tyrophagus putrescentiae* (CAP System, Pharmacia, Sweden) was positive (1.87 IU/ml). Patch tests were performed according to the ICDRG, using Leukotest (Beiersdorf AG, Germany). European standard series and sesquiterpene lactones were negative at 2, 3, and 4 days. Patch tests with *Tyrophagus putrescentiae* (lyophilized powder and diluted in saline 10 BU/ml) showed a positive response of erythema and papules at 2 and 3 days. 12 controls were negative to the same preparations.

Discussion

Tyrophagus putrescentiae is a mite that commonly grows on pastures, leaves and grain storage facilities. It is well-known that *Tyrophagus putrescentiae* can elicit allergic respiratory diseases, such as bronchial asthma and rhinoconjunctivitis, particularly in rural occupational environments: farms, dairy barns, bakeries and grain elevator stores (4). However, to the best of our knowledge, no cases of airborne contact dermatitis from this storage mite have been reported to date. The clinical pattern and distribution in our case, together with the results of serum-specific IgE and skin tests, suggest an airborne contact dermatitis caused by both Types I and IV allergy.

References

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