

Laryngeal edema due to European bee-eater (*Merops apiaster*) in a patient allergic to honeybee

O. Gulbahar*, N. Mete, O. Ardeniz, K. Onbasi,
A. Kokuludag, A. Sin, F. Sebik

Key words: bee-eater, honeybee, laryngeal edema, *Merops apiaster*.

Contact with the antigen may not always be obvious in allergic reactions. Inhalation of the bee allergens has been reported to induce allergic symptoms in beekeepers (1). Bee venom components found in honey can cause severe allergic reactions in sensitive individuals (2). We present a case of anaphylaxis after eating a bee-eater (BE) in a patient allergic to honeybee.

European bee-eater (*Merops apiaster*) is a colorful bird which eminently eats bees, wasps and hornets (250 bees per day). Stings are frequently swallowed and found in their food remains. BEs are apparently immune to venom; they show pain when stung but no other effect is evident. They live in most parts of southern Europe, south-western Asia, northern and southern Africa and are found throughout Turkey (3).

A 52-year-old hunter, ate BE meat 1 week before admission to our clinic. He experienced itching in the oral mucosa and difficulties in breathing 30 min after the meal. He was admitted in the emer-

gency room where laryngeal edema was confirmed. He received treatment and was referred to our allergy clinic. He did not have personal or family history of atopy. In the past he had been stung six times by bees. The wasps never caused any reaction. But generalized urticaria, hypotension and unconsciousness had occurred for the last three times after he was stung by honeybees. The last reaction was at 4 months ago. Before the laryngeal edema episode caused by BE he had eaten the bird several times without any clinical reaction. He stopped eating this bird after systemic sting reactions caused by honeybees.

Allergy tests were performed 2 months after the reaction. Skin prick test to honeybee venom revealed a wheal of 3 mm greater than the negative control (ALK 300 µg/ml). Serum-specific IgE (Pharmacia UniCAP, Uppsala, Sweden) for *Apis mellifera* was 17.5 kU/l (class 3). Tests for wasp venom remained negative.

In addition to venom allergy via bee stings, venom allergens can cause reaction in sensitive patients when they are encountered unknowingly. Beekeepers may be sensitized to bee venom through inhalation as well as stings (1). Thirty-one percent of beekeepers had experienced nasal or eye symptoms correlated with the history of systemic sting reactions while working at beehives (4). Allergic symptoms ranging from itching in the oral mucosa to anaphylaxis have been reported in patients allergic to honey (5). In these individuals primary sensitization may be due either to the honey itself, to compositae pollen or to bee venom components (2).

To our knowledge, this is the first case of laryngeal edema caused by ingestion of BE meat in a patient with a history of honeybee allergy. The mechanisms of this

reaction remain unclear. But it is necessary to investigate whether major venom allergens are detectable in the bird's blood or tissues. In conclusion, patients allergic to bees should avoid eating these birds.

*Ege Üniversitesi Tıp Fakültesi İç Hastalıkları AD

Klinik İmmünoloji ve Alerji BD
35100 Bornova-Izmir,

Turkey

Tel: +90 232 343 81 40

Fax: +90 232 343 81 40

E-mail: ogulbahar@yahoo.com

Accepted for publication 16 January 2003

Allergy 2003; 58:453

Copyright © Blackwell Munksgaard 2003

ISSN 0105-4538

References

1. REISMAN RE, HALE R, WYPYCH JI. Allergy to honeybee body components: distinction from bee venom sensitivity. *J Allergy Clin Immunol* 1983;**71**:18-20.
2. HELBLING A, PETER C, BERCHTOLD E, et al. Allergy to honey: relation to pollen and honey bee allergy. *Allergy* 1992;**47**:41-49.
3. *Merops apiaster*, bee-eater. In: CRAMP S, ed. Handbook of the birds of Europe, the Middle East and North Africa. Vol IV. Terns to Woodpeckers. Oxford University Press, 1985:748-754.
4. ANNILA IT, KARJALAINEN ES, ANNILA PA, et al. Bee and wasp sting reactions in current beekeepers. *Ann Allergy Asthma Immunol* 1996;**77**:423-427.
5. BAUER L, KOHLICH A, HIRSCHWEHR R, et al. Food allergy to honey: pollen or bee products? Characterization of allergenic proteins in honey by means of immunoblotting. *J Allergy Clin Immunol* 1996;**97**:65-73.