



Anaphylaxis Due to Horses in Two Children with Pollen Allergy

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To the editor,

The most common causes of anaphylaxis in children are foods, drugs, and bee venom (1). Animals, especially horses, are a rare cause of anaphylaxis. Here we report two cases of anaphylaxis due to horses in patients with concomitant allergic rhinitis and pollen sensitizations.

Case 1: A 13-year-old boy suddenly developed angioedema, erythematous skin rash on his face, and dyspnea after horseback riding at a picnic during the spring. He was diagnosed as suffering from anaphylaxis and treated with adrenaline, methylprednisolone, and antihistamine in the emergency department. His clinical history included allergic rhinitis and a history of horseback riding without an allergic reaction. He was referred to our clinic for diagnostic allergy work-up. Skin prick tests (SPT) with horsehair (8×5 mm), grass pollen (20×14 mm), and cereal pollen (7×7 mm) were positive. Serum horse epithelium-specific immunoglobulin E (IgE) concentration was 4.51 kU/L (Immulate 2000) and total IgE was 432 IU/ml. Avoidance of horses was advised and an adrenaline autoinjector was prescribed. He has had no contact with horses and no recurrence of anaphylaxis for 4 years.

Case 2: A 5-year-old boy presented with a history of angioedema, urticaria, wheezing, and respiratory distress that developed during indoor horseback riding. He was diagnosed as having anaphylaxis and treated with adrenaline in the emergency department. He had regularly ridden horses before the anaphylaxis and had a history of atopic dermatitis and allergic rhinitis. SPT with horsehair was positive (7×7 mm), as were SPT results with dog epithelium (3×3 mm), grass pollen (7×5 mm), and cereal pollen

(6×5 mm). Horse avoidance was advised and an adrenaline autoinjector was prescribed. He had no further horse contact or anaphylaxis during the 4 years since the first episode.

Horse allergy usually occurs among people who regularly handle horses and generally results in symptoms such as rhinitis, conjunctivitis, asthma, and urticaria but can rarely cause anaphylaxis (2). Horse exposure is an occupational risk factor for sensitization in horse riders. A study by Tutluoğlu et al. (3) has shown that grooms were more frequently sensitized to horses (12.8%) when compared with controls (4.3%) because of the occupational exposure. Similarly, both of our patients had a history of repeated close contact through regular horseback riding before presenting with anaphylaxis.

In previous studies, patients with anaphylaxis due to horse usually had sensitization to another animal or pollen (2-5). In our study, both of the patients described here had pollen allergy and one of them also had dog atopy concomitant with horse atopy. Most reports have emphasized the coexistence of horse atopy with other pet allergens and attributed this to albumin cross-reactivity (2). Although the coexistence of horse and pollen sensitivity has been observed previously, it was not assigned much importance (4-6). In a study by Liccardi et al. (6) including 35 patients sensitized to horse allergen on SPT, none of the patients were found to be monosensitized to horses and 88% of the patients (31/35) had pollen atopies in addition to horse sensitivity. They also observed that pet sensitizations commonly coexisted with horse sensitization, which they attributed to cross-reactivity, but they did not comment on the coexistence of pollen sensitization.

Pollen allergy has been shown to accompany horse allergy both in our study and previous studies documenting horse-induced anaphylaxis (4,5). However, a relationship between the two entities has not yet been defined.

Management of anaphylaxis due to horse includes avoiding direct and indirect exposure to horse allergens and carrying an adrenalin autoinjector (1,2). Educating patients about horse-induced anaphylaxis and risk factors for anaphylaxis may be lifesaving. Pollen allergy may accompany horse sensitization and acute anaphylactic reactions. This possibility should be kept in mind during the evaluation of pollen-allergic children before riding and families can be informed about it.

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