
Correspondence

ALLERGY TO HORSE

To the Editor:

Allergy to pets, such as cats and dogs, causes significant morbidity in children. The body of medical literature about allergy to horse is limited, although allergy to fur animals is a widespread phenomenon. Only a few reports of anaphylactic episodes connected to horse allergy have been reported.¹

We report the case of a 6-year-old girl who was admitted to the allergology in-patient service after presenting with an episode of anaphylaxis. The reaction occurred shortly after a 10-minute ride in a snow sleigh pulled by a horse. The symptoms included wheezing, sneezing, runny nose, erythematous skin reaction, periorbital angioedema, and lip swelling. The girl was transferred to the emergency ward. Clinical examination demonstrated tachypnea, tachycardia, and hypotension. Lung auscultation revealed wheezes and crackles over the lungs. In the emergency department she received medications, and rapid clinical improvement was observed.

After admission to the hospital, her physical examination, spirometry, and chest radiography findings were normal. Specific IgE levels were markedly elevated against horse, cat, and dog dander.

After 2 weeks, skin prick tests with common inhalant and food allergens were performed. The results of skin prick tests, except to horse, cat, and dog epithelium and milk, were negative. Avoidance of the exposure to fur animals, especially horses, was advised.

Animal allergens play an increasing role as a cause of asthma, bronchial hyperresponsiveness, and allergic skin diseases. Much is known about allergic reactions caused by such allergens as cat and dog dander, but horse allergens as a potential cause of allergy are often forgotten and underestimated. The observed reaction might have occurred in response to allergens contained in dander and/or horse sweat.

In the late 1990s, important horse allergens, Equ c 1 (synthesized in the liver and the sublingual and submaxillary glands), Equ c 2, and Equ c 3 (isolated from horse sweat), were characterized.^{2,3} Horse serum albumin cross-reacts with dog and cat serum albumin. Equ c 2 possess approximately 50% similarity to Bos d 2, a major cow dander allergen.

Some studies demonstrated the prevalence of allergies to big fur farmed animals and respiratory symptoms among groups of people who are highly exposed to these allergens. On the other hand, Roberts and Lack⁴ noted that the horse dander is often not taken into consideration as a cause of an allergic disease, including asthma, especially in an urban environment.⁴ Horse allergens can be carried on clothing of riding persons. Thus, it may exist in the indoor environment and may cause an allergic reaction in patients who have not had any contact with a horse. The case reported by Roberts

and Lack⁴ supports the notion that horse dander allergen may also cause a life-threatening anaphylaxis. It is probable that children are especially susceptible to horse allergens. Both the case reported by Roberts and Lack⁴ and our case demonstrate that there might be an increased risk of anaphylaxis after contact with numerous amounts of horse allergens.

The proper diagnosis is crucial for appropriate management. Skin prick testing, being both simple and inexpensive, is a useful investigative tool. In combination with the properly taken history and clinical examination, it may be sufficient to diagnose a horse allergy. This could also be confirmed by an elevated serum specific IgE level against horse epidermis.

Avoidance of allergens is critical in the management of this allergy. An appropriate rescue treatment composed of antihistamines and inhaled β_2 -agonists should be prescribed. The patients with previous severe systemic reactions should carry a preloaded adrenaline device and should be taught when and how to use it. Allergen immunotherapy could be the treatment of choice. The clinical study of Fernandez-Tavora et al⁵ showed high safety and efficacy of this method.

Horse allergy may be an important clinical problem, especially in children. It should be differentiated from other types of reactions (eg, cold urticaria, exercise-induced anaphylaxis, or food anaphylaxis). It must also be noted that horse allergens may be present in the urban environment not only in the country.

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