

Letter to the editor

Very late reactions to allergen-specific immunotherapy caused by physical exercise

During specific immunotherapy (SIT) for allergy to pollen or other allergens, it is common to develop a local reaction with a red, tender swelling at the site of injection. This reaction appears within minutes and disappears within a few days after the injection. SIT patients are generally advised to avoid physical exercise on the day of allergen injection, but otherwise no restrictions are placed on their daily life.

In the literature, I have not been able to find descriptions or reports of local or systemic reactions in connection with physical exercise several weeks after the allergen injection.

I will report two cases.

Case 1. A 14-year-old boy had allergic rhinoconjunctivitis due to grass pollen but no other allergies. He was treated with SIT for 3 years without any adverse reactions (*Phleum pratense*, Alutard [ALK-Abelló]).

The maintenance dose, 100 000 SQ units, was given subcutaneously in the forearms, right and left alternatively, and the interval was 5–6 weeks. In February 1997, 2 weeks after the last allergen injection, he played handball. There was no grass pollen in the air. During the exercise, he suddenly developed numerous red nodules on both forearms, at the former injection sites. At the same time, he felt swelling of the lips. He went to the emergency room, and was advised to take antihistamine, and did so. After a few hours, all symptoms had disappeared. He told me of this when he came for his next SIT treatment some weeks later. I continued his SIT program, and he has never since had the same problem despite vigorous exercise.

Case 2. A 15-year-old boy had allergic rhinoconjunctivitis and bronchial asthma due to grass pollen but no other allergies and no bronchial asthma out of season. He had received SIT for 3 years without problems. Every 5–6 weeks, he received the main-

tenance dose of grass-pollen extract, 100 000 SQ units subcutaneously, in either left or right forearm. In February 1999, when there is no grass pollen in the air, and 3 weeks after the last injection, he “warmed up” before a football match by running 7 km. During this exercise, he suddenly developed numerous red, itchy nodules at the former injection sites on both arms. Within a few minutes, he developed a dry cough like that which he had in the grass-pollen season. When he got home in 30 min, he inhaled a β -agonist, which promptly relieved the cough, and took an antihistamine tablet. The nodules disappeared after 1–2 h. He counted up to 20 nodules in each forearm, so that he had a reaction at perhaps all the injection sites. One week later, he ran again, and once more nodules appeared on his forearms, but this time they disappeared faster. On this second occasion, he did not suffer any asthma symptoms. He had no subsequent problems during sports or other exercise. I did not continue the SIT in this patient.

I report two cases with late local and systemic reactions after SIT for grass-pollen allergy. The reactions came several weeks after the latest treatment, in connection with physical exercise. One of the patients continued the treatment, and never had the same reactions again. The other patient stopped the treatment. What is the correct thing to do? Why did these reactions come so late? Has anybody had the same problem?

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