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## Food allergy as a new risk factor for scurvy

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**Key words:** food allergy; oral allergy syndrome; scurvy.

Oral allergy syndrome (OAS) is a specific clinical syndrome frequently seen in allergy practice. Although the symptoms of OAS affect mainly the oral cavity (itchiness, localized angio-oedema, papulae), more severe conditions such as systemic symptoms including anaphylactic shock, could occur (1). OAS affects between 25% and 35% of people allergic to pollens (2, 3). It is mainly associated with fruits and vegetables, especially when consumed raw. As people suffering from OAS could have a reaction to many fruits and vegetables, nutritional deficiency could be a potential complication of this condition as described in this case report. To our knowledge, it is the first case report of scurvy associated with food allergies.

A 34-year-old man had a history of seasonal rhinitis. He also had severe OAS for multiple fruits, vegetables, including an anaphylactic reaction to nuts. He restricted his diet to milk, beef and oat because of his multiple allergies.

Nine years after his allergies began, he was seen for bluish nodules on both legs, sensitive to touch, along with a spontaneous ecchymosis on the posterior part of his right thigh. Because he reported prior symptoms of an upper respiratory tract infection a few days before, a presumptive diagnosis of erythema nodosum was made. First blood analysis reported nor-

mal complete blood count, coagulogram and electrolytes.

One week later, he came again at the emergency as there was induration and increasing pain in his right thigh and a right swollen knee. He also reported asthenia, dyspnea and palpitations. He was hospitalized for investigation.

On physical examination, there was a swollen right knee with a striking ecchymosis on the posterior part of his right thigh (Fig. 1). There were nodules with induration on both legs, sensitive to touch. A few petechia and gingivitis were observed in his mouth.

The clinical investigation revealed an anemia at 81 g/l, with white blood cells, platelet level, and coagulation values

within normal limits. Echography and Doppler studies showed no evidence of thrombophlebitis or intramuscular hematoma. An articular puncture showed evidence of hemarthrosis.

As no other etiology could explain his hematoma and hemarthrosis, scurvy was suspected and the patient was treated with vitamin C. Two weeks later, he was feeling better, has less asthenia, gingivitis and resolution of hematoma. There was a slight persistent synovitis. Hemoglobin was improved at 124 g/l. After 1 month, he was clinically asymptomatic. There was no relapse in the last year under vitamin C supplementation.

Scurvy is the clinical manifestation of vitamin C deficiency. It is historically

**Careful nutritional follow-up should be done in people suffering from oral allergy syndrome.**



Figure 1. Ecchymosis on the thigh.

linked with the era of great maritime expeditions as sailors are among the most numerous and severely afflicted victims.

Even if it became rare, groups at risk in Western countries include: persons with behavioral disorders or anorexia, malabsorption syndrome, alcoholic with poor nutrition, isolated elderly patient, homeless persons, war zone living people, anorexia secondary to cancer or chronic disease and follower of fad diets such as Zen macrobiotic diet (4).

As vitamin C is present only in fruits and vegetables, daily intake of these foods or supplementation is needed. As most people with OAS are not allergic to all fruits and vegetables, it is logical to think that those people complete their nutritional intake with other fruits or vegetables.

However, some allergic people are extremely wary and avoid all fruits and vegetables. As scurvy is a very rare

disease in our country, where the quality of life is excellent, we should be advised that food allergic people are a new group at risk for vitamin C deficiency. It underlines the importance of nutritional follow-up in food allergic people.

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## References

1. Pastorello EA, Ortolani C. Oral allergy syndrome. In: Metcalfe DD, Sampson HA, Simon RA, editors. *Food allergy: adverse reactions to foods and food additives*, 3rd edn. Boston: Blackwell Publishing, 2003:169–182.
2. Bircher AJ, Van Melle G, Haller E, Curty B, Frei PC. IgE to food allergens are highly prevalent in patients allergic to pollens, with and without symptoms of food allergy. *Clin Exp Allergy* 1994;**24**:367–374.
3. Pastorello EA, Ispano M, Pravettoni V et al. Clinical aspects of food allergy. *Proceedings of the XVI European Congress of Allergy and Clinical Immunology*, Madrid, 1995:883–888.
4. Pimentel L. Scurvy: historical review and current diagnostic approach. *Am J Emerg Med* 2003;**21**:328–332.