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*Risk patient prediction****Which hazelnut-allergic patients risk a severe reaction after eating hazelnuts?*****Medical viewpoint:**

Patients presenting symptoms of allergy after hazelnut intake are not uncommon in my experience. For hazelnut-allergic patients from the southern regions of Europe in particular, testing for specific IgE antibodies to the hazelnut protein Cor a 8 can help assess the risk for severe reactions.

Actions to take

- Draw a blood sample and request specific IgE to hazelnut and Cor a 8. Use both results as a complement to case history and other clinical findings.
- Increased levels of specific IgE to Cor a 8 could indicate increased risk of severe reactions to hazelnut intake.
- Emphasise the importance of avoiding hazelnuts at all costs. Give guidance on how to deal with daily life situations.
- Consider prescribing an epinephrine auto-injector.
- Make an individual management plan that includes continuous follow-up.

It is essential that hazelnut-allergic individuals at risk of severe reactions receive proper avoidance instructions plus training in how to act if accidental intake occurs. Test results to the Cor a 8 protein can help enforce this management.

Medical director:

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Severe allergic reactions following intake of hazelnuts are not common but can be life-threatening in hazelnut-allergic patients. Predicting which patients may run this risk helps arrange the best management. Measuring allergen-specific IgE antibodies to the protein Cor a 8 in suspected individuals aids this task.

Diagnosing food allergy at a molecular level has a high clinical relevance – Highlights from literature

Cor a 8, a lipid transfer protein (LTP) from the hazelnut, is a major allergen in Spanish patients allergic to hazelnuts but not to birch pollen. LTPs are associated with severe allergic reactions. Cor a 8 is thus suggested as a suitable diagnostic indicator for predicting severe food allergy to hazelnut and for further improving sensitivity in diagnostic procedures (1).

IgE antibodies to the Cor a 8 protein are a risk marker for severe allergic reactions in patients suspected of having allergy to hazelnut.

Hazelnut is a common cause of food-induced allergy. A prevalence of up to 0.5% has been reported. Both milder symptoms and more severe anaphylactic reactions are known. The association between severe reactions and the presence of specific IgE to Cor a 8 is particularly strong in patients from southern Europe.

LTPs are present both in pollen and plant-derived foods and cross-reactions have been reported (2). The presence of specific IgE to Cor a 8 in hazelnut-allergic patients may thus help explain allergic reactions to foods other than hazelnut.

References: (1) F. Schocker et al. *J Allergy Clin Immunol* 2004;113:141-147.
(2). L. Zuidmeer, R van Ree. *Curr Opin Allergy Clin Immunol* 2007;7:269-273.

Benefits of ImmunoCAP® testing

Quantitative specific IgE antibody test results to hazelnut allergens including Cor a 8 add value in the diagnostic work-up of hazelnut-allergic patients.

The clinical advantages are several. These tests help to:

- Confirm allergy to hazelnut
- Predict severe reactions after intake of hazelnut, which is particularly relevant for patients from southern Europe
- Form a basis for proper treatment and advice for hazelnut-allergic patients