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## Pseudo-food allergy caused by carry-over of latex proteins from gloves to food: need for prevention?

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Allergy to natural rubber latex (NRL) has become an important issue, both in occupational environments as in private life (1). It is one of the major occupational diseases among health care workers. The prevalence of latex sensitization among Western health care workers is estimated at 3–18% (1, 2), versus <1% in the general population (1).

Although not easily recognized, latex allergy may now be an expanding problem for food handlers and for consumers with an NRL-allergy (3, 4). The frequent sensitization in the food handlers' branch is thought to be caused by the excessive use of latex gloves that are mostly powdered and therefore contain high levels of allergenic latex proteins (5).

The problem for NRL-allergic consumers is illustrated by a 47-year old surgeon occupationally sensitized to NRL for 5 years. He suffers from allergic reactions when in contact with latex, but even after eating food handled with NRL gloves. He is nonatopic, and has no history of any inhalant or food allergies.

When using NRL gloves in the past, the patient developed progressively itching eczema on his hands. Assuming to

be allergic to latex, he shifted to latex-free gloves and became free of symptoms during work. Later, he suffered from a severe reaction immediately after inflating a balloon (a notorious source of latex protein). On several occasions, the patient suffered from severe oedema of his uvula, resulting in impaired swallowing, breathing and speaking, without skin reactions or oral itching. This occurred after consumption of peeled shrimps, fish and some types of salad or bread. He tolerated unpeeled king-size shrimps. When information could be retrieved, it appeared that the reactions could always be attributed to latex contamination of the food product.

The first allergological evaluation was 5 years ago. Skin-prick tests (SPT) with inhalant and food allergens were all negative. In addition, prick-to-prick tests with different shrimp species were negative. SPT with two commercial latex extracts (Stallergènes and ALK-Abellò) were both strongly positive (4+). Specific IgE for latex was elevated (1.13 kU/l). Recently, a complete re-evaluation was performed of specific IgE for NRL and latex related allergens (ficus benjamina, avocado, banana, kiwi, pineapple, buckwheat, corn, rice and chestnut). IgE levels for latex were elevated (0.60 kU/l).

We concluded that this patient is still mono-sensitized to latex and that his food related allergic reactions are most likely caused by latex contamination during food handling.

The problem of allergic reactions caused by latex-handled food is illustrated by this first patient with an occupational mono-sensitization to NRL who is nonatopic, with reactions to latex-handled food. In the future, more of these patients might be seen or better recognized.

As adjustment of European legislation regarding hygiene prevention in the food industry, NRL gloves are used more frequently as they are cheap and comfortable compared with nonlatex gloves (6).

Although food labelling is prominent in preventing food allergies, many people still suffer from allergic reactions because of allergens hidden in their food. We speculate that parts of these unexplained reactions are caused by traces of latex protein rather than food allergens. However, this is difficult to diagnose, as most latex allergic patients also have multiple food allergies. It is no common knowledge, even to physicians, that food can be contaminated by traces of latex as a result of a carry-over effect of latex proteins from the gloves of food handlers. We suggest testing more for latex sensitization and allergy in patients with unexplained allergic reactions. To handle this health problem in the future, adding latex to the list of allergens that have to be declared on foods might be an option. However, the problem can be solved more effectively by a prohibition of the use of latex gloves during food handling.

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