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¿ Is Natural Latex an Important Cause of Allergy ?

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Natural latex is an important cause of allergy in individuals with risk factors. Neuromuscular relaxants together with natural latex are among the most studied agents responsible for pre-operative anaphylaxis. Allergic reaction to latex represents, in most cases, an immune response regulated by IgE antibodies (type I hypersensitivity). This type of reaction is produced in individuals how have previously been in contact with latex and have formed sensitivity, the same as in other common forms of allergies. These types of reactions are also more frequent in certain risk groups, such as: health personnel, patients with congenital defects (spina bifida, urologic, myelomeningocele), those who have undergone multiple surgical interventions and history of repeated exposures -specially in serous and mucous- to materials such as latex. There is a known existence in patients with atrophy history, in rubber and plastic workers, janitors and patients with history of latex intolerance as: balls, balloons, gloves, preservatives, etc. There are cross reactions between latex and food antigens (bananas, cashews, avocado, celery, grenade, etc), these allergens have an antigenic action very similar to latex, clinically and immunologically [1,2].

Immunopathogenesis of allergy to latex is not completely understood. Several proteins have been identified from natural latex extracts that adhere to IgE. The main one being Hevein b 6, formed from prohevein (Hev b 6.01) and two Hevein post-transcriptional proteins (Hev b 6.02 and Hev b 6.03). These three components act like independent immunogens. In the original Heb b 6.01 protein are found regions responsible for the IgE binding, as well as the proliferative response of the T lymphocyte. Heb b 6.02 domain contains discontinuous epitopes that can recognize the B lymphocyte, while Hev b 6.03 is a better inductor of the proliferative response for having sequentiated unions to HLA-DR4 [3,4]. Though this it is possible to initiate an acquired immune response directed to immunogens, latex related proteins activated by allergenic-specific T CD+ lymphocytes. Identification of T cell dominant epitope is important and decisive for the development of a potential specific immunotherapy [5].

Clinical spectrum includes slight dermatitis cases that may or may not affect mucous, together with urticarial, pruritus and exanthema being the most frequent. Other forms in which it manifests are rhinitis respiratory profiles and bronchial obstruction. Only in rare occasions do lethal symptoms appear such as anaphylaxis, convulsions, frequently observed during anesthesia [3,4].

Pre-operative identification of high risk patients and preventive measures may decrease latex allergy and anaphilaxy incidencies [5,7].

The severity of the immediate reaction depends on the level of sensitivity and the amount of latex in which the person comes in contact with. Greatest danger of suffering extreme reactions occurs when latex comes in contact with humid areas of skin of inner parts during surgery, due to the body absorbing more quickly a larger amount of allergen, not forgetting that latex may be suspended in the air and can cause respiratory symptoms. Latex proteins may adhere to powder used in latex gloves, in using these gloves these particles together with latex allergens fly thought the air, where they can be inhaled or come in contact with the nose or the eyes and can cause symptoms.

High levels of this type of allergen dust have been measured in operating rooms. For this reason the American Society of Anesthesiologists have recommended who patients that have been identified as allergic to latex be the first to use operating rooms, which is when the concentration of these airbornallergenics (latex) is minimum, the use of non-powder or synthetic gloves is also recommended (vinyl or nitrile), reducing the risk of reaction, and the use of a physiologic solution on the gloves to remove the excess of dust [2,8-10].

For these reasons show the Natural latex is an important cause of allergy in individuals with risk factors and the most studied agents responsible for pre-operative anaphylaxis.

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