

ALLSA POSTER PRESENTATIONS

THE CURVULARIA CASE OF CURVULARIA IN CAPE TOWN

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Curvularia is an allergenic fungal spore that peaks during autumn. The total fungal spore load from a Burkard 7-day recording volumetric spore trap, mounted on a roof close to the University of Cape Town Lung Institute in Mowbray, was quantified from June 2008 to April 2009. The range was 80 - 5 618 spores/cubic metre air. The proportion of the total fungal spore load for Curvularia varies according to the geographic location. Documented ranges are 0.87% to 9.8%. Seasonal changes in Cape Town generally start in February, depending on the weather parameters. The Curvularia catch increased at the onset of autumn, and the proportion of Curvularia spores in the total fungal spore load rose from 0.3% for the period June 2008 to January 2009, to 12.1% for the autumn months February - April 2009. Curvularia counts of this magnitude have not been measured at three previously sampled sites in Cape Town. This finding indicates that Curvularia may be an important allergen in this area. A small prospective study could be undertaken, by adding this fungal spore allergen to the skin-prick or Immunocap testing panels in local hospitals to determine the incidence of Curvularia sensitivity in the local population.

DIFFERENTIATION BETWEEN TRUE LATEX ALLERGY AND CROSS-REACTIVITY IN SOUTH AFRICAN DENTAL WORKERS

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Introduction: Latex sensitivity has been reported in South African health professionals, including dental workers. Sensitisation and allergy to NRL products have been shown to be due to a small fraction of residual extractable proteins; however, cross-reactivity due to sequence homologies between allergens from different sources has been reported. It is important to discriminate between true allergy and asymptomatic sensitisation for the treatment and management of latex sensitive individuals.

Aim: The aim of this study was to determine the role of single recombinant *Hevea brasiliensis* latex allergens and cross-reacting carbohydrate determinants (CCDs) in the diagnosis of latex allergy in South African dental workers.

Methods: This study investigated 41 composite latex (k82) positive individuals from a previous study of 421 dental workers. Clinical symptoms to latex were identified through a self-administered questionnaire. Sensitivity to eight single recombinant *Hevea brasiliensis* latex allergens (Hev b 1, 3, 5, 6.01, 6.02, 8, 9, and 11) was tested. Allergens from MUXF3 and HRP markers were included in order to detect sensitisation to CCDs. The IgE reactivity to these markers was analysed with the Pharmacia ImmunoCap system.

Results: Hev b 1, 3, 9 and 11 allergens showed little or no value in the evaluation of clinical sensitisation. The clinically significant latex allergens identified were Hev b 5, 6.01, 6.02 and 8. Of the 41 latex sensitised individuals tested, 22 showed true latex allergy, 7 had asymptomatic latex sensitisation and the remaining 19 were identified as false-positive responses to latex as a result of cross-reactivity to carbohydrate epitopes.

Conclusion: The findings of this study demonstrated that Hev b 5, 6.01, 6.02 and 8 can be reliably used in the diagnosis of true latex allergy among South African dental workers.

PRODUCT NEWS

Long-chain polyunsaturated fatty acids influence the immune system of infants

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Several events occur during the first months of life that allow the immune system to become competent and functional. The aim of this article is to review the rationale and evidence of an influence of (n-3) long-chain PUFA (LCPUFA) on the immune system of infants. The (n-3) LCPUFA exert their immunomodulatory activities at different levels. The (n-3) LCPUFA metabolites induce eicosanoid production, alter gene expression, and modify lipid raft composition, altering T-cell signalling; all contribute to immunological functional changes. However, the roles of these mechanisms and the types of T or other immunological cells involved remain unclear at present. Moreover, the effect of (n-3) LCPUFA on the immune system of infants may



vary according to dose, time of exposure, and profile of the immune system (T-helper, Th1/Th2). Most of the interventional studies in infancy have been performed for the prevention of allergy. They all confirmed influence on T-cell function and cytokine profiles, but clinically beneficial effects are more conflicting. Supplementation of the maternal diet in pregnancy or early childhood with (n-3) LCPUFA is potentially a noninvasive intervention strategy to prevent the development of allergy, infection, and possibly other immune-mediated diseases. However, any long-term *in vivo* effects on (n-3) LCPUFA early in life for immunomodulatory defense in infants and later on immune status and health remain to be assessed.

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