

Abstract on Latex Assays presented at "first world congress on work-related and environmental allergy" - Fourth International Symposium on Irritant Contact Dermatitis

1. Seventh International NIVA Course on Work-Related Respiratory Hypersensitivity. 9-12 July 2003.

P59

SIGNIFICANT DECREASE IN LATEX ALLERGENS Hev b 1, 3, 5, and 6.02 IN MEDICAL GLOVES MARKETED IN FINLAND BETWEEN 1995-2001

Palosuo T, Karkkainen T, Frisk K, Reinikka-Railo H, Qjajavi J, Alenius H, Reunala T, Turjanmaa K*

National Public Health Institute, FIT Biotech Ltd., National Agency of Medicines, Finnish Institute of Occupational Health, Tampere University Hospital, Helsinki and Tampere, Finland

Objective. Latex allergy continues to be an important occupational health problem. Methods that can reliably measure specific allergens in gloves and other latex devices, instead of nonspecific total protein, are needed.

Methods. A new immunoassay, making use of monoclonal-antibodies and recombinant allergens was used to quantify clinically relevant latex allergens Hev b 6.02, 5, 3 and 1, all known to retain their IgE-binding ability during rubber manufacturing. Finnish National Agency of Medicines has arranged on a biennial basis nationwide market surveys on medical gloves. We report here results for the new latex allergen-specific assay in surveys in 1995 (22 gloves) and 2001 (71 gloves).

Results. In 1995 Hev b6.02 was detected in 73%, Hev b5 in 73%, Hev b3 in 45% and Hev b1 in 14% of medical gloves. In 2001, Hev b6.02 was detected in 53%, Hev b5 in 24%, Hev b3 in 22% and Hev b1 in 0%. When the sum of the 4 allergens in gloves exceeded 1g/g, most latex-allergic patients showed positive skin prick test reactions against extracts of such gloves. In 1995 41% of the gloves revealed more than 1 g/g of latex allergens, while in 2001 only 14% exceeded this value.

Conclusion. A marked decrease in the concentrations of 4 clinically relevant latex allergens in medical gloves was noted between years 1995 and 2001. Quantifying selected latex allergens in manufactured products offers means to reliably monitor their allergen content. This methodology could eventually be used to assess and set up meaningful safety limits for latex devices.