American Latex Allergy Association

Can Gutta Percha be used for root canals in (NRL)Latex-Allergic individuals?

Answered by
Robert Hamilton, PhD

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The question of gutta percha use in latex-allergic individuals has been a topic for debate for many years. Previous discussions(1) seemed to indicate that the use of gutta-percha might cause an allergic reaction in latex-allergic individuals. Recent research may demonstrate that gutta-percha products can be safely used in latex-allergic individuals.

(1) Gutta-percha allergy in a healthcare worker with latex allergy; Boxer,Grammer,Orfan; J ALLERGY CLIN IMMUNOL, MAY 1994

Cross-Reactivity Studies of Gutta-Percha, Gutta-Balata, and Natural Rubber Latex (Hevea brasiliensis)

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Abstract:

Gutta-percha and gutta-balata are derived from the Paliquium gutta and Mimusops globsa trees, respectively, that are in the same botanical family as the rubber tree Hevea brasilienisis. For this reason the potential for immunological cross-reactivity between the gutta-percha and gutta-balata used in endodontics and natural rubber latex (NRL) has been the subject of some controversy, because these products may be used in latex-allergic individuals. The objective of this study was to investigate the potential cross-reactivity between gutta percha, gutta balata, and NRL. Physiological extracts of seven commercially available gutta percha products, raw gutta-percha, raw gutta-balata, and synthetic trans-polyisoprene were each analyzed for cross reactivity with NRL in a competitive radioallergosorbent test inhibition assay. No detectable cross-reactivity was observed with any of the raw or clinically used gutta-percha products. In contrast the raw gutta-balata released proteins that were cross-reactive with Hevea latex. We conclude that the absence of guttaï¿½percha proteins that can react with Hevea latex-specific IgE antibody supports the minimal potential for commercially available gutta-percha to introduce allergic symptoms in individual sensitized to NRL. Because gutta-balata is sometimes added to commercial gutta-percha products caution should be exercised if products containing gutta-balata are used in endodontic care of latex-allergic individuals.

Dr. Robert Hamilton one of the authors of this research writes-

> These are my ?opinions? on the significance of the study. The practical implications of this work are

as follows: 1. Root canals with gutta percha should represent no risk for latex allergen exposure from the gutta percha itself. It is inert and based on our testing does not contain cross-reactive latex allergen. 2. If the gutta percha is supplemented with gutta balata, then there is a potential for latex allergen exposure. However, this potential risk should be viewed as minimal since gutta balata is mixed with inert gutta percha and is not likely to be released from the tooth cavity. 3. Symptoms of pain associated with root canals in latex allergic individuals can occur as a result of gutta percha packing that extends beyond the root canal cavity and are not a result of latex allergen exposure.

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