

Title

Letter to the Editor: Response to: Clinical relevance of p-tert-butylphenol-formaldehyde resin (PTBP-FR) contact allergy among general dermatology patients

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Declaration of interests

Dr. D Hamann is a first degree relative of C Hamann who is CEO and owner of SmartPractice (Phoenix, Arizona), a company that produces and sells patch testing materials.

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We read with great interest the manuscript *Clinical relevance of p-tert-butylphenol-formaldehyde resin (PTBP-FR) contact allergy among general dermatology patients* presenting decreasing prevalence and relevance of PTBP-FR patch test reactions in a Finnish dermatology patients.¹ As the authors mention, PTBP-FR allergic contact dermatitis was indeed identified in shoe glue in the 1950s, but this complex resin is not uniformly allergenic. PTBP-FR contain hundreds of compounds, many of which have not been identified. It was not until the late 1990s and early 2000s that research by Zimerson and Bruze investigated the chemical identity of different components and identified the two main allergens in the resin with high sensitizing.^{2,3} These dimers are 4-*tert*-Butyl-2-(5-*tert*-butyl-2-hydroxy-3-hydroxymethyl-benzyloxymethyl)-6-hydroxymethylphenol and 4-*tert*-Butyl-2-(5-*tert*-butyl-2-hydroxy-benzyloxymethyl)-6-hydroxymethylphenol generally referred to as Dimers IX and X, respectively.

Patch testers assume that commercial PTBP-FR patch test preparations have comparable allergenicity and chemical composition. However, a previous study demonstrated that many patch test preparations do not contain sufficient doses of Dimer IX and/or Dimer X to elicit an allergic reaction in sensitized patients.⁴ Unfortunately, the preparations of PTBP-FR used in this Finnish study do not have regulatory oversight as a medicinal product by Swedish or EU authorities and the allergenic dimer concentration is not declared. Thus, the decreasing prevalence and relevance of PTBP-FR in this Finnish population may reflect decreased sensitization and warrant use in specialized series as the authors propose; however, the decreasing prevalence and relevance could also be due to low dimer concentration in the patch test materials and this should likely be investigated.

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