

(原 著)

Basic Studies on Contact Dermatitis Due to Hair Colorings and Cold Permanent Wave Solutions

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Abstract

The results of some surveys conducted at dermatological clinics concerning the incidence of contact dermatitis due to hair preparations are discussed. Hair coloring dermatitis was seen most frequently followed by cold permanent wave solution dermatitis.

The results of patch tests using various dye intermediates and modifiers on hair coloring dermatitis patients are presented. The frequency of positive reactions is highest to pPDA (p-phenylene diamine), followed by N-phenyl pPDA, 2,4-diaminophenol hydrochloride, as well as 2-chloro pPDA sulfate and mPDA.

Sensitization potency of dye intermediates and modifiers in guinea pigs is also studied. pPDA is the most irritant chemical as well as the most potent sensitizer in this study. Also, toluene 3,4 DA (diamine), oPDA, and N-phenyl pPDA are potent sensitizers, followed by 2-nitro pPDA and toluene 2,5 DA sulfate. On the other hand, mPDA, 4-nitro oPDA, 4-nitro mPDA sulfate, 2-chloro pPDA sulfate, 2,4-diaminophenol hydrochloride, and p-, o-, and m-aminophenol all exhibit very low or no sensitization potency at all.

The results suggest that in the case of oxidation dyes, the position of the amino group and the addition as well as the position of chlorine, or nitro group, or methyl group might greatly influence the sensitization potency. Also, the results of sensitization potency in guinea pigs and those of patch tests on hair coloring dermatitis patients are compared.

A case of typical allergic reactions to ammonium thioglycollate is also presented and some cases of allergic reactions to cold permanent wave solutions are discussed.