

Short Communication

Tattoo dermatitis from primary sensitization to clothing dyes

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Case Report

A 39-year-old woman presented with a 2-year history of a pruritic rash, initially on the lower legs then spreading to the trunk and flexures. 3 months prior to presentation, she had been on holiday to Ibiza and had acquired a black skin-paint tattoo on her left arm. Within 24 h of this procedure, she had developed an acute vesicular rash at the tattoo site. She had never had her hair dyed nor had she had any other cosmetic exposure to p-phenylenediamine. Her truncal rash had worsened on 2 occasions after wearing a black top, and also on her legs after wearing a pair of black trousers.

On examination, she had post-inflammatory hyperpigmentation at the site of the skin-paint tattoo, on the trunk, in the major flexures and on the lower legs.

She was patch tested against an extended European standard series, facial series, dye series and pieces of her own black top and trousers. The positive results are shown in Table 1.

This patient's history was compatible with primary sensitization to clothing dyes leading to cross-sensitivity to p-phenylenediamine in the skin paint. She was advised to wear white or non-dyed clothing next to her skin and her dermatitis has cleared.

Table 1

Patch test	D2	D4
Disperse Yellow 3	++	++
p-phenylenediamine	++	++
Disperse Orange 3	+	+
4-aminoazobenzene	+++	++
own black top	++	++

Discussion

Semi-permanent skin-tattooing is becoming increasingly popular. Allergic contact dermatitis from p-phenylene-diamine in the skin paint has been reported (1–4). The primary exposure to p-phenylenediamine in 6 out of the 8 cases was from the skin paint. In the other 2 cases, primary sensitization was from hair dye. Our case is unusual in that the primary sensitisation was from clothing dyes.

Cross-reactivity between clothing dyes of the azo group and p-phenylenediamine may occur due to the same central molecular structure of a benzene ring with 1,4 attachment of nitrogen salts. Despite this, azo dye-sensitized patients do not always react to p-phenylenediamine and therefore this alone is not a reliable screen for azo dye sensitivity on patch testing. Our patient, however, reacted to both and is interesting because of the sequence of her sensitization and subsequent presentation.

References

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