

'Black Henna Tattoo': art or allergen?

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Accepted 21 February 2016

DESCRIPTION

A 10-year-old boy, who was previously fit and healthy, presented with a 3-week history of an erythematous, pruritic, papulovesicular rash on his right upper arm. The rash had started 4 days after application of a temporary black henna tattoo while he was on a holiday in Spain. Owing to suspected cellulitis, the patient had been trialled with two oral macrolide antibiotics, but there had been little improvement. Examination revealed an erythematous papulovesicular, partially crusted skin lesion. The eruption was pruritic and followed the outline of the tattoo (figure 1). The surrounding skin showed diffuse erythematous swelling and was hot and painful to touch. The child had no prior history of atopy, eczema or any allergic reactions. The rest of his general and systemic examination was normal.



Figure 1 Outline of black henna tattoo with surrounding soft tissue inflammation.

A diagnosis of type IV delayed hypersensitivity to black henna with surrounding cellulitis was

made. He was initially treated with intravenous clindamycin for 3 days followed by oral flucloxacillin for 4 days. Topical 2% fuscic acid plus 1% hydrocortisone acetate cream and emollients were applied for 7 days. An improvement was noted after 48 h with rapid resolution of surrounding inflammation. Residual hypopigmentation of the tattoo area was apparent after a week.

Learning points

- ▶ Paraphenylenediamine (PPD) is a textile dye that is commonly added to henna to blacken the pigment and speed up drying time. The combination together is called black henna.¹ PPD is a known contact allergen, and can evoke a type IV delayed hypersensitivity reaction based on its concentration and the duration of exposure. Eruptions are typically seen 3–10 days after the application of black henna.² The concentration of PPD in black henna tattoo inks can be as high as 30%.³
- ▶ Depending on the intensity of the inflammatory reaction, there can be scarring, keloid formation or depigmentation over the tattoo.
- ▶ Patients who develop an allergic reaction to PPD should be advised by clinicians to avoid any further exposure to PPD, which is contained in cosmetic products such as hair colouring and semipermanent eyebrow make-up.
- ▶ Skin tattoos with black henna should be avoided, especially during foreign travel, as this can make the tracing of the vendor and any subsequent public health management challenging.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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To cite: Rogers C, King D, Chadha L, et al. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2015-212232

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