

## Case Report

# A Case of Contact Dermatitis and Cellulitis After a Second Temporary Henna Tattoo

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### Abstract

Temporary tattoos made with Indian henna have become very popular. As a result, reports of allergic contact dermatitis from a temporary henna tattoo have increased. Presently described is the case of a 15-year-old boy who developed contact dermatitis and cellulitis after receiving a second temporary henna tattoo. He was treated with local and systemic medication. There was persistent hyperpigmentation at the tattoo site 15 days after the application. Allergic contact dermatitis from temporary tattoos, especially PPD, is a growing problem worldwide. Cross-reaction to related compounds and permanent skin changes are a frequent consequence of sensitization to this significant allergen.

**Keywords:** Allergic contact dermatitis, henna, temporary henna tattoo

Temporary tattoos made by using Indian henna have become popular among all people. The reports of allergic contact dermatitis to temporary henna tattoos have been increasing and it may result in a permanent scar, pigmentary change and problems with contact sensitization.<sup>[1,2]</sup>

### Case Report

A fifteen-year-old boy was admitted with the left side of the neck with redness, swelling and bleeding. It was learned that two days ago a temporary tattoo figure was processed by using the Indian henna; and the figure started to scratch, swell and bleed from the vesiculopapular lesions. He could not move the neck because of the pain and swelling; and the wound was infected. It was learned that two months ago he processed a temporary tattoo figure on his arm by using the Indian henna, and it was scratched for two days

after one day, but it was not infected and not swollen. In the second encounter with a temporary tattoo, the reaction of the body was increased, and needed to be treated. The patient had no history of eczema and had no other relevant past medical history or medications. He had never used hair dye products. The examination revealed that there were 6\*7 cm, painful and infectious, hyperemic maculopapular and vesiculopapular lesions in the area of figure in the left side of the neck (Fig. 1). The patient was evaluated with dermatologists. It was thought that after allergic reaction to tattoo, lesion was infected due to scratching and became cellulitis. Local and systemic antibiotics were used for seven days, local wound care was made, systemic steroid was used for three days and systemic antihistamines used for seven days. At fifteen days later, there was prominent post inflammatory hyperpigmentation over the tattoo (Fig. 2).

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**Figure 1.** Contact dermatitis and cellulite after temporary henna tattoos.



**Figure 2.** Hiperpigmentation at the site of the temporary tattoo.

## Discussion

Temporary Indian tattoos are especially preferred with particularly teenagers and children because it is cheap, painless, easily applicable and disappears in a very short period of time. It is used for hair, skin and nails for religious, traditional and cosmetic reasons. It is a greenish powder made from the leaves of *Lawsonia alba* (family Lythraceae). It is used alone or in combination with other agents, such as para-phenylenediamine (PPD), vinegar, olive oil, coal and clove.<sup>[1]</sup> Especially PPD in these agents is a strong allergen and aggravates the complication risk, including allergic contact dermatitis, scars, keloids, hypo-hyperpigmentation, urticaria, angioedema and anaphylaxis.<sup>[2, 3]</sup> In a review of 48 reported cases of patients with allergic contact der-

matitis to temporary tattoos, all of the 43 cases patch-tests were positive to PPD.<sup>[4]</sup> Post-inflammatory pigmentary changes following allergic contact dermatitis can result in a permanent tattoo like the present case.<sup>[5]</sup>

In our case, the first reaction for the first tattoo was only scratching, but the second was serious for patient. This patient may develop a permanent and increasing sensitization to PPD/henna and related compounds and be severely disadvantaged by contact dermatitis or immediate-type hypersensitivity reactions, if they want to use for the third time. Therefore the agents of temporary henna tattoo should be actively controlled, and the public should be educated about the risk of allergic contact sensitization and of the serious life-long complications.<sup>[6]</sup>

## Disclosures

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## References

1. Özcan D, Seçkin D. A Case of Localized Hypertrichosis Due to Temporary Henna Tattoo. *Turk J Dermatol* 2014;3:164–5.
2. El Habr C, Mégarbané H. Temporary henna tattoos and hypertrichosis: a case report and review of the literature. *J Dermatol Case Rep* 2015;9:36–8.
3. Le Coz CJ, Lefebvre C, Keller F, Grosshans E. Allergic contact dermatitis caused by skin painting (pseudotattooing) with black henna, a mixture of henna and p-phenylenediamine and its derivatives. *Arch Dermatol* 2000;136:1515–7.
4. Onder M, Atahan CA CA, Oztaş P, Oztaş MO. Temporary henna tattoo reactions in children. *Int J Dermatol* 2001;40:577–9.
5. Lewin PK. Temporary henna tattoo with permanent scarification. *CMAJ* 1999;160:310.
6. Matulich J, Sullivan J. A temporary henna tattoo causing hair and clothing dye allergy. *Contact Dermatitis* 2005;53:33–6.