Abstract
Temporary henna tattoos or pseudotattoos have become increasingly widespread among children and adolescent. A generalized skin reaction, type erythema multiforme-like reaction is unusual, and rarely reported. We describe the case of a 7-year-old boy who reported erythematous papular bull’s-eye shaped lesions and consolidated edema primarily in the upper and lower extremities. These lesions were compatibles with erythema multiforme-like reaction. He also showed an erythematous-eczematous lesion on his leg, shaped like a dolphin. In this area, a temporary henna tattoo was painted 1-month earlier. Patch test was positive for paraphenylenediamine (PPD). Skin reactions due to henna are rare. Most of the reactions are due to additives, especially PPD, an aniline derivative, which is added to speed up the process of skin dyeing and to give a darker brown to black color (“black” henna). As henna tattoos are becoming increasingly popular, prevention requires the annual provision of information to consumers, especially young people and their parents.

Key Words: Erythema multiforme, paraphenylenediamine, tattooing

Introduction
Temporary henna tattoos or pseudotattoo have become increasingly widespread among children and adolescent, as a safe and economic alternative to permanent tattoos. It is well-known that allergic skin reactions to natural henna are rare, due to its extremely low rate of sensitization. In India, North of Africa, China, and Egypt, it is used in weddings and religious ceremonies; in occident, it is used to dye hair and cosmetics. Paraphenylenediamine (PPD), a powerful allergen, is added to the henna tattoo mixtures (“black" henna tattoo) to decrease application time and intensify the color. Allergic contact dermatitis to PPD is seen with increasing frequency in children.

Case Report
We describe the case of a 7-year-old boy who reported erythematous papular bull’s-eye shaped lesions and consolidated edema primarily in the upper and lower extremities [Figure 1]. He also showed an erythematous-eczematous lesion on his leg, shaped like a dolphin [Figure 2], and lesions compatible with erythema multiforme-like reaction. 1-month earlier, a temporary henna tattoo was painted in this area.

Patch tests were performed, and we observed a high sensitivity after 48 h and moderate after 96 h. We reported a positive reaction to PPD. Patient was treated successfully with topical therapy using mid-strength corticosteroids. The patient developed a long-lasting residual hyperpigmentation in the tattoo area.

Discussion
Henna has been used to paint the skin for adornment and religious reasons for 9000 years and in over 60 countries. Christians, Jews, Muslims, Hindus, and Buddhists have used henna as part of their religious customs. The henna is a flowering plant native to Northern Africa, Western and Southern Asia in semi-arid zones, used since antiquity to dye skin. It has a great affinity for keratinocytes, and it is used to create temporary tattoos, without it being necessary to puncture the skin.[1-7]

Natural henna use rarely causes skin reactions, but “black” henna contains an ingredient in addition to pure henna to achieve its ebony color. In most cases, this added ingredient is PPD, a powerful sensitizer that should not be directly applied to the skin as it may cause mild contact dermatitis.[2] One of the most dangerous applications of this chemical is when it is added to henna because the
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With the increasing popularity of henna tattoos, an allergy to paraphenylenediamine (PPD) in temporary tattoos can occur. PPD is applied while the tattoo is still in its oxidation process, and its potential as allergen is increased. When added to henna, the concentration of PPD is often much higher than what is approved for use in hair dyes.

Erythema multiforme-like secondary to PPD is rarely observed. The first case was reported only a few years ago. The cause of the sensitivity to PPD is unknown; it is believed that the mechanism involved in the pathogenesis may be a reaction mediated by type III immune complexes and associated with type IV retard hypersensitivity.

Various topicals allergens cause erythema multiforme, including topical drugs such as corticosteroids, nonsteroidal anti-inflammatory drugs, iodine povidone, imiquimod; rubber gloves; nickel and herbicides.

Three possible causes of the residual hypopigmentation have been described: A reduction in melanin synthesis, selective destruction of the melanocytes, or photoleukomelanodermitis due to pigment blocking.

As henna tattoos are becoming increasingly popular, prevention requires the provision of information to consumers, especially young people and their parents. It is important for the population to be aware of this circumstance and the risk entailed by sensitization to PPD.

To conclude, we believe that temporary black henna tattooing should be controlled by health authority legislation to minimize the appearance of new cases of reaction to PPD and the serious and permanent consequences we have presented.

**What is new?**

Erythema multiforme-like secondary to paraphenylenediamine (PPD) is rarely observed. It is important for the population to be aware of the risk entailed by sensitization to PPD due to popular henna tattoos.

**References**


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