

Black Henna Temporary Tattoo: A Case of Sometimes Debilitating Dermatological Complication

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Abstract

Case Report

In Africa, henna tattooing is generally practiced on the hands and feet during ceremonies such as weddings and baptisms. Many allergic reactions including allergic contact dermatitis have been described, not directly linked to pure henna, but especially to the addition of para-phenylenediamine. We report the case of a 35-year-old female patient who presented with allergic contact dermatitis following the application of a black henna tattoo. A 35-year-old woman presented with very itchy vesiculobullous lesions on the backs of the hands and forearms with a burning sensation 48 hours after the application of a black henna tattoo containing paraphenylenediamine (PPD) vesiculo-bullous, edematous lesions which sat at the tattoo site and exactly followed the initial design on the hands and forearms. The diagnosis retained was contact dermatitis allergic to black henna. Black henna tattooing is an ancient practice, responsible for a large number of allergic contact dermatitis due to the various products mixed with henna. It is therefore important that there be information, especially among young people, about the skin risks of this practice.

Keywords: allergic contact, black henna tattoo, para-phenylenediamine, vesiculobullous lesions.

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INTRODUCTION

Henna has been used for centuries for body adornment in various cultures and civilizations, primarily in Southwest Asia. (India, Sri Lanka), in North Africa (Maghreb), in the Horn of Africa and in the Middle East [1].

In Africa, henna tattooing is usually performed on the hands and feet during ceremonies such as weddings and baptisms [2].

To obtain the raven black tint, ingredients are added, mainly para- phenylenediamine (PPD) [1].

Many allergic reactions including allergic contact dermatitis have been described, not directly

related to pure henna, but especially to the addition of paraphenylenediamine [3].

We report the case of a 35-year-old female patient who presented with allergic contact dermatitis following the application of a black henna tattoo.

OBSERVATION

A 35-year-old woman presented with very itchy vesiculobullous lesions on the backs of the hands and forearms with a burning sensation 48 hours after the application of a black henna tattoo containing paraphenylenediamine (PPD). There was no notion of initial trauma and the patient had no particular history. The physical examination found vesiculobullous, edematous lesions which sat at the tattoo site and exactly followed the initial design at the level of the

hands and forearms (Figure). The rest of the clinical examination was unremarkable. The diagnosis retained was allergic contact dermatitis to black henna. Allergological tests were not carried out due to a lack of resources. The patient was put under topical care and

dermocorticoids (Dermoval cream) for ten days, which led to a very good clinical evolution and total regression of the lesions. The patient was informed of the possibility of a recurrence in the event of subsequent contact with henna.



Figure: Vesiculo-bullous rash strictly localized at the tattoo site on the hands and forearms

DISCUSSION

To our knowledge, this is the first case of allergic contact dermatitis linked to black henna described at the hospital in Mopti (Mali). Henna tattooing has been used for centuries in various cultures: Jewish, Christian, Muslim, Hindu and Buddhist for ritual, social or aesthetic purposes at events such as weddings [4]. In Africa, it is usually performed on the hands and feet during ceremonies like weddings and baptisms [2]. The choice of this practice lies in its ease of application, the obtaining of a blacker tattoo, the acceleration of the drying process (a few minutes to 2 hours), the total absence of pain during its application and the no need for post-application care [2, 3, 5].

However, over the past few years, there has been a repetition of incidents and accidents. Indeed, since the 2000s, more and more publications around the world have reported the side effects of labile black henna tattooing. The most reported reactions are most often allergic contact dermatitis [2, 5], not directly linked to pure henna, but especially to the addition of other dyes such as paraphenylenediamine (PPD) [3] papulo-vesicular rash, more or less itchy, sometimes painful and disabling, strictly localized at the site of the tattoo, of variable severity but which can go as far as a bullous eruption. Very rarely, general signs, even life-threatening, have been reported [3].

The time to onset after application of the tattoo makes it possible to discriminate primary sensitization to paraphenylenediamine (PPD) during tattooing from reactivation by prior sensitization. It is estimated that contact dermatitis takes between 7 and 15 days to appear when a new allergen is introduced. The delay is shortened to 48 hours when the subject has already had prior contact with the PPD. A history of occupational exposure to PPD, hair dyes, previous henna tattooing, or application of a cross-allergen to the skin should be systematically sought. However, PPD is such a potent sensitizer that it can cause a reaction within 48–72 hours without prior sensitization [3, 6]. Over the long term, hypertrophic/keloid scars or transient or permanent pigmentary disorders (hyper- or hypopigmentation) drawing “negatively” the temporary tattoo may persist and induce contact sensitization to various products (PPD, hair dyes, textile dyes, thiuram [7, 8]. Explorations essentially consist of carrying out patch tests (PT) sometime after the acute episode to assess the state of sensitization. They usually show a strongly positive vesicubullous reaction to PPD revealing a strong sensitization to this product. The interest of PPD patch tests is called into question because they are positive in more than 80% of patients with dermatitis of contact after henna tattooing [9]. Moreover, the risk “explosive” reaction with bubbles and erosions local communities during the tests as well as that of raising awareness of the PPD and other allergens induce greater caution [9, 10].

CONCLUSION

Black henna tattooing is an ancient practice, responsible for a large number of allergic contact dermatitis because of the various products mixed with henna. It is therefore important that there be information, especially among young people, about the skin risks of this practice.

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