

Vermilion hypopigmentation at an unusual site

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Introduction

Vermilion or *kumkum* powder is offered in south Indian Hindu temples as 'prasadam' (consecrated temple food) as a blessing especially for the female deity. It is both commercially available and homemade with the main ingredients being starch or chalk powder, turmeric powder, and azo dyes. Most women and some men apply this as a small round patch or as a horizontal or linear streak over the centre of the forehead. The remaining powder sticking to the finger tip is often applied by women over the hollow of the neck and over the sacred *Thali* (a chain with a gold coin or a thread soaked in turmeric paste tied around the neck at the time of marriage) that comes in contact with the chest and abdomen. Dermatitis and contact hypopigmentation is common at all these sites.

Case Report

An 18-year-old south Indian Hindu girl presented with a 6-month history of an asymptomatic small round white

patch on the front of her neck. She had the habit of wearing a sticker bindi on her forehead and applying the sacred vermilion powder over the front of the neck. She noticed gradual loss of skin colour on her neck where she had been applying the vermilion. There was no change in the forehead at the site of the bindi.

Examination showed a well 1-cm demarcated, round patch of depigmentation over the anterior hollow of the neck (Fig. 1). There were no other patches of depigmentation in her skin.

Gradual repigmentation started after she stopped application of vermilion. Complete repigmentation occurred after topical moderately potent steroid application.

Discussion

Vermilion or *kumkum*, a red powder ranging from bright ruby red to a dark dusky red colour is a unique cultural symbol of south Indians as a blessing from God, religious heads and elders in the family, as well as a mark and pride of married women. There are many ingredients in the commercially available red vermilion powder of which the main pigments include various azo dyes, coal tar dyes, toluidine red, erythrosine, lithol red calcium salt, turmeric powder, together with fragrances, groundnut oil, tragacanth gum, parabens, and canaga oil (1,2). It is also prepared at home by alkalizing pure turmeric powder. The most common cause of cosmetic dermatoses in south India is vermilion dermatitis causing pigmented cosmetic dermatitis (1,3). Ingredients responsible for contact dermatitis to vermilion powder include Brilliant Lake Red R, Sudan I, amino benzene, and canaga oil(4).



Fig. 1. The round patch of depigmentation on the front of the neck.

Contact hypopigmentation occurs without preceding inflammation by direct melanocytotoxic effect of certain chemicals. Azo dyes in vermilion powder are known to produce contact hypopigmentation (5). Contact dermatitis and contact hypopigmentation over the forehead and the frontal hair margin are common and widely reported. The habit of applying vermilion over the anterior hollow of neck after visiting a temple or a religious ceremony is common among south Indian women. Contact dermatitis and contact hypopigmentation at this site is favoured by the retention of sweat in the shallow well created of anterior hollow of the neck.

Our patient did not develop contact dermatitis to the sticker bindi on the forehead, but developed contact hypopigmentation to vermilion powder applied on the anterior hollow of neck aided by sweat retention. Similar hypopigmentation can occur in the chest and abdomen, where the sacred Thali with vermilion powder contacts the skin.

This case is reported for the uncommon site of contact hypopigmentation to vermilion, and to highlight the fact that the sweat retention in the anterior hollow of neck may be a factor.

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