



Letter to the Editor

Mangalasutra dermatitis-A cultural dermatosis in India

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Dear Sir,

Cultural dermatoses often occur in specific patterns. It gives a diagnostic clue to the possible site of contact of the allergen. Dermatologists must educate themselves about “cultural dermatology” and ask direct questions to the patients about the same.^[1] We describe a patient with contact dermatitis due to *mangalasutra* and added components.

A 60-year-old female homemaker presented to us with pruritic pigmented skin lesions over the neck and chest for the past one year. The patient was wearing a plastic thread necklace with all the components of *mangalasutra* around the neck. The metallic ornaments and beads in the *mangalasutra* thread were extending up to the mid-chest. She stopped wearing them two months back due to pruritic skin lesions over the same area after consultation. She also gave a history of turmeric application over the thread and had stopped applying it recently because of pruritic skin lesions over the place. No other family member had similar complaints. On physical examination, multiple shiny lichenoid papules coalescing to form plaques with scaling and pigmentation were noted along the neck and the central chest (Figures 1–3). In the epigastric area, the lesions had become lichenified with the surrounding lichenoid papular eruption. The lesions were distributed along the area of contact of the chain. No other skin lesions were observed.

We considered a clinical diagnosis of contact dermatitis to *thali* thread, turmeric, or metal. The patient underwent patch testing with Indian standard series patch testing with a set of allergens and the patient’s own materials (thread and turmeric). A piece of the thread was soaked in normal saline for 20 minutes and then patch tested using a Finn chamber. The readings were taken after 48 and 96 hours. The patient was found to be positive (1+) to thread. Indian Standard Series (ISS) allergens and turmeric didn’t show any reaction.

Thread has an important place in the various socio-religious practices in India. It is worn in the form of *mangalasutra* (*thali* thread) around the neck, the sacred *janeu* thread over the chest, drawstrings worn around the waist to secure the clothes, and *araijan kayiru* (worn by children around the waist). These cultural practices lead to various dermatoses due to contact sensitization, frictional forces, or occlusion. They can also aggravate pre-existing dermatoses such as dermatophyte infection, pressure leukoderma, frictional lichenoid dermatitis around waist (drawstring dermatitis), or lichen planus (due to koebnerisation).^[2]

In India, the holy thread, referred to as the *mangalasutra*, is tied as a symbol of marriage around the bride’s neck during the wedding. Turmeric is applied over these threads during the wedding ritual. The thread can also have metallic ornaments. The thread, turmeric, or metallic ornament can contribute to the development of contact dermatitis.

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Figure 1: Multiple lichenoid papules coalescing to form plaques present over the left neck linearly distributed in a well-defined manner along the *thali* thread.



Figure 2: Multiple lichenoid papules coalescing to form plaques present over the left chest and left para-median intermammary area lying in close contact with knots of the *thali* thread.



Figure 3: Well-defined lichenified plaque surrounded by multiple lichenoid papules present over the upper abdomen over areas in contact with the *thali* thread and metal ornaments.

These threads are usually made of natural fibers and are colored with azo dyes. However, the composition of these ceremonial threads can change with different cultures and places. In recent times, these threads are being synthesized using synthetic plastic materials, as seen in our patient. Azo and anthraquinone dyes and formaldehyde resins are some of the important causes of such thread dermatitis.^[3] One of the challenges while dealing with such materials is that the manufacturers don't label the dyes. In such cases, patch testing needs to be done using fabric, extracts, or textile series.^[4]

Turmeric (*Curcuma longa*) is a yellow spice used in South India for its flavor and medicinal properties.^[5] Curcumin is the main ingredient in turmeric. It is also present in other products such as *kumkum*, disinfectants, food coloring, milled spices, and cosmetic creams. Indian women smear turmeric over the *mangalasutra* regularly. Pigmented contact dermatitis can occur due to incomplete washing off of the turmeric from the *thali* thread.

As seen in our case, clinical suspicion of contact dermatitis to the thread should always be followed by a patch test. The unilateral distribution of the lesions noticed in our patient

might be due to behavioral traits or clothing style (saree pallu). The dermatologist must be aware of thread dermatitis, its causative allergen, and issue appropriate allergen checklist for the same. The panel should include thread material per se, materials such as turmeric, which are smeared on it, and metal ornaments that are worn alongside the *mangalasutra*. More studies are needed on the chromatographic analysis of the thread for finding out novel allergens where the patch test series fails in identifying the appropriate substance.

Declaration of patient consent

Patient's consent not required as patient's identity is not disclosed or compromised.

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Conflicts of interest

Dr. Devinder Mohan Thappa is the Editor-In-Chief of this journal.

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