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Morphea Due to Waxing at a Salon: The First Case Report

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Dear Editor,

Morphea, a relatively rare sclerosing condition, involves skin and the tissues beneath it. It's characteristic feature is the fibrosis of the skin, the underlying subcutaneous tissue and in rare instances of the underlying fascia, muscle or bone [1-4]. In this article, we have described a unique case of circumscribed morphea following waxing at a salon. Despite a meticulous review of medical literature in English language using PubMed, we could not find any case of morphea due to waxing. This prompted us to report this case.

A 33-year-old male visited to our dermatology clinic. His chief complaint was hyperpigmentation and thickening of the skin over his back for the past two years. He had done waxing at a salon for his hypertrichosis over back as suggested by friends. Hot waxing (soft type) was done using stripping method. Day after waxing, he developed redness, itching and mild pain over the right upper back followed by the development of flat reddish skin lesion. The lesion progressed with time and in about one month turned into a brownish thickened plaque. Since then he didn't observe any enlargement of the lesion. He denied any history of similar lesions on other body parts.

Examination revealed a single well-defined brownish indurated plaque measuring 10×7 cm on the right upper back (Figure 1). The borders of the plaque were irregular. The surface of the plaque was dry with loss of hair. The skin over the lesion was indurated with slight atrophy at places. Clinical examination did not reveal any anesthesia/hypoesthesia in the plaque. The examination of nails,



Figure 1. Brownish colored indurated plaque on the right upper back. The surface of plaque looks dry with loss of hair. Note the hypertrichosis over the unaffected skin



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mucous membranes and hair was unremarkable. Review of systems including examination of peripheral nerves was normal.

Routine laboratory tests including the test for anti-nuclear antibody and Borrelia serology were unremarkable. Skin biopsy showed epidermal atrophy with blunting of rete ridges. There was mild-moderate perivascular lymphocytic and plasma cell infiltrates in the dermis. Dense bundles of collagen were seen in deeper dermis. Loss of skin appendages was also noticed (Figure 2). Based on history and clinical examination and further supported by histopathology of skin biopsy, the diagnosis of circumscribed morphea due to waxing was made. He was prescribed topical tacrolimus 0.1% ointment, to be applied twice a day and is under follow up.

Circumscribed morphea is defined when single or multiple round or oval lesions are present, not amounting to generalized disease. It has been divided into two types: Superficial type where the disease is limited to epidermis and dermis and deep type in which inflammation and sclerosis extend up to subcutaneous tissue, fascia or muscle [1,5]. The histopathological changes in the present case extended up to the reticular dermis, suggesting the superficial type.

The etiology of morphea is not clear till date. In susceptible individuals, various predisposing factors have been proposed to cause the development of morphea. These include trauma (blunt, surgical, penetrating, persistent friction), vaccinations (measles, mumps and rubella; bacilli Calmette-Guérin, hepatitis B, diphtheria, tetanus, pneumococcus, pertussis), injections of vitamin B12 and K, immobilization, tight undergarments, previous herpes zoster infection, diagnostic X-ray, radiotherapy, several drugs, and probably Borrelia infection [2-4,6]. Waxing as an etiological

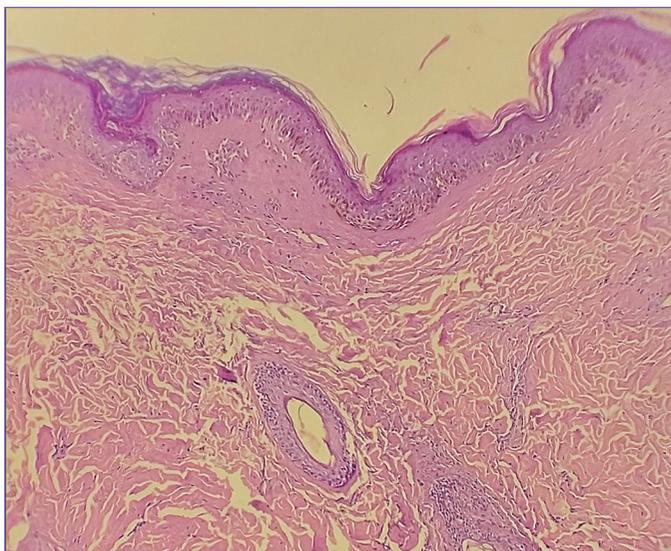


Figure 2. There is epidermal atrophy with blunting of rete ridges. Mild to moderate perivascular lymphocytic infiltrate along with dense bundles of collagen are seen in dermis (HE×10x)

factor for the development of morphea has not been described in literature. Some authors have suggested that trauma induces an aberrant wound healing response accompanied by up-regulation of endogenous toll-like receptor ligands. This causes enhancing of innate immune signal pathways thereby causing activation of fibroblasts and leading to scleroderma [7].

A case of circumscribed morphea has been reported in a female after wearing electronic slim belt for abdominal obesity in which the authors proposed that the persistent pressure and irritation due to the wearing of slim belt together with local heat might have caused morphea [2]. We speculate that the trauma caused by stripping during waxing in collaboration with the heat generated by the hot wax might be the reason for inducing morphea in the present case. Since, morphea following waxing has not been reported before, hence we were obliged to present this novel case.

Ethics

Informed Consent: The authors confirm that they have received all appropriate patient informed consent form.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: T.A., R.F., Concept: T.A., R.F., M.S., Design: T.A., R.F., M.S., Data Collection or Processing: T.A., R.F., M.S., Analysis or Interpretation: T.A., M.S., Literature Search: T.A., R.F., Writing: T.A., M.S.

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