Post Herpetic Itch Leading to Frictional Alopecia of Eyebrow and Scalp-A Hitherto Undescribed Phenomenon

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Abstract

Post herpetic itch (PHI) is a less commonly reported sequela of herpes zoster. It can begin upon the resolution of the lesions or several weeks later. PHI is neuropathic in nature and is said to be caused by neural injury in the form of demyelination of itch-transmitting nerve fibers in the skin. The majority of PHI resolves over weeks to months with symptomatic treatment. We report a case of PHI resulting in frictional alopecia of eyebrows and scalp due to frequent rubbing of the skin and hairs secondary to bothersome neuropathic itch.

Keywords: *Alopecia, eyebrow, frictional alopecia, post herpetic itch, trichoscopy*

Introduction

Herpes zoster can lead to damage to nerve fibers that mediate itch and pain sensations in the skin leading to the sequelae such as post herpetic itch (PHI) and post herpetic neuralgia (PHN). PHI is a less-reported sequel in patients recovering from herpes zoster. We herein report a case of PHI developing frictional alopecia over the affected eyebrow and scalp due to constant rubbing of the involved skin and hairs.

Case Report

A 52-year-old woman came to one of us Shyam Verma (SV) with complaints of severe itching on the left side of the face and scalp, which started 3 weeks after an episode of herpes zoster. She complained of loss of eyebrow hair, which she had noticed for the past 10 days. A dermatologist had treated her with 1000 mg of valacyclovir for a week, paracetamol SOS, and fusidic acid cream for the first 10 days, after which she was told to take only 10 mg of cetirizine twice daily and apply fluticasone cream. On examination, there was the involvement of the ophthalmic branch of the trigeminal nerve (V1) with visible loss of the left lateral eyebrow and mild edema around the left eye. The parietal scalp margin above the lateral eyebrow also showed hair loss. Mild scaling and some post-inflammatory hyperpigmentation could be noted in the area [Figure 1]. The itch was bothersome and worse at night, which disturbed her sleep. She constantly rubbed the area instead of scratching it. Dermoscopy of the eyebrow and hair both showed bent hairs, black dots, short broken hairs, empty dots, violaceous dots and globules, and loss of follicular opening suggestive of frictional alopecia [Figure 2]. A diagnosis of PHI with secondary frictional alopecia of the eyebrow and scalp of V1 dermatome was made. Treatment was started with gabapentin 300 mg per day, increased to 900 mg per day within 2 weeks, and continued for a month that resulted in complete resolution of the itch in 6 weeks and appreciable regrowth of hair of the eyebrow and affected scalp.

Discussion/Conclusion

Post herpetic itch (PHI) and post herpetic neuralgia are not uncommonly encountered sequelae of herpes zoster though the latter has been studied more systematically.[1] They can occur with varying intensity together or alone.[2] PHI can begin upon resolution of the lesions or several weeks later. It is not common in the elderly, unlike PHN. The majority of PHI and PHN resolve over weeks to months with symptomatic treatment. However, significant PHI resulting in trauma to the skin or serious decline in the quality of life is only

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Figure 1: Left eyebrow and corresponding temporal scalp, following herpes zoster showing sparse hair of varying length. Post-inflammatory hyperpigmentation following herpes zoster visible

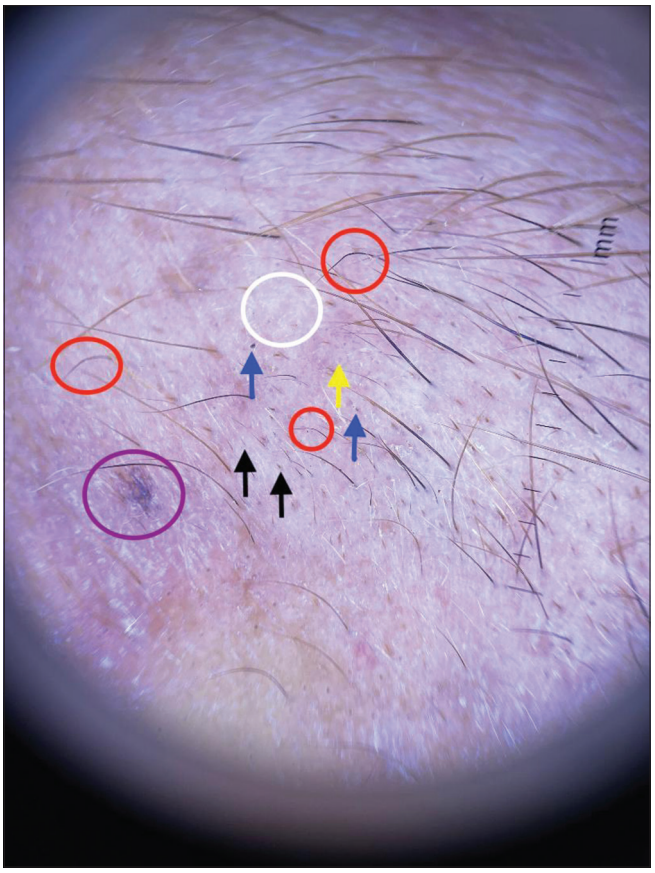

Figure 2: Trichoscopy showing bent hairs (red circle), black dots (blue arrow), short broken hairs (black arrows), empty dots (yellow arrow), violaceous dots and globules (violet circle), loss of follicular opening (white circle) [Dermlite DL4; 10×; polarized]

rarely reported.[1,3] PHI is neuropathic in nature and is said to be caused by neural injury in the form of demyelination of itch, transmitting nerve fibers in the skin.[4] Ectopic discharges due to changes in ion channels and overexcitation of primary neurons are thought to increase the transmission of itch, leading to bothersome neuropathic itching.[4] Frictional alopecia is a type of traumatic alopecia caused by repeated rubbing of the skin underlying the affected hair.[5-7] It has been described on sites such as the lower extremities in the distribution of socks and shoes, and the scalp in gymnasts and joggers.[6,7] Trichoscopy provides useful clues in the diagnosis of frictional alopecia.[7] The presence of bent hairs, short broken hairs, black dots and violet-colored dots, and globules (suggesting post-inflammatory pigment incontinence) aided the diagnosis of frictional alopecia. Additionally, trichorrhexis nodosa has also been described in frictional alopecia, which was absent in our case.[6] Broom hairs have been described with trichoteiromania where hairs become short and broken with longitudinal splits over the entire length of the hair shaft[8] and also in trichoscopy of scalp dysesthesia.[9] Notably, the literature describes broom hairs only on scalp trichoscopy with no report of its occurrence on eyebrows as was in our case too. Further studies are required to ascertain the sensitivity and specificity of broom hairs in the diagnosis of hair disorders.

Conclusion

We believe this is the first description of frictional alopecia of eyebrows and scalp as a complication of severe PHI. We suggest a careful examination of hairs on the face and scalp in the areas affected by herpes zoster to enable detection, counseling, and treatment of such hair loss when present.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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