Monotonous Broom Hairs: A Feature of Trichoteiromania

Ana Luísa João Nélia Cunha Tomás Pessoa e Costa André Lencastre

Dermatology Department, Centro Hospitalar Universitário de Lisboa Central, Lisbon, Portugal

Established Facts

- Trichoteiromania is a self-inflicted hair injury resulting from chronic rubbing of the scalp.
- It is often a diagnosis of exclusion which requires a high index of suspicion.

Novel Insights

- Trichoteiromania is probably an overlooked condition.
- Monotonous clusters of broom hairs may be an important trichoscopic clue for the diagnosis and considered to be a hallmark of this disorder.

Keywords

Trichoteiromania · Broom hairs · Diagnosis

Abstract

Trichoteiromania is a self-inflicted traumatic hair injury, with breaking of the hair shafts resulting from repetitive rubbing of the scalp. We describe a patient with trichoteiromania presenting with one lichenified pruriginous plaque on the scalp, associated with fracture and loss of hair shafts giving the conspicuous appearance of monotonous clusters of broom hairs under trichoscopy, which pointed to the diagnosis. As trichoteiromania can be considered a psychodermatological condition, patient education and a behavioral approach are of paramount importance in the management and prognosis of this disorder.

© 2020 S. Karger AG, Basel

Introduction

Trichoteiromania is a rare type of artificial hair loss in which breaking of the hair shafts results from repetitive rubbing of the scalp [1]. Excessive scratching may also cause lichen simplex chronicus [2]. Trichoscopy is a useful tool for the diagnosis, with broom hairs representing a common feature [3].

Case Presentation

A 37-year-old Caucasian male described a 6-month history of localized alopecia in the left occipital region. The patient's past medical history was unremarkable, namely for eczema, seborrheic dermatitis, psoriasis, or other episodes of alopecia. Physical examination revealed a well-defined isolated patch of nonscarring alopecia on the

Fig. 1. Broken hairs in a rough, thickened, skin-colored scalp, with adjacent normal-appearing hair and scalp.

Fig. 3. Orthokeratotic acanthosis with compact hyperkeratosis on the surface, compatible with lichen simplex chronicus (HE, ×40, vertical section).

Fig. 2. Trichoscopy shows monotonous clusters of broom hairs, with rare erosions and hematic crust and dilated vessels.

Fig. 4. No relevant hair shaft loss, without inflammation, bleeding, or features of cicatricial alopecia (HE, ×40, horizontal section).

left occipital area. Broken hairs measuring approximately 0.5 cm in maximum length rose from a rough, thickened, skin-colored scalp, and there was normal looking hair at its margins as well as on the remaining scalp (Fig. 1). The hair pull test was negative. A striking appearance of monotonous clusters of broom hairs, with rare erosions, hematic crust and dilated vessels, (Fig. 2) was evident on trichoscopy. Further inquiry disclosed that during work as a long-distance driver he inadvertently and repetitively rubbed the affected area, denying significant pruritus. He also denied cutting or pulling the scalp hairs or the application of any topical preparations. Trichoteiromania with secondary lichen simplex chronicus was thus assumed, and dermocorticosteroids were prescribed, along with education and behavioral measures which were promptly accepted. Finally, the histological examination revealed only normal hair follicles and well-formed pilosebaceous units with accompanying interfollicular irregular acanthosis with hyperkeratosis (Fig. 3, 4).

Discussion

In trichoteiromania, single or multiple lesions are found, consisting of lichenified, oftentimes pruritic plaques with broken short hairs. These are 1–2 cm long and macroscopically white-tipped, seen under trichoscopy as longitudinally split hair shafts (brush-like ends or broom hairs), resembling trichoptilosis. Broom hairs are the reflection of continuous frictional damage that gradually erodes the less adherent distal cuticular cell margins [1, 3], and they have recently been considered to be a trichoscopic feature highly suggestive of trichoteiromania [2]. Although they can also be less frequently seen in

trichotillomania (hair plucking) [4], lichen simplex chronicus changes found herein support the diagnosis, illustrating the itch-rub/scratch-itch cycle [1, 2].

While trichotillomania and trichotemnomania are considered to be obsessive-compulsive disorders [5, 6], the psychopathologic substratum of trichoteiromania is less consistent. Nevertheless, scalp dysesthesia in the absence of a specific dermatological disorder has been pointed out as a common denominator [5], whether psychiatric-based or resulting from sympathetic disorders, such as Claude Bernard-Horner syndrome [7]. The patient's scalp indeed showed no underlying pathology, notwithstanding the fact that scalp disease, such as seborrheic dermatitis or dermatophytosis, can eventually aggravate this disorder [8], expectedly by exacerbating the compulsive rubbing behavior.

Standard of care consists of pharmacological symptomatic treatment (topical or intralesional steroids) [8] and behavioral strategies. The latter include patient education and eventually psychotherapy [3]. Oral N-acetylcysteine has been successfully employed to control the urge to scratch in one case, requiring further studies [2].

Conclusion

This case of trichoteiromania highlights the unique observation of crops of broom hairs with striking uniformity which, to the best of our knowledge, is unparalleled

in other types of alopecia or psychotrichological conditions. We therefore emphasize that this precise trichoscopic feature should raise the suspicion of this less common but probably overlooked form of self-inflicted hair injury.

Statement of Ethics

The authors have no ethical conflicts to disclose. The patient has given his consent to publish photos and details of the case.

Disclosure Statement

The authors have no conflicts of interest to declare.

Founding Sources

There are no funding sources.

Author Contributions

Dr. Ana Luísa João contributed to data analysis and interpretation and drafting of the manuscript. Dr. Nélia Cunha contributed to interpretation of data and revision of the article. Dr. Tomás Pessoa e Costa contributed to revision of the article. Dr. André Lencastre contributed to data collection, data analysis and interpretation, and revision of the article.

References

- 1 Freyschmidt-Paul P, Hoffmann R, Happle R. Trichoteiromania. *Eur J Dermatol*. 2001 Jul-Aug;11(4):369–71.
- 2 Salas-Callo CI, Pirmez R. Trichoteiromania: Good Response to Treatment with N-Acetylcysteine. *Skin Appendage Disord*. 2019 Jun;5(4):242–5.
- 3 Banky JP, Sheridan AT, Dawber RP. Weathering of hair in trichoteiromania. *Australas J Dermatol*. 2004 Aug;45(3):186–8.
- 4 Rudnicka L, Rakowska A, Olszewska M, Slowinska M, Czuwara J, Rusek M, et al. Hair shafts. In: Rudnicka L, Olszewska M, Rakowska A, editors. *Atlas of Trichoscopy: Dermoscopy in Hair and Scalp Disease*. London, UK: Springer; 2012. p. 11–46.
- 5 Reich S, Trüeb RM. Trichoteiromanie. *J Dtsch Dermatol Ges*. 2003;1:22–8.
- 6 Chandran NS, Novak J, Iorizzo M, Grimalt R, Oranje AP. Trichotillomania in Children. *Skin Appendage Disord*. 2015 Mar;1(1):18–24.
- 7 Diniz TA, Abuawad YG, Silva FO, Kakizaki P, Valente NY. Trichoteiromania: An Atypical Case Associated with the Claude Bernard Horner Syndrome. *Skin Appendage Disord*. 2018 Oct;4(4):342–4.
- 8 Pereira J. Tricosis compulsivas. *An Bras Dermatol*. 2004 Oct;79(5):609–18.