QUIZ SECTION

MJS PUBLISHING

Acquired Alopecia in an 86-year-old Woman: A Quiz

Raphaëlle CAILLOT[1], Sébastien EYMIEUX[2,3], Emmanuelle BLANCHARD-LAUMONNIER[2,3], Anne-Guillemette MOINEAU[1] and Sophie LEDUCQ[1,4*]
*[1]Department of Dermatology and Reference Centre for Rare Diseases and Vascular Malformations (MAGEC), University Hospital Centre of Tours, Avenue de la République, FR-37044 Tours Cedex 9, [2]IBiSA Electron Microscopy Facility, University Hospital Centre of Tours, Tours, [3]University of Tours, INSERM U1259, Tours, and [4]University of Tours, University of Nantes, INSERM 1246-SPHERE, Tours, France. *E-mail: sophie.leducq@univ-tours.fr*

An 86-year-old woman with mild cognitive disorder described a 3-month history of localized alopecia of the scalp. She had applied a topical antifungal agent for 3 weeks with no improvement. Physical examination showed a 5-cm well-defined isolated patch of non-scarring alopecia of the vertex (Fig. 1A), with no erythema or scales on the scalp. The hair-pull test and Wood's light examination gave negative results. Trichoscopy revealed multiple short broken hairs of different lengths (Fig. 1B, red arrow) and brush-like splitting of the ends (Fig. 1B, blue arrow). The remaining scalp was normal. The woman did not report any pruritus or associated pain and had no general symptoms. Scanning electron microscopy (SEM) of cut hairs showed lesions of evident trichorrhexis nodosa with shaft fractures on 95% of the sample, longitudinal splits, and brush-like extremities (Fig. 1C and D).

What is your diagnosis?

Differential diagnosis 1: Trichoteiromania

Differential diagnosis 2: Trichotillomania

Differential diagnosis 3: Tinea capitis

Differential diagnosis 4: Alopecia areata

See next page for answer.

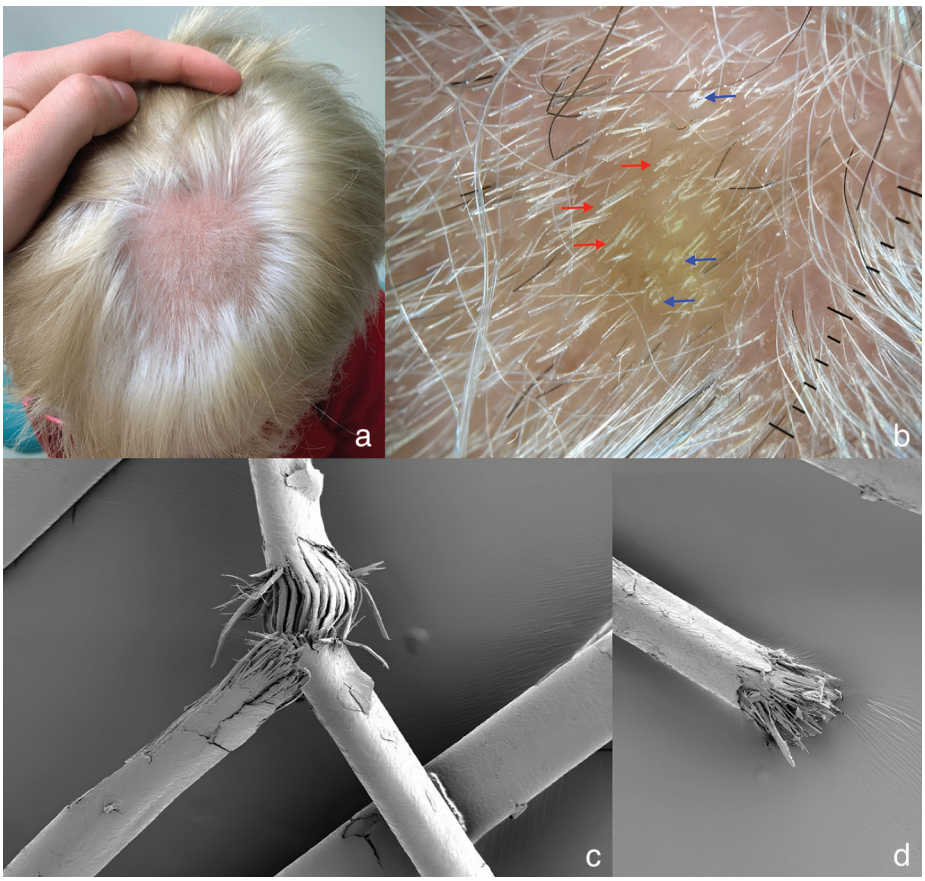

Fig. 1. (a) Clinical image: isolated patch of alopecia on the vertex. (b) Trichoscopy image: blue arrow showing broken hair of different lengths; red arrow showing brush-like extremities. (c) Scanning electron microscopy x 200: hair shaft with an impending fracture along with a broom-like end (d) Scanning electron microscopy x 200: brush-like extremity after the breakage of the hair shaft.

ANSWERS TO QUIZ

Acquired Alopecia in an 86-year-old Woman: A Commentary

Acta Derm Venereol 2024; 104: adv41159.
DOI: 10.2340/actadv.v104.41159

Diagnosis: **Trichoteiromania**

Trichoteiromania is a rare type of non-scarring self-inflicted alopecia. It consists of repeatedly rubbing the scalp, which results in fracturing of the hair shafts (1, 2). This condition is underdiagnosed and frequently mistaken for trichotillomania, a more common disorder, in which patients continuously pull their hair rather than rubbing it. Although the pathophysiology is not clearly established, this condition is considered an obsessive-compulsive disorder (1) and often described in association with a psychiatric or neurological disorder (3). Clinical features include single or multiple well-defined lesions on the scalp with broken short hair. The condition can be associated with pruritus and lichenified plaques. Trichoscopy reveals short hairs with splits, leading to brush-like ends or broom hairs (1) caused by continuous friction on the scalp, gradually eroding the distal cuticular cell margins (2). Broom hairs are also a common feature that can be highlighted on trichoscopy. Nonetheless, when clinical and trichoscopy findings remain uncertain, SEM can be rapidly performed on pathological cut hairs to examine the hair cuticle ultrastructure. In our case, SEM findings strengthened the diagnosis of acquired trichorrhexis nodosa, and the act of rubbing was confirmed by the patient's daughter, who observed this compulsive behaviour in her mother. The patient was not fully aware of her rubbing act because of the cognitive disorder.

The main differential diagnosis is trichotillomania, which demonstrates different trichoscopic signs resulting from the stretching and fracture of hair shafts, such as black dots, coiled hairs, tulip hair, and V-sign. Hair around the patch is often damaged (4). For a well-defined patch of alopecia, alopecia areata can also be considered, but the latter usually features non-scarred focal hairless patches. Trichoscopy shows "exclamation-point" hairs, broken hair, black dots, and yellow dots (4). Finally, tinea capitis is a frequent aetiology of scalp alopecia, with short broken hairs, corkscrew hairs, and comma hairs, which are the most characteristic trichoscopic finding (5).

Treatment of trichoteiromania is challenging and includes behavioural strategies, psychotherapy, and symptomatic treatment such as topical corticosteroids if pruritus is associated. Oral N-acetylcysteine, a drug usually used for obsessive-compulsive disorders, was successfully used in 1 published case (6).

ACKNOWLEDGEMENTS

The authors thank Sonia Georgeault from the Electron Microscopy facility (IBiSA) of Tours University for her technical help.

REFERENCES

1. João AL, Cunha N, Pessoa e Costa T, Lencastre A. Monotonous broom hairs: a feature of trichoteiromania. Skin Appendage Disord 2020; 6: 168–170. https://doi.org/10.1159/000506602
2. Banky JP, Sheridan AT, Dawber RPR. Weathering of hair in trichoteiromania. Australas J Dermatol 2004; 45: 186–188. https://doi.org/10.1111/j.1440-0960.2004.00087.x
3. Diniz TA, Abuawad YG, Silva FO, Kakizaki P, Valente NYS. Trichoteiromania: an atypical case associated with the Claude Bernard-Horner syndrome. Skin Appendage Disord 2018; 4: 342–344. https://doi.org/10.1159/000481575
4. Alessandrini A, Bruni F, Piraccini BM, Starace M. Common causes of hair loss: clinical manifestations, trichoscopy and therapy. J Eur Acad Dermatol Venereol 2021; 35: 629–640. https://doi.org/10.1111/jdv.17079
5. Waśkiel-Burnat A, Rakowska A, Sikora M, Ciechanowicz P, Olszewska M, Rudnicka L. Trichoscopy of tinea capitis: a systematic review. Dermatol Ther 2020; 10: 43–52. https://doi.org/10.1007/s13555-019-00350-1
6. Salas-Callo CI, Pirmez R. Trichoteiromania: good response to treatment with N-acetylcysteine. Skin Appendage Disord 2019; 5: 242–245. https://doi.org/10.1159/000497167