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Case Report

Trichoscopy: A Useful Tool in Diagnosing Temporal Triangular Alopecia

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ABSTRACT

Temporal triangular alopecia (TTA) is a form of localized non-cicatricial alopecia of the scalp. Commonly affecting children, TTA may be present at birth or later in life. The diagnosis of TTA is essentially clinical, as an invasive biopsy may not be practicable in all cases. Trichoscopy is a non-invasive diagnostic imaging technique that allows magnified visualization of surface and subsurface changes in disorders of scalp and hair. Utilizing the technique, a quick and non-invasive confirmation of the clinical diagnosis of TTA is made possible as the disease exhibits distinctive trichoscopic patterns. Further, trichoscopy allows differentiating TTA from other causes of localized non-cicatricial alopecia of scalp, such as alopecia areata which also exhibits distinctive trichoscopic features. Differentiating the two is important as the clinical behaviour and prognosis in either are entirely different. In this report, we describe the trichoscopic features in two children with TTA.

Keywords: Trichoscopy, Temporal triangular alopecia, Vellus hairs, Alopecia areata, Non-scarring alopecia

INTRODUCTION

Temporal triangular alopecia (TTA) or Brauer nevus is a form of localized non-progressive, non-cicatricial alopecia of the scalp, commonly affecting children and adolescents without any gender predilection. It was first described by Sabouraud in 1905.[1] It is clinically characterised by round, oval, or triangular circumscribed patch of alopecia usually affecting the frontotemporal region unilaterally. Onset in adulthood, bilateral frontotemporal involvement and involvement of other areas of the scalp are infrequent. The exact etiopathogenesis of TTA is unclear. Histologically, TTA exhibits vellus hair follicles that may be normal in number or reduced without any associated inflammation.[2] Trichoscopy serves as a quick, handy and non-invasive tool not only in diagnosing TTA but also to differentiate it from alopecia areata that bears quite a resemblance with TTA.[2,3]

CASE REPORT

Herein, we describe two children who presented with patchy area of hair loss involving the scalp [Figure 1]. The first case was a 6-year-old girl presenting with a fairly well-defined oval alopecic patch measuring about 2 × 2 cm on the left frontotemporal region [Figure 1a] from the past 4 years. The second case was a 5-year-old boy with an irregular patch of alopecia measuring about 2 × 3 cm involving the left frontotemporal region [Figure 1c] from the past 3 years. In

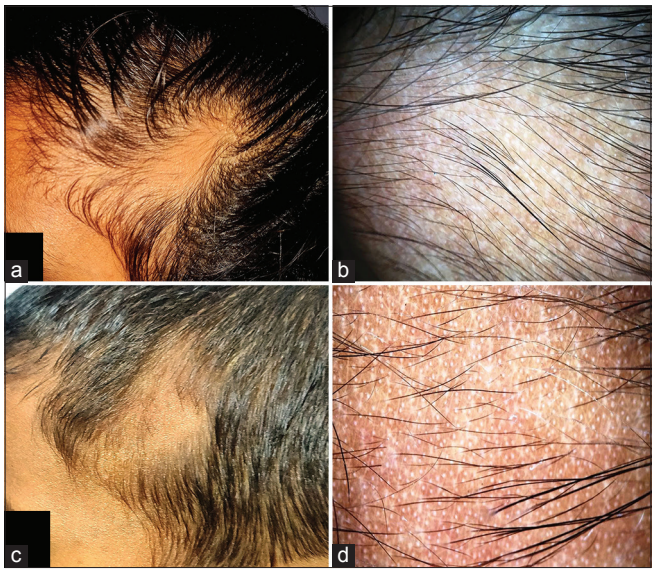

Figure 1: (a) Oval to irregular patchy non-scarring alopecia involving the left fronto-temporal regions in a 6-year-old girl. (b) On trichoscopy, it exhibits sheet of vellus hairs. (c) Similar clinical finding seen in a 5-year-old boy. (d) Trichoscopy in the same boy also showing sheet of vellus hairs. (DermLite™ DL3 [3Gen Inc., San Juan Capistrano, CA, USA], ×10 polarized).

both the cases, the alopecic patches were asymptomatic and developed spontaneously without any preceding trauma. No personal or family history of atopy was noted in either case. The hairless patches in both the children were also non-progressive and without any family history of similar complaints. Trichoscopy under polarized mode in both cases revealed identical features characterized by sheet of vellus hairs of varying lengths with sparseness in the density of the follicles [Figure 1b and d]. Systemic examination and rest of the dermatological examination in both the children were unremarkable. Based on the clinical and trichoscopic findings, the diagnosis of TTA was established.

DISCUSSION

Trichoscopy (dermoscopy of scalp and hair) is a non-invasive, office-based imaging technique employed in the diagnosis of hair and scalp disorders. The diagnosis of these disorders is based on the 'trichoscopic criteria' pertaining to the disorders in conjunction with the clinical aspects of the diseases. The essential trichoscopic features of TTA are numerous short vellus hairs of varying lengths, described as 'carpet of vellus hairs', corresponding to the vellus hair follicles seen on histology.[2-4]

Alopecia areata is a T-cell-mediated autoimmune disorder characterised by varying degrees of non-scarring hair loss affecting any hair bearing area of the body. Especially when acquired, TTA may be difficult to differentiate from alopecia areata involving the scalp. However, the trichoscopic features

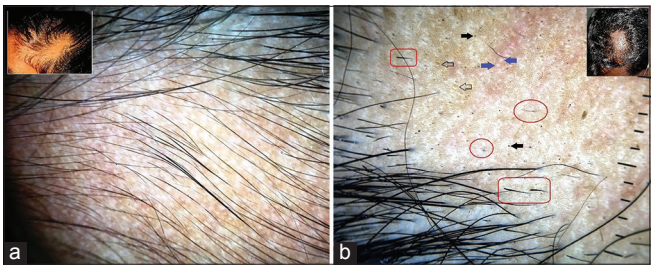

Figure 2: (a) inset: clinical image. Trichoscopy in a case of temporal triangular alopecia showing sheet of vellus hairs. (b) inset: clinical image. A case of alopecia areata with similar location on the scalp showing numerous black dots (black solid arrows), yellow dots (black hollow arrows), short vellus hairs (red circles), exclamation mark hairs (red rectangles) and numerous empty follicles (blue arrows). (DermLite™ DL3 [3Gen Inc., San Juan Capistrano, CA, USA], ×10 polarized).

of alopecia areata are quite characteristic and include black dots (hair shafts broken at the level of scalp surface), yellow dots (empty follicles with enlarged sebaceous glands), broken hairs, exclamation mark hairs (proximally tapering hairs) and empty follicles that are conspicuously absent in TTA [Figure 2]. Although short vellus hairs are also seen in alopecia areata, these usually are less in number and seen in association with one or more of the above features.[5]

The trichoscopic findings described in the index case were conclusive of TTA (in conjunction with the clinical features). Alopecia areata was effectively ruled out due to the absence of typical features of the disease described above.

CONCLUSION

This report highlights the role of trichoscopy as a simple, quick and non-invasive tool in diagnosing TTA. A monomorphic pattern formed predominantly by vellus hairs of varying lengths is conclusive of TTA on trichoscopy and obviates the need for an invasive biopsy. Further, differentiating TTA (especially the acquired form) from alopecia areata is also aided by trichoscopy. Being a benign and non-progressive condition, TTA does not require active treatment unless requested by the patients for cosmetic concerns. On the other hand, alopecia areata is an autoimmune disorder with varied clinical presentation and prognosis requiring active intervention in many of the cases. Hence, the distinction between the two becomes imperative for appropriate patient counselling and management.

Ethical approval

Institutional Review Board approval is not required.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Conflicts of interest

There are no conflicts of interest.

Use of artificial intelligence (AI)-assisted technology for manuscript preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

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