Linear Alopecic Patches in a Child: An Unusual Presentation of Trichotillomania

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Sir,

A 10-year-old girl presented with patches of hair loss involving the midline and the crown area of the scalp for the past 5 months. There was no history of associated pruritis or hair loss in any other areas. Personal and family history were unremarkable.

On examination, the patient had 3 × 10 cm linear patch of nonscarring alopecia on the midline of scalp. Another similar patch of size around 2 × 10 cm was present 3 cm lateral and parallel to the previous patch [Figure 1]. There was no redness or scaling. Hair pull test was negative along the edges of the patch and no exclamation mark hair was observed.

Polarized dermoscopy was done with a handheld Dino-Lite DermaScope (AM7115MZT (5 MP), 70X) and showed hair of different lengths with broken shafts, numerous black dots, perifollicular hemorrhage [Figure 2], flame-shaped hair, vellus hair, V-sign, and pigtail hair [Figure 3]. Biochemical tests including thyroid function tests were within normal limits. Punch biopsy was performed from the edge of the lesion, which revealed thickened and wrinkled fibrous root sheaths with abundant deposits of melanin pigment, extravasated red blood cells within the hair matrix, and trichomalacia [Figure 4]. Although the clinical picture was atypical, a diagnosis of trichotillomania (TTM) was made based on the classical histopathology and dermoscopic findings.

TTM, also known as hair pulling disorder, is characterized by repeated thoughts and activities.[1,2] Clinically, TTM is usually distinctive, with multifocal poorly defined, nonscarring patches of alopecia, broken hairs of different lengths on the surface, irregular borders, and often contralateral to the side of the dominant hand. Dermoscopic features of TTM include coiled hairs with frayed ends, short hairs with trichoptilosis (split ends), black dots, perifollicular hemorrhages, flame hairs, V sign (two hairs broken at the same level and rising from the same follicular opening), broom fibers, tulip hairs, and hair powder.[3,4] All the features except the last two were present in our patient. Biopsy further aids in confirming the diagnosis, which mainly shows empty canals, intraepithelial and

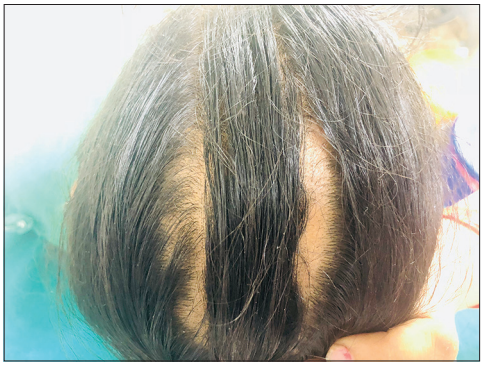

Figure 1: Two linear patches of alopecia on the scalp

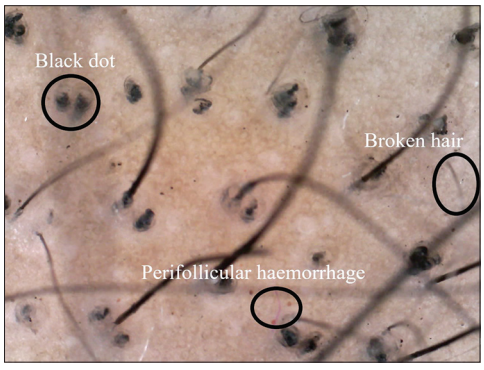

Figure 2: Dermoscopic image showing hair of different lengths with broken shafts, numerous black dots, and perifollicular hemorrhage (Polarized mode, Dino-Lite DermaScope, AM7115MZT (5 MP), 70X)

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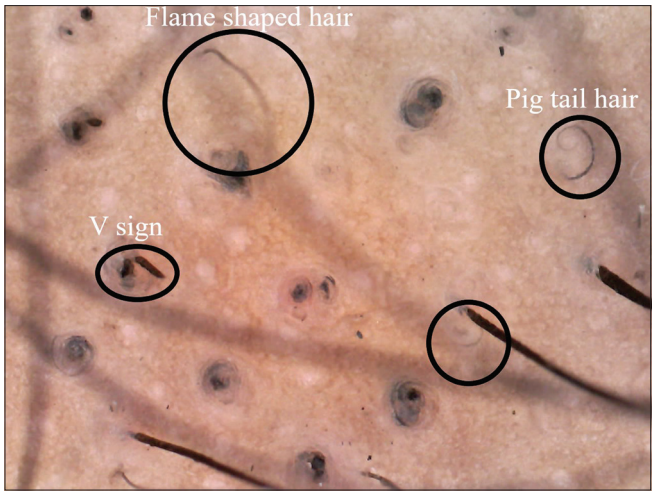

Figure 3: Dermoscopic image showing flame-shaped hair, V-sign, pigtail hair, and vellus hair

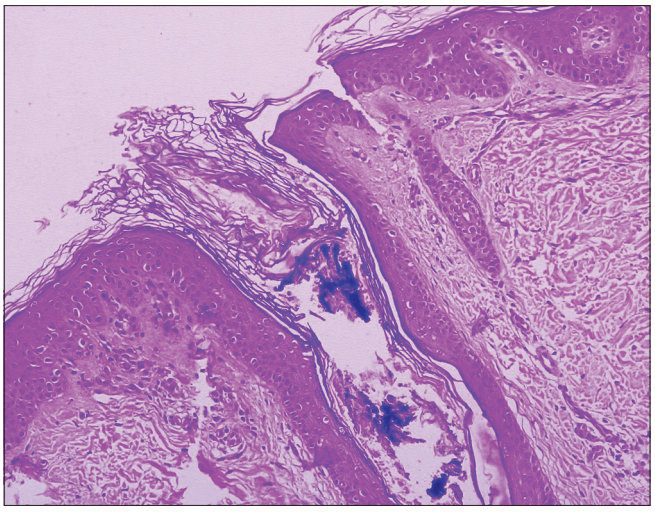

Figure 4: Histopathology of alopecic patch showing trichomalacia, dilated follicular infundibulum showing broken and crumpled hair shaft with clumping of melanin (hematoxylin and eosin × 200)

perifollicular hemorrhages, perifollicular pigment casts, and trichomalacia.[5]

The major differential diagnosis of TTM in children includes alopecia areata, tinea capitis, traction alopecia, and loose anagen syndrome.[2] Physical examination, hair density, hair pull test, and dermoscopy help in differentiating TTM from other dermatological conditions causing hair loss.[3] In alopecia areata there are well-defined smooth areas of alopecia with a positive hair pull test at the border of lesion and exclamation mark hairs on dermoscopy, which are commonly absent in TTM. Tinea capitis often presents with multiple hairs broken off at the scalp level (or a few millimeters above) and dermoscopy may show comma and cork screw hairs. Traction alopecia is the result of sustained pulling on the hair roots as a result of various hair styles such as tight ponytails or braids and hair casts may be seen on dermoscopy.[2] Our patient had classical dermoscopic and histopathological findings of TTM, though the pattern in which alopecia occurred (involving the midline of scalp in a linear pattern) has not been reported previously. We counseled our patient and referred her to psychiatry department for further evaluation and cognitive behavioral therapy.

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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Nil.

Conflicts of interest

There are no conflicts of interest.

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