INTRODUCTION

Woolly hair nevus is an acquired hair shaft abnormality affecting scalp hair with circumscribed patches of hair which are curly, unruly, tightly coiled and smaller in diameter as compared to normal surrounding hair. The affected hair may be light coloured without increase in fragility.[1, 2] This disorder usually manifests at birth or within first 2 years of life.[3] We present a case of progressively evolving multiple woolly hair nevi in a 10-year-old child. Trichoscopy of unruly hairs showed abnormal kinking of hair shafts. Varying diameters of a single hair shaft, damaged cuticle, and trichorrhexis nodosa-like features were observed on hair microscopy. Histopathology showed abnormal bending of hair follicle above the hair bulb and irregularities of inner root sheath near the bulb at the bending. Most of the reported cases of woolly hair nevi had one or two stable patches, but this case presented with four patches which were progressively evolving.

CASE REPORT

A 10-year-old boy presented with multiple circumscribed patches of abnormal hair on scalp [Figure 1a]. The first patch was noticed on vertex at the age of 7 years. This was followed by the development of three new patches during the last 1 year; two on both temporal areas and one on the occipital area. The hairs in the affected area were thicker, curlier, with random hair shaft orientation, and normal underlying scalp. Trichoscopy revealed abnormal kinking of hair shafts [Figure 1b]. Varying diameters of a single hair shaft [Figure 2b], trichorrhexis nodosa-like features [Figure 2c], kinking, and damaged cuticle [Figure 2a], with normal pigmentation were observed on hair microscopy. Color of the affected hair shafts was dark and uniform. These characteristic features were absent on microscopy of normal surrounding hair shafts [Figure 2d]. Histopathology showed abnormal bending of the hair follicle above the hair bulb [Figure 1c], and irregularities of inner root sheath near the bulb at the bending [Figure 1d]. A detailed cutaneous and systemic examination along with cardiac, ophthalmic, dental, skeletal, and nervous systems evaluation did not reveal any gross abnormality.

DISCUSSION

Woolly hair is described as tightly coiled hair covering the whole scalp or part of it, where the hairs tend to be...
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unruly, curly, lighter in color, smaller in diameter, without increase in fragility. It was classified into four categories by Hutchinson et al.\textsuperscript{[3]}

- Hereditary woolly hair (autosomal dominant)
- Familial woolly hair (autosomal recessive)
- Symmetrical circumscribed allotrichia
- Woolly hair nevus.

Woolly hair nevus is a well-circumscribed noninherited patch of woolly hair that affects both the sexes equally.

Woolly hair nevus may be associated with linear epidermal nevus, nevus comedonicus, café-au-lait spots, hemangiomas, multiple nevi, palmoplantar keratoderma, precocious puberty, ocular defects such as persistent pupillary membrane, loss of retinal pigment epithelium, heterochromia iridis, and cardiac, neurologic, auditory, dental, or skeletal defects.\textsuperscript{[4]}

In woolly hair nevus, light microscopy of the hair shaft shows varying findings such as normal or hypopigmentation, partial twists and kinking, abnormal hair cuticle, irregular bore diameter, and features of trauma (damaged cuticle). Dermoscopy may show crawling snake-like appearance with short-wave cycles; such a finding was not evident in this patient.

Varying nonspecific histopathological features have been described in this condition which include normal hair follicles and appendages, curved hair bulbs, miniaturization of hair follicles such as alopecia areata, wavy appearance of hair follicles with perifollicular inflammatory infiltrate, and several involved terminal hair follicles ending in same infundibulum with excessive amount of normal apocrine glands and perifollicular lymphocytic infiltrate similar to those of nevus of Jadassohn.\textsuperscript{[3]} In this case, we observed abnormal bending of hair follicle above the hair bulb and irregularities of inner root sheath near the bulb at the bending.

Although it is mentioned in literature that up to five patches of woolly hair nevi are possible in an individual,\textsuperscript{[2]} most of the reported cases had solitary patch, and this case shows four patches that are still progressing and coalescing with each other. Major hypopigmentation or marked thinning of hair shaft was absent. Trichoscopy findings in this case were consistent with those of other reported cases.

Woolly hair nevi show chronic course. Texture and appearance of affected hair may improve with age.\textsuperscript{[2]} Treatment options are few, but surgical excision with flap reconstruction can be done in selected cases.

**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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