INTRODUCTION

Frictional alopecia is a type of acquired nonscarring alopecia caused due to repetitive friction on the hair-bearing sites.\(^1\) Frictional alopecia on lower extremities can occur due to socks and/or footwear. The typical site of involvement gives a clue to the diagnosis, but it needs to be differentiated from other causes of alopecia. We herein report a case of frictional alopecia due to socks and describe the trichoscopic features.

CASE REPORT

A middle-aged female presented with decrease in the density of hairs over the lower one-third of both legs for the past 1 month. Recurrence of a similar patch of hair loss was reported by the patient every year with the onset of winters and correlated it with the wearing of socks. The patient also complained of mild pruritus in the lesion. Family and personal history was noncontributory. On physical examination, an ill-defined patch of noncicatricial alopecia involving the lower one-third of both legs was noted [Figure 1]. No other cutaneous lesions were appreciated. There was no evidence of varicocities, and peripheral pulses were normal. Rest of the body hairs and scalp hairs revealed no signs of alopecia. Routine hematological and biochemical investigations were normal. Thyroid profile was also normal. Dermoscopy using a Universal Serial Bus (USB) dermatoscope revealed the presence of decreased hair density, bending of hair shafts, broken hairs, coiled hairs, splitting of hair shafts, and sock fibers [Figure 2a and b]. There was absence of black and yellow dots. The patient was reassured, counseled, and advised to wear ankle length socks, if necessary.

DISCUSSION

There is a scarcity of literature on the epidemiology of acquired frictional alopecia. Given the benign and asymptomatic nature of this entity, the actual prevalence may be higher than that reported in literature. Frictional alopecia is a type of anterolateral leg alopecia where the cause of friction is ascertained.\(^2\) Association with...
androgenetic alopecia, peripheral nerve disease, and thyroid dysfunction has been suggested in cases where no frictional cause can be elicited.\[^{3,4}\] Alopecia areata remains a close possibility and needs to be ruled out.\[^{4}\]

The distribution in frictional alopecia either from just below the knees or the mid-calf to the ankles is consistent with either knee-high boot wear or socks. It is more commonly reported in males. The possible explanation for the same may be that women more commonly wear ankle length socks and preferentially shave their legs. The exact pathogenesis remains unclear,\[^{4}\] but the most likely explanation is the stress on hair follicles due to repetitive trauma. Hairs may regrow once the source of friction is removed. However, in chronic cases, the alopecia may persist even when the source is removed. Histology shows no pathological changes.\[^{1}\]

The important clinical differential is alopecia areata. Dermoscopy can be used to differentiate between the two entities. Dermoscopy of alopecia areata shows black dots, yellow dots, short vellous hairs, exclamation mark hairs, and broken hairs.\[^{5,6}\] Frictional alopecia, on the other hand, shows trichoscopic features suggestive of stress to hair in the form of bending of hairs, broken hairs, coiled hairs, and splitting of hair shafts. Treatment of frictional alopecia includes avoidance of the triggering factor and reassurance.

**CONCLUSION**

Frictional alopecia is a fairly common but probably underreported entity. Dermoscopy can serve as an important diagnosing tool in ascertaining the diagnosis and differentiating it from alopecia areata. The patient needs to be worked up in view of various other reported associations in the form of thyroid dysfunction, androgenetic alopecia, peripheral nerve disease, and arterial insufficiency.

**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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