Burnt Matchstick Sign - A new Trichoscopic finding in Trichotillomania

Sir,

Trichoscopy of the scalp often effectively helps in solving the clinical and diagnostic dilemmas faced during diagnosis of a scalp condition. The diagnosis of trichotillomania (TTM) is often met with rejection to accept by the parents and poses as a herculean task to the clinician to convince the patient and the bystanders. Although the gold standard of diagnosis remains to be histopathological evaluation, dermoscopic confirmation of the condition is fast replacing the need for an invasive procedure. Although multiple hair signs have been reported as distinguishing features for TTM when compared to alopecia areata, to the best of our knowledge, “Burnt matchstick” sign has so far not been reported which when correlated with the pathogenesis of TTM may turn out to be of immense diagnostic significance.

The first case is that of an 18-year-old female who presented with patchy loss of hair over the centroparietal area of 2 months duration. History did not reveal any underlying stress or repetitive pulling/rubbing/cutting/twirling of the hair. On enquiry, she initially complained of only itching and denied any deliberate hair pulling at that time. Examination revealed patchy loss of hair with broken hair ends, black dots, and hair varying in different length. There was no evidence of scaling, lice, or nits. Dermoscopic evaluation revealed broken hair ends, trichoptilosis, flame hair, and evidence of broken matchstick appearance on the scalp with scattered and sparse areas of perifollicular hemorrhage [Figure 1].

The second case was that of a 25-year-old married female who was brought by her parents to the outpatient department with extensive loss of hair over the centroparietal area for the past 8–9 months. History revealed increased stress due to family issues preceding the onset of hair loss. Obvious history of pulling/plucking/twirling/cutting/rubbing of the hair was absent.
Unlike the first case, there was no associated itching or irritation or burning sensation before the onset of hair loss. Clinical evaluation demonstrated loss of hair over the centroparietal area almost mimicking a Friar Tuck sign with broken hair, black dots, and hair of varying length. Dermoscopic examination in concurrence with the first case showed evidence of flame hair, broken hair, trichoptilosis, V-sign, and broken matchstick appearance of hair [Figure 2].

In both the cases based on history, clinical examination, and dermoscopic evaluation, the diagnosis of TTM was established which was further managed medically along with counseling.

TTM is a form of traction alopecia resulting from habitual, repetitive removal of one’s own hair.[1] From the point of view of a dermatologist, TTM is self-induced hair loss, resulting from repetitive pulling of one’s own hair and most patients fulfill no other Diagnostic and Statistical Manual of Mental Disorders 4th Edition criteria. The condition may be easily confused with other forms of patchy alopecias wherein comes the importance of trichoscopy – a noninvasive office-based diagnostic tool.

Several common trichoscopy features of TTM have been identified. Decreased hair density, hairs broken at different lengths, short hairs with trichoptilosis (“split ends”), irregular coiled hairs, upright regrowing hairs, and black dots as also perifollicular hemorrhages have already been described.[2-4] Further in 2014 Rakowska et al. described novel signs in dermoscopy of TTM including flame hairs, V-sign, tulip hairs, and hair powder.[7]

We herein describe a novel finding of the burnt matchstick appearance of the hair and consider it to be specific for TTM. A burnt matchstick appearance can be described as dark bulbar proximal tip with a linear stem of variable length. This trichoscopic finding can be extrapolated to the pathogenesis of the condition which involves trauma and traction of hair giving rise to the appearance of the proximal portion of a burnt matchstick. This can be differentiated from a flame hair by being linear in morphology, nonwavy, longer in length, and absence of a conical tip. This dermoscopic feature we consider it to be specific for TTM and helps in differentiating trichotemnomania and teiromania since the latter two do not have any traction involved which is the essence for development of the sign.

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Conflicts of interest
There are no conflicts of interest.

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