

# Case report and essential pearls in early-onset trichotillomania

## Abstract

Early-onset trichotillomania is a challenging diagnosis, but some “clues” could make it easier. Here, besides a good response to the therapeutic approach, some diagnostic pearls are depicted.

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## Case report

A nine-year-old male student born in São Luís, Maranhão, Brazil, was brought by his mother to the Dermatology outpatient department of Federal University of Maranhão, after previous consultations with a pediatrician. He was apparently well until 6 months ago, when his mother observed a progressive picture of patchy hair loss.

On clinical examination, the child was healthy, in good general condition, except for this area of alopecia measuring 10cm in its largest diameter, located in the left parietal region (Figure 1a). His personal record revealed excellent school performance and early literacy (at the age of 4), but, in his family history, it deserved to be highlighted that his father had obsessive compulsive disorder. Regarding dermoscopy, there was a decrease in capillary density, broken and curly hair in varying lengths with tricopytose (“split ends”), and “black dots”.

During this 6-month investigation period, a wide range of tests had been ordered, including a skin biopsy. In this context, nothing worthy of note was observed in his laboratory tests, including blood count, C-reactive protein (CRP), erythrocyte sedimentation rate (ESR) and several markers for autoimmune diseases. On the other hand, his scalp biopsy indicated a non-inflammatory, non-scarring alopecia with follicular damage (trichomalacia) and findings compatible with external trauma, including distortion of the anatomy of the hair follicle and perifollicular and intra-follicular hemorrhage. Also, the number of hair follicles was normal, nonetheless there was an increased anagen/telogen ratio, without significant inflammation.

In view of the clinical, dermoscopic and histological findings, the diagnosis of trichotillomania was proposed and both psychotherapeutic and pharmacological treatments were implemented: escitalopram was prescribed at a dose of 10mg daily and cognitive behavioral therapy was instituted. After two months, the child had improved substantially his self-inflicted impulses, as well as his hair had regrown noticeably. According to his mother, 8 psychotherapy sessions were carried out during this period.

Nowadays, the child is no longer using pharmacological therapy, but he is undergoing quarterly dermatological follow-up and therapy twice a month, without recurrence (Figure 1b).



**Figure 1** (A) First consultation and (B) after 2 months of treatment.

## Discussion

The term trichotillomania was first composed by the French dermatologist Francois Henri Hallopeau in 1889. It derives from the Greek words *thrix* (hair) *tillein* (pulling) *mania* (madness).<sup>1</sup> Patients report feeling an urge and uncontrollable need to pluck their own hair, especially their scalp hair, but it could involve eyebrows, eyelashes, pubic hair or any other part of the body. It is not uncommon for patients to ingest the plucked hair strands or part of them, characterizing trichophagy.<sup>2</sup> The 5<sup>th</sup> edition of Diagnostic and Statistical Manual of Mental Disorders (DSM)<sup>3</sup> classifies trichotillomania as an impulse control disorder and provides criteria for its diagnosis (Table 1). However, these criteria may not be applicable to children.<sup>4</sup>

**Table 1** DSMV diagnostic criteria for trichotillomania

- A. Recurrent pulling out of one's hair, resulting in noticeable hair loss
- B. An increasing sense of tension immediately before pulling out the hair or when attempting to resist the behavior
- C. Pleasure, gratification, or relief when pulling out the hair
- D. The disturbance is not better accounted for by another mental disorder and is not caused by a general medical condition (e.g., a dermatologic condition)
- E. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning

**DSMV Fourth edition of diagnosis and statistical**

Trichotillomania has a prevalence of 0.6% among students, has a bimodal age of onset and is classified into two groups: early-onset and late-onset. The first one occurs between 2 and 10 years of age, is commoner in boys (62%), and has a benign self-limiting course (pearl 1). Although these patients could exhibit other habit disorders (such as nail biting, thumb sucking, and skin picking), they rarely present any serious psychopathology.<sup>5</sup> On the other hand, late onset type begins during adolescence, is commoner in girls, worsens during adulthood, and may be attributed to difficult parent adolescent relationships, bullying in school, pubertal body image changes as well as physical and sexual abuse.<sup>6</sup>

Concerning the clinical picture, trichotillomania usually presents as a bizarre shaped patch of incomplete non-scarring hair loss with hairs of uneven length (pearl 2), and the scalp is the most affected site. In this, children pull hair on the side of their dominant hand due to easy accessibility (pearl 3).<sup>7</sup>

Although the previously cited DSM-V criteria may contribute to the suspicion and diagnosis, one important aspect that makes it so complex is that only half of the parents notice the hair pulling behavior in pediatric trichotillomania and, even if they do, many do not believe that their child's own actions are the cause of the hair loss (pearl 4). The fact that children tend to pull their hair when alone or in relaxed surroundings makes their habits less noticeable.<sup>8</sup>

Among the differential diagnoses, the one that deserves more attention is alopecia areata, which can be clinically differentiated by the positive hair pull test at the margins of the patches (pearl 5). However, if the doubt persists, dermoscopy (pearl 6) can be extremely useful and some findings are strongly suggestive of trichotillomania: broken and curly hair in varying lengths with trichoptysis ("split ends"), "black dots", and most recently described "flame hair" (semi-transparent, wavy, and cone-shaped proximal hair residues as a result of pulling anagen hair), and "tulip hair" (short hairs with darker, tulip flower shaped ends). Absence of "exclamation mark hairs" is important since it is almost pathognomonic for alopecia areata.<sup>9</sup>

Sometimes, histological examination can be used to confirm the diagnosis, with specific findings including trichomalacia and pigmented casts (pearl 7). There are several non-specific findings: follicular plugging, decreased number of follicles, decreased number of sebaceous glands, melanoderma, increased number of fibrous tracts and vellus hairs, evidence of hemorrhage, and presence of hair granulomas.<sup>10</sup>

Trichotillomania may be treated combining pharmacologic and nonpharmacologic approaches. Pharmacologic treatment includes lithium salts, tricyclic antidepressants, selective serotonin reuptake

inhibitors, antipsychotics, and *N*-acetylcysteine. Psychotherapeutic treatments include habit reversal therapy, acceptance and commitment therapy, awareness-enhancing monitoring devices, and response inhibition training.<sup>11</sup>

**Table of pearls**

1. Early-onset trichotillomania has a good prognosis
2. Incomplete non-scarring hair loss with hairs of uneven length
3. Usually on the side of dominant hand
4. Only half of the parents notice the hairpulling behavior
5. Hair pull test negative (and positive in alopecia areata)
6. Dermoscopy is an important tool: absence of exclamation mark hairs
7. Histological examination: trichomalacia and pigmented casts

**Conclusion**

Early-onset trichotillomania can offer enormous difficulties in its diagnosis, but by following the diagnostic criteria of DSM-V and observing the listed pearls, many doubts can be resolved, allowing relief to be brought as soon as possible to both child and parents.

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**Conflicts of interest**

We declare no conflict of interest.

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