

Trichotillomania: A Review and Case Report

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Although patients with trichotillomania typically present to dermatologists, the diagnosis and treatment lie in the field of psychiatry. We report an unusual case of a 33-year-old woman with severe trichotillomania. We review common clinical and pathologic findings of this often chronic and socially debilitating disorder. In addition, we discuss treatment options for dermatologists and how collaboration with psychiatrists is the most effective management for these difficult-to-treat patients.

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It has become increasingly apparent that there exists a clinical interface between dermatology and psychiatry. Psychocutaneous medicine has been recognized for decades and includes diseases such as delusions of parasitosis, lichen simplex chronicus, chronic urticaria, body dysmorphic disorder, trichotillomania, psoriasis, and dermatitis artefacta, to name a few. These can be classified as disorders in which the body image is distorted, self-esteem is impaired, comorbid dysregulation of affect exists, and somatopsychic relationships are present, which reflects the emotional toll of chronic skin diseases.¹ Women outnumber men in all the psychocutaneous diseases. For dermatologists, these diseases pose a challenge, especially in treatment. Patients are drained emotionally and can be difficult to manage without the additional help provided by psychologists or psychiatrists. Pharmacology may relieve symptoms only partially, and other nonpharmacologic treatments usually are indicated, including hypnosis, biofeedback, relaxation therapy, and psychotherapy.²

This article reviews trichotillomania from both dermatologic and psychiatric perspectives. It presents the case of a 33-year-old African American woman with multiple family members experiencing trichotillomania. In addition, our patient has pulled out the hair of other family members. Finally, her son developed an area of scalp alopecia as a result of her pulling out his hair. He himself also was developing signs and symptoms consistent with trichotillomania. While a review of the literature revealed a report of several patients pulling out the hair of other family members, no report was found describing alopecia in another person.

Case Report

A 33-year-old African American woman was referred to our dermatology clinic by her primary care physician for evaluation of alopecia. Her chief complaint was a 3-month history of an increasingly repetitive urge to pull out her hair. Previously, her primary care physician had prescribed fluvoxamine; however, she reported no change in her symptoms. She readily admitted to the self-induced nature of the hair pulling. The patient remembered beginning to pull out her hair at the age of 10 or 11 years, upon awakening from a dental procedure that had required sedation. She did not remember this to be a traumatic event; however, she recalled having a sense of increased anxiety. Months before the dental procedure, the patient reported frequent and escalating sexual abuse by her father. This began as fondling and inappropriate touching and progressed to penetration. By the age of 16 years, the abuse was occurring on an almost daily basis. According to the patient, the abuse was never revealed to her mother. She stated that her mother was a "strict disciplinarian" and her knowing about the abuse would only "hurt her mother," whom she loved very much. Indeed, it may be that the hair pulling was an unconscious expression of internal rage toward the mother. In fact, the patient may have been struggling with the possible loss of love

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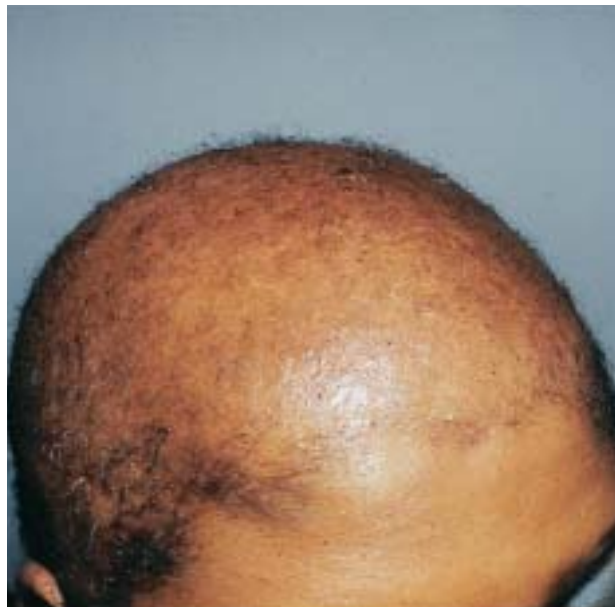


Figure 1. A tonsure pattern of scalp alopecia consisted of a sparse distribution of long and short hairs throughout the scalp, except for a rim of normal-appearing hair at the periphery.



Figure 2. The patient's eyebrows and eyelashes were symmetrically absent.

or fear of punishment by the mother. The abuse finally came to an end when her older sister, who was also being abused, threatened to reveal the abuse to their mother.

While the degree of hair pulling in our patient has waxed and waned since initial onset, an almost global scalp alopecia had been present since shortly after the birth of her first child, 9 years ago. She admitted to pulling out her scalp hair, followed by the eyebrows, eyelashes, extremities, and pubic hair. In addition, she describes a methodical pattern of "sucking out" the root end, which she described as "deveining it," and then eating the root. She described increasing tension before the hair pulling. Also, our patient experiences intense pleasure and relief when the act is completed. She had no other significant medical issues and denied any tics; obsessions; or compulsions, such as checking, counting, or washing.

At the time of evaluation, a tonsure pattern of scalp alopecia was present. This consisted of a sparse distribution of long and short hairs throughout the scalp, except for a rim of normal-appearing hair at the periphery (Figure 1). Eyebrows and eyelashes were symmetrically absent (Figure 2). Although she admitted to having pulled out her pubic hair in the past, she recently began shaving this area. No clinical evidence of an inflammatory, fungal, or scarring process was evident at the time of the physical examination. The dermatologist performed a biopsy

to rule out organic causes of alopecia. Findings revealed a deformed hair shaft, with pigmentary debris in the follicle (Figure 3).

There were several specific aspects of the patient's hair pulling that were particularly striking. The patient reported a family history of hair pulling that included 2 maternal cousins, a maternal aunt, and a maternal grandmother. On several occasions the patient had pulled out the facial hair of her husband and father, with their permissions. Most revealing is the repetitive pulling out of a patch of her son's scalp hair, which she states had a reddish cast at one time. Her son now has an area of scalp alopecia in that region. This was confirmed on physical examination. She was referred to the university's medical-psychiatric clinic, where it was recommended that she begin psychotherapy and increase her dose of fluvoxamine. The psychiatrist also suggested that olanzapine or pimozide be added to the fluvoxamine therapy. Unfortunately, the patient's insurance status precluded psychotherapy, and she subsequently failed to keep several follow-up visits. When we last spoke by telephone, she was still pulling out her hair, which she has done now for almost 22 years.

Comment

Trichotillomania is classified psychiatrically under the impulse control disorders. Dermatologically, it is a cause of alopecia secondary to repeatedly

pulling out one's own hair. Onset can occur at any age but most commonly presents during the pre-teen years. While often a self-limited disorder in children, trichotillomania frequently follows a chronic relapsing course in adults.³ The patient

often is reluctant to admit to a self-inflicted cause. The diagnosis usually can be made by history and physical findings; however, histologic studies are helpful to rule out other causes and to help support the diagnosis.^{4,5} Patients often have a concurrent diagnosis or history of other psychiatric problems, such as depression or anxiety. Although trichotillomania has several similarities with obsessive-compulsive disorder (OCD), it remains a separate clinical diagnosis, with devastating social implications and potentially life-threatening complications if the hair is ingested.

The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* outlines 5 criteria that must be met for the psychiatric diagnosis of trichotillomania: (1) recurrent pulling out one's hair resulting in noticeable hair loss; (2) an increased sense of tension immediately before pulling out hair or when attempting to resist the behavior; (3) pleasure, gratification, or relief when pulling out hair; (4) the disturbance cannot be better accounted for by another mental disorder and is not due to a general medical condition; (5) the disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of function.⁶

The prevalence of trichotillomania has been difficult to establish; however, the incidence is more common than once thought. Christenson et al⁷ found that 0.6% of the college students they studied met *DSM-IV* criteria for trichotillomania, while 2.5% were found to pull out their hair to the point of visible hair loss. Rothbaum and associates⁸ conducted 2 studies with college-aged students and

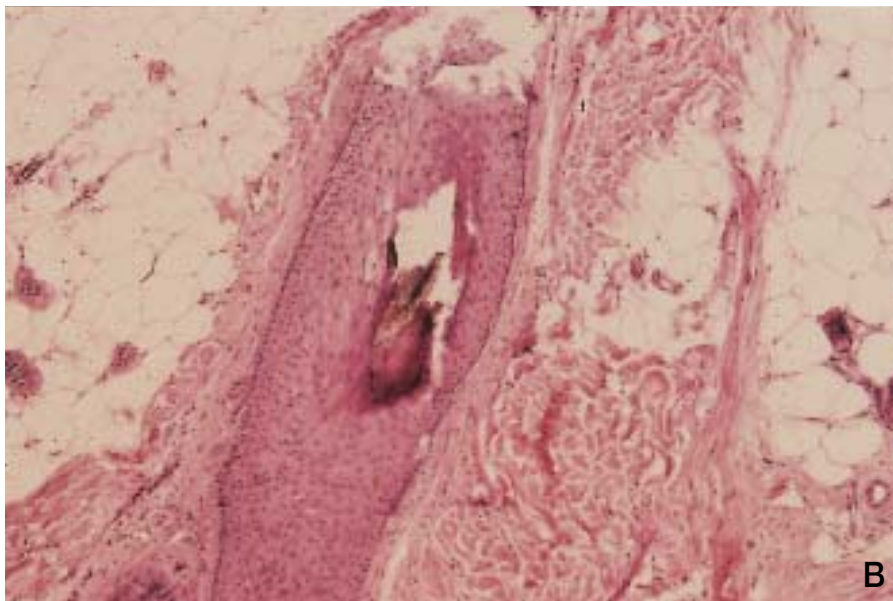
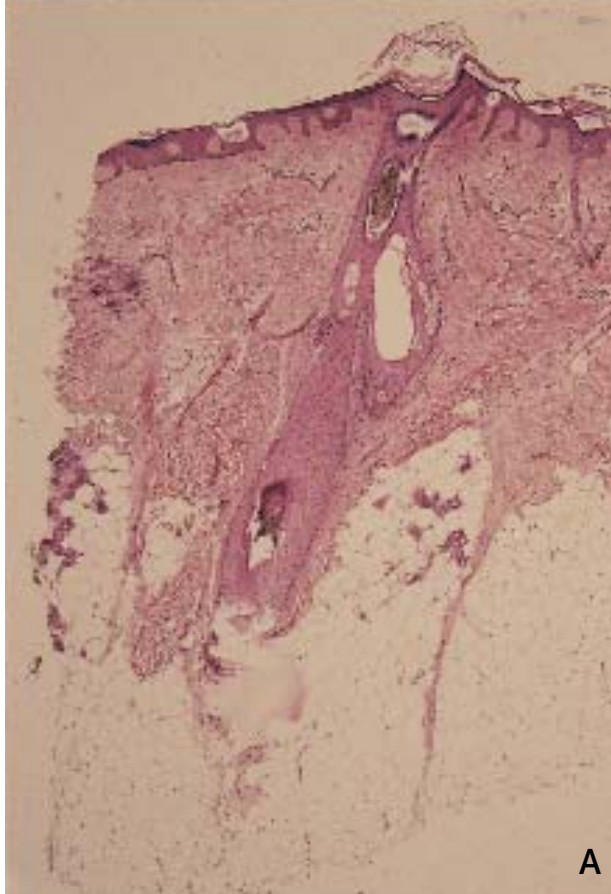


Figure 3. A deformed hair shaft with pigmentary debris in the follicle (A and B) (H&E, original magnifications $\times 4$ and $\times 10$).

found that 0.5% and 1%, respectively, pulled out their hair on a regular basis for other than cosmetic reasons and described significant stress with this activity. However, 10% and 13% of the students admitted to pulling out their hair without any association with stress. Findings like these have led to questioning the rigidity of the *DSM-IV* criteria.

The average age of onset consistently shows that hair pulling is more common in the early teenaged years (11 and 12 years old).^{8,9} A review of the literature found that the onset of hair pulling ranges in age from younger than 1 year to 56 years.^{8,9}

The chronicity of this disorder is supported by studies reporting that alopecia had been present on average 4 to 20 years before presentation.^{8,9} Although school-aged children show equal distribution between genders, adult females present significantly more often than males.⁷ This exaggerated difference in adults is likely multifactorial. For example, hair loss in females may cause more cosmetic concerns. Male hair loss may be more socially acceptable due to male pattern baldness. Patients with trichotillomania typically may develop low self-esteem, poor social and occupational functioning, and poor self-image.

Familial history of hair pulling is mentioned infrequently in the literature. Families of patients with trichotillomania have a higher than average incidence of OCD. However, those patients do not necessarily have a family history of trichotillomania.⁹ A literature search found a letter to the editor reporting the case of a patient with 2 of 13 siblings who were hair pullers.¹⁰ An article by Swedo and Leonard¹¹ found a slightly higher, but not statistically significant, increase in hair pulling of first-degree relatives of patients with trichotillomania. In our patient's case, 4 other family members are reported to be hair pullers.

Some studies comment on an association between the onset of hair pulling and a traumatic or stressful event.^{12,13} Graber and Arndt¹² found that 7% of patients associated their hair pulling with a recent stressful event. Greenberg and Sarner¹³ noted that 26% of patients had had surgery or trauma, and 47% reported a related stressful event. Our patient reportedly began pulling out her hair immediately after a dental procedure. Although now she does not report this as a stressful event, it may have been a traumatic experience at the time. The severe sexual abuse she experienced in childhood also predates her hair pulling by several months. Hair pulling may have various unconscious meanings; for this patient, it could be an outward expression of anger or increased anxiety.

Muller¹⁴ describes the alopecia associated with trichotillomania as having an unnatural patchy,

frequently patterned, ill-defined, or sharply outlined areas of nonscarring hair loss. Classic patterns can be linear patches or even the tonsure appearance as described in our patient. Eyebrow and eyelash involvement is usually symmetric. In a study of 60 adults, Christenson et al³ described an asymmetric pattern of scalp alopecia in 60% of subjects. This group also reported pulling out their hair from more than one area 62% of the time. The scalp was the most commonly affected area (75% of the time), followed by eyelashes (53%), eyebrows (42%), and pubic hair (17%). Eight percent admitted pulling out the hair from a spouse or significant other.³ We found no report in the literature of alopecia occurring in someone other than the primary hair puller. Oral behavior has been reported with similar frequency in 48% of patients; 33% described either chewing or biting off the end, while only 10% actually ate their hair.³

Psychiatric comorbidities are common in patients with trichotillomania. Two studies^{3,7} describe a high association of trichotillomania and *DSM-IV* axis I diagnoses, such as major depressive disorder, anxiety disorder (to include OCD), eating disorder, and substance abuse. Christenson and colleagues³ found that 49 of 60 (82%) patients met criteria for an axis I diagnosis at some point in their life. However, our patient did not meet criteria for other psychiatric diagnoses at the time of presentation.

Due to several similarities, trichotillomania has been compared and even considered to be a spectrum of OCD, mostly because both conditions are effectively treated with medications that enhance serotonin and norepinephrine levels. A comprehensive review by Jaspers¹⁵ found the difference between trichotillomania and OCD too great to support trichotillomania as a variant of OCD. Stanley et al¹⁶ found trichotillomania to differ from OCD by an earlier age of onset (13 years compared with 20 years), pleasure associated with the action, fewer obsessive thoughts, and less interference with everyday life due to the behavior. Christenson et al³ also questioned similarities because only 15% of his study group would have met criteria for OCD. It was noted also that only 33% of patients had multiple obsessions, whereas those with OCD had multiple obsessions 60% of the time.³

Frequent association with other psychiatric conditions has made classifying trichotillomania difficult from a psychiatric perspective. Two articles^{17,18} describe hair pulling in children frequently to be a self-limited condition. Some even consider it to be a stress-relieving habit, such as nail biting and thumb sucking. This is important, especially when etiology and treatment are considered.

From a dermatologic point of view, there are no pathognomonic histologic findings for trichotillomania; however, several findings can be suggestive.⁶ A biopsy also can exclude other common causes of alopecia, such as alopecia areata and tinea capitis. Muller looked at histologic findings from 3 separate studies.^{4,5,14} Muller noted a consistent pattern of similarities, which include the following recommendations and findings: 4- to 5-mm punch biopsies taken from sites affected for less than 8 weeks had the highest yield. Stains other than hematoxylin-eosin were of no further benefit. Taking numerous sections was suggested because only a few may show changes. The most consistent finding was an increased number of noninflamed and occasionally abnormal-appearing catogen hairs seen on 74% of specimens. At times, 3 to 5 catogen hairs were identified. Typically, only 1% of scalp hairs are in the catogen stage at any one time. For differential purposes, catogen hairs are frequently inflamed in alopecia areata. Empty dilated ostia containing keratin plugging were found in 73% of specimens, and melanin-pigmented casts and granules were found in the upper follicles and infundibulum in 61% of specimens. This melanin pigment deposition is caused by hair follicle trauma. Although pigmented granules can be seen in other conditions, the distribution is often different. For example, the melanin usually is found deeper in the hair follicle and is more concentrated with alopecia areata. Traumatized hair bulb findings of hemorrhage, clefting, and exudative reaction or even partially avulsed hair papilla were seen in 24% of specimens. The absence of dermal fibrosis and hair bulb inflammation (except for occasional mild folliculitis) also was noted. Muller¹⁴ summarized by describing a classic trichotillomania section to consist of 3 or 4 dilated ostia with soft keratin plugging, 1 or 2 melanic casts, and 2 or 3 catogen hairs.

Numerous studies¹⁹⁻²⁵ have described medical complications related to trichobezoars, including gastric outlet obstruction, intussusceptions and intestinal perforation, acute appendicitis, obstructive jaundice, pancreatitis, and megaloblastic anemia. Although these complications can be severe and life threatening, no patients in the groups reviewed for this article cited occurrences or complications of trichobezoars.

Treatment

Treatment of trichotillomania necessitates a broad-based approach. Most patients will present to a dermatologist or primary care physician with the complaint of hair loss. They are usually embarrassed to admit to the self-induced nature of the alopecia. The hair loss, however, has tremendous

emotional implications for the patient and the family. Collaboration with a psychiatrist who understands psychocutaneous medicine is essential to achieve the best outcome for the patient. Treatment modalities may include a combination of cognitive-behavioral therapy or psychodynamic and pharmacologic interventions. Other nonpharmacologic treatment options include hypnosis, biofeedback, and relaxation therapy.²

Pharmacologic interventions include tricyclic antidepressants, monoamine oxidase inhibitors, and selective serotonin reuptake inhibitors. Clomipramine is a tricyclic antidepressant with selective antiobsessive effects.²⁶ This medication reduces hair pulling in patients with trichotillomania. In a 14-patient, double-blind study, Swedo et al²⁷ reported remission of symptoms in 3 patients and a 50% reduction of symptoms in 9 patients who were treated with clomipramine. Maintenance of this response was seen at 4- to 6-month follow-up visits in 9 of the patients who completed the 10-week study.²⁷ Currently, there are insufficient numbers of studies to prove pharmacologic efficacy.

Double-blind, placebo-controlled trials of selective serotonin reuptake inhibitors without norepinephrine effect, such as fluoxetine and fluvoxamine, have not been effective.^{28,29} Other medications that also have serotonin and norepinephrine effects have been effective, as well as have better side effect profiles. Ninan and colleagues³⁰ reported at least a 50% reduction of symptoms in 8 to 12 patients treated with venlafaxine. Other options may include augmentation with atypical antipsychotic agents, such as olanzapine and risperidone.

Psychiatric interventions such as psychodynamic and cognitive-behavioral therapies with and without medication also have been effective. A type of behavioral therapy developed by Azrin et al³¹ called "habit reversal" has shown improvement consistently, even to the point of resolution of symptoms.³² This combination of techniques significantly reduced hair pulling, even at 22-month follow-up.^{31,32} Rosenbaum and Ayllon³² showed success with this technique in patients as young as 10 years.

In a 9-week, placebo-controlled trial of cognitive-behavioral therapy versus clomipramine, Ninan et al³⁰ concluded that while 4 of 6 patients treated with clomipramine had a reduction of symptoms, 4 of 5 treated with cognitive-behavioral therapy were symptom free, and 1 of 5 had a reduction of symptoms at the end of the study.

Conclusion

Trichotillomania is a rare, chronic, and relapsing disorder, with onset in the early teenaged years. It is a

disorder that may have significant medical and psychiatric implications. Physicians, especially those in dermatology and primary care, should be knowledgeable in the diagnosis and treatment of trichotillomania. Biopsy is important in the differential diagnosis of alopecia and is recommended. A broad-based treatment approach is also a necessity for the most successful outcomes, and collaboration between dermatologist and psychiatrist is recommended.

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