



(CASE REPORT)



Trichotillomania: Insights and case study

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World Journal of Advanced Research and Reviews, 2024, 22(03), 954–959

Publication history: Received on 11 April 2024; revised on 17 May 2024; accepted on 20 May 2024

Article DOI: <https://doi.org/10.30574/wjarr.2024.22.3.1576>

Abstract

Trichotillomania is a challenging impulse control disorder characterized by the compulsive urge to pull out one's own hair. This case focuses on a 28-year-old woman who has been battling trichotillomania without displaying any other obsessive-compulsive symptoms. The aim of this report is to provide a comprehensive overview of her diagnosis and therapeutic interventions. Despite the absence of other OCD manifestations, the patient's condition has significantly impacted her quality of life. Various treatments, including cognitive-behavioral therapy, selective serotonin-reuptake inhibitors (SSRIs), and the use of N-acetylcysteine have been employed. The case highlights the importance of an integrated approach to manage this disorder effectively. This case underscores the complexities involved in trichotillomania and suggests the need for further research to refine treatment protocols.

Keywords: Trichotillomania; Hair pulling; Impulse control disorder; Cognitive-behavioral therapy; Selective serotonin-reuptake inhibitors(SSRIs); N-acetylcysteine; Alopecia; Comorbidity

1. Introduction

Trichotillomania is characterized in the DSM-V, as an obsessive-compulsive and related disorder. Individuals with this condition recurrently pull-out hair from various body parts, leading to noticeable hair loss. This disorder is having profound psychosocial implications.

The prevalence varies between 0.5 – 2% of the general population. Due to the stigma associated with the disorder, the actual prevalence could be higher. In pediatric populations, the lifetime prevalence is estimated at 1–3%, with common sites for hair removal including the scalp, eyebrows, eyelashes, and pubic area. Other affected areas can include limbs, underarms, and chest.

Trichotillomania displays a significant gender disparity in adults, with a female-to-male ratio of about 4. In children, particularly females aged between 9-13, the disorder is frequently denied despite its occurrence. The disorder is highly comorbid, with up to 80% of those affected experiencing concurrent psychiatric conditions such as anxiety, major depressive disorder, substance abuse, eating disorders, and body dysmorphic disorder. Commonly, trichotillomania co-occurs with other compulsive behaviors.

A notable complication is trichophagia, potentially leading to the formation of trichobezoars in the gastrointestinal tract. This can result in severe complications, including the need for surgical interventions.

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2. Case vignette

Ms. M, a 28-year-old woman, has been married for two years and has struggled with hair-pulling since she was 14, initially targeting her eyebrows before shifting to the crown of her head. This behavior became a daily routine over the past 14 years. She often engaged in hair-pulling during stressful moments, with about half of these instances occurring subconsciously. She would realize what had occurred only upon seeing piles of hair on the floor.

Ms. M typically spent two hours each day pulling her hair. The compulsion began upon touching her hair, and she found it nearly impossible to resist the urge. The episode ended when she felt a specific tugging sensation, saw a satisfactory root.

The temporary relief from pulling quickly turned into feelings of shame. Due to alopecia, she has concealed her condition from her husband by attributing her hair loss to damaging hair treatments and hair extensions. She has also managed to avoid showering with him to keep her alopecia hidden.

Despite these challenges, she had not sought treatment until discovering information online. Upon examination, she presented with a 2cm diameter area of alopecia on the crown of her head. Although she occasionally ingested hairs, there were no gastrointestinal complications. Diagnosed with trichotillomania, she underwent twelve sessions of habit reversal therapy and treatment with n-acetyl cysteine. These interventions reduced her hair-pulling to 5-10 minutes every few days, a substantial improvement that she has maintained for over a year.

3. Epidemiology

While comprehensive epidemiological studies on trichotillomania are limited, small-scale research suggests that its prevalence in the general population ranges from 0.6% - 4%. This variation could be due to underreporting, as individuals often feel ashamed and may not seek treatment. The disorder affects all ages but is particularly notable during childhood and adolescence, with a tendency to persist into adulthood. There is a significant female predominance, with females being more affected than males by a ratio of about 4 to 1.

4. Clinical description

The typical onset age for trichotillomania is between 10-13 years old, and this pattern is observed consistently across various cultures. Hair pulling can occur from any hair-bearing area, although the scalp is the most affected area, with 72.8% of patients reporting it, followed by the eyebrows (56.4%). The triggers can vary, including sensory factors like the hair's thickness or texture, emotional states such as anxiety, and cognitive aspects like obsessive thoughts.

Patients often engage in hair pulling without full awareness "automatic" pulling. In contrast, "focused" pulling occurs when individuals pull out hair that feels coarse, irregular, or out of place.

Trichotillomania is associated with significant psychosocial difficulties, including low self-esteem, largely stemming from the visible hair loss and the stigma around the inability to control it.

Medically, trichotillomania can lead to complications beyond psychological distress. It can cause skin damage, especially if instruments like tweezers are used. Additionally, 20% of individuals with trichotillomania also engage in trichophagia, which can lead to the formation of trichobezoars.

4.1. Physiopathology

Screening for trichotillomania reveals that it persists, varying in severity over time, with some adults experiencing symptoms for an average of 22 years. Although the intensity of hair pulling waxes and wanes, it generally continues without intervention.

The reluctance to seek help is partly due to a prevalent belief that professionals lack knowledge about the disorder. Other barriers include shame and unawareness that their behavior constitutes a medical issue, it frequently co-occurs with other disorders such as depression, anxiety, and substance abuse. Research involving a large sample of individuals with trichotillomania indicates that many use substances like alcohol to mitigate the distress associated with their condition.

There is often confusion between trichotillomania and OCD, with a notable percentage of those with trichotillomania also experiencing OCD. However, trichotillomania is distinct in several ways, including a higher prevalence of co-occurring disorders such as skin picking and nail biting, and differences in age of onset and treatment approaches. Unlike OCD, which may involve compulsions driven by intrusive thoughts, hair-pulling in trichotillomania is usually not driven by such cognitive intrusions. Treatments also differ, with habit reversal techniques being more appropriate for trichotillomania, while OCD responds to SSRIs and exposure-response prevention strategies.

5. Diagnosis

TTM Diagnosis is challenging. alopecia is a common clinical complaint. Furthermore, hair loss resulting from different underlying causes may have similar clinical manifestation. Common causes of alopecia in children and adolescents include alopecia areata, congenital alopecia, traction alopecia, tinea capitis and TTM. Alopecia may also be a consequence of endocrine disorders, systemic illnesses, infections, genetic predispositions, or drugs. Diagnosis of TTM is based on a careful medical history and detailed physical examination.

The favorite site of hair pulling is the frontoparietal region of the scalp, eyelashes, and eyebrows, where hair can be easily reached. However, pubic hair, body hair, or facial hair might be affected. Physical examination may reveal focal, nonscarring patches of hair loss with irregular borders, located contralateral to the dominant hand.

Diagnosis of TTM sometimes ensues through hairball in the emergency room. Trichobezoars can be identified. Such behavior may lead to gastrointestinal symptoms including nausea, vomiting, abdominal pain, and bowel obstruction and perforation.

5.1. DSM-V diagnostic criteria for trichotillomania

- Recurrent pulling out of one's hair, resulting in hair loss.
- Repeated attempts to decrease or stop hair pulling.
- The hair pulling causes significant distress or impairment in social or occupational functioning.
- The hair pulling or hair loss is not attributable to another medical condition
- The hair pulling is not better explained by the symptoms of another mental disorder

5.2. Psychotherapy

In a study, 48 patients over 15 with Trichotillomania (TTM) received 6 sessions of cognitive therapy (CT), with follow-ups at 3, 12, and 24 months. CT and behavioral therapy (BT) showed similar immediate reductions in TTM symptoms, with CT being slightly more effective after 3 months, but both leveled off at long-term follow-ups. CBT is the most supported treatment for TTM, with a study of 22 children showing a 77% positive response rate to therapy. Small-scale studies indicate significant benefits of CT and BT, particularly with habit-reversal training (HRT), which outperformed usual care. TTM's association with depression and anxiety suggests these co-occurring disorders might influence treatment outcomes.

6. Pharmacotherapy

SSRIs are the option in routine practice. However, only three studies assessing fluoxetine in TTM.

- Streichenwein and Thornby analyzed the efficacy of fluoxetine in double-blind fashion. A total of 23 adults were screened, and 16 patients were included into the trial, which consisted of a 2-week washout period followed by 12 weeks of 80 mg daily, 5 weeks re-washout, and 12 weeks placebo.
- No significant differences were observed in terms of the urge to tear hairs, time spent on pulling hairs, and the number of torn hairs. In summary, fluoxetine was not superior over placebo for treatment of TTM.
- 21 adults with TTM were subjected to an 18-week placebo-controlled, double-blind crossover study with fluoxetine, at dosages up to 80 mg/day. The duration of the drug and placebo treatment was 6 weeks, separated by a 5-week washout period. Again, no short-term benefits of SSRIs in treatment of TTM, including such parameters as the urge to pull hair, the number of episodes, and the amount of hair pulled per week.
- Van Minnen et al. compared the efficacy of fluoxetine and BT in the 12-week trial, 14 patients completed BT (6 sessions every 2 weeks), 11 received fluoxetine 60 mg/day, and 15 patients constituted the control group. 9 patients on fluoxetine reported mild to moderate adverse effects: insomnia, drowsiness, fatigue, nausea, dry mouth, dizziness, tremor, headache, or delayed orgasm. In one patient with insomnia, the dose of fluoxetine was reduced to 40 mg. The results of the treatment were compared using the MGH-HPS. Better efficacy was

observed in the BT group with final effect size of 3.8, compared with 0.42 in the fluoxetine group, and 1.09 in the control group. Clinical improvement was assessed as 64% in the BT group, 20% in the controls, and 9% in the fluoxetine group.

N-Acetylcysteine Several studies have examined the role of N-acetylcysteine (NAC) in treating trichotillomania. In one study by Bloch et al., 39 young participants with a history of hair pulling for at least 6 months were given either NAC or a placebo over 12 weeks. The results showed minimal improvement, with only 25% of the NAC group and 21% of the placebo group experiencing a significant reduction in hair pulling, indicating negligible benefits of NAC for children with TTM. In another study involving 50 adults participants underwent a double-blind, placebo-controlled trial where they received either a placebo or 1200–1400 mg of NAC daily for 12 weeks. This study found that 56% of the NAC group reported significant improvement, compared to just 16% in the placebo group, as measured by the MGH-HPS.

Olanzapine A study involving 18 patients tested olanzapine over 3 months. The treatment started with 2.5 mg/day, which was increased to a maximum of 10 mg/day, among the 17 patients who completed at least one week of treatment, hair pulling was significantly reduced by 66% from the starting point. Additionally, anxiety levels also dropped by 63% according to the Hamilton Rating Scale for Anxiety. Overall, significant clinical improvement was noted, with 4 patients experiencing a full stop in symptoms. The effectiveness of olanzapine was primarily evaluated using the Clinical Global Impressions-Improvement (CGI-I) scale, and supplementary measures included the Yale–Brown Obsessive Compulsive Scale specifically for TTM (TTM-YBOCS) and the CGI-Severity scale. The study found that 85% of the olanzapine-treated group were marked as responders based on CGI-I, compared to 17% in the placebo group. These results suggest olanzapine is a promising treatment for TTM.

Opioid Antagonists : Naltrexone It has shown promise in some individual reports for treating trichotillomania. In a non-controlled study, De Sousa prescribed an average dose of 66 mg/day of naltrexone to 14 children with TTM over 10 months. By the study's end, 21.4% stopped pulling hair entirely, and 57% showed some improvement. This means that 79% had a positive response. However, a more rigorous study by Grant et al. did not support these findings. In this double-blind, placebo-controlled trial, 51 TTM patients were given either naltrexone or a placebo, with doses starting at 50 mg/day and increasing to 150 mg/day over eight weeks. Results showed that naltrexone did not significantly outperform the placebo. The inconsistencies between these studies could be due to differences in study duration and participant demographics. Other treatments explored for TTM include cannabinoid agonists like dronabinol and anticonvulsants like topiramate. In a 12-week study with 14 adult women, dronabinol was administered at doses ranging from 2.2 to 15 mg/day, with 64% responding positively to treatment, and the average effective dose was 11.6 mg/day without major cognitive side effects. Conversely, an open-label study on topiramate at doses of 50–250 mg/day for 16 weeks showed no significant reduction in hair pulling, and some participants dropped out due to adverse effects, indicating the need for more research to confirm its effectiveness and safety. Lastly, modafinil, a stimulant for narcolepsy, was also tested in an 18-participant double-blind study, but it failed to show any benefit for treating TTM.

Recommendations

If untreated, trichotillomania is a chronic illness that often results in substantial dysfunction. Control of the hair pulling is therefore critical for maintaining long-term quality of life.

Based on our clinical experience, we suggest the following strategies:

- Begin with a thorough psychiatric assessment to establish an accurate diagnosis
- Thorough medical evaluation if the person admits to ingesting hair to assess for possible gastrointestinal blockage
- Provide education about the disorder, including possible etiologies, and treatment risks and benefits
- There is no evidence that SSRIs are beneficial for trichotillomania. N-acetyl cysteine in doses of 1200mg twice a day has been helpful in reducing urges to pull and probably should be considered as the initial treatment.

7. Conclusion

Trichotillomania is a poorly understood disorder that can be extremely disabling with evident impact on quality of life and social and psychological functioning of affected patients. Factors that suggest progression include an increase in the reported number of pulling sites, frequency of urges, and amount of focused pulling.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of ethical approval

This study was conducted in compliance with the ethical standards of the relevant institutional and national guidelines on. Approval was granted by Ibn Nafis hospital, and informed consent was obtained from all participants involved.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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