

Behavioral Treatment of Trichotillomania : A Case Report

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Abstract

Trichotillomania is a poorly understood complex disorder of multifaceted pathology which often requires an interdisciplinary approach for management. A case of trichotillomania is presented who showed poor response to pharmacotherapy but responded well to behaviour therapy in the form of habit reversal training. Treatment lasted 16 sessions. The patient recovered fully by the end of 12th session. The condition is briefly discussed.

Keywords: *Trichotillomania, behaviour therapy, habit reversal training.*

Introduction

Trichotillomania (TTM) is characterized as an impulse control disorder in which individuals fail to resist urges to pull out their own hair most notably scalp hair, but also eyebrows, eyelashes, and hair from the extremity, axillary, and pubic areas, and is associated with significant functional impairment and psychiatric comorbidity across the developmental spectrum[1]. The term was first coined in 1889 by the French dermatologist Hallopeau, who described a young man who pulled out his hair in tufts. The word is derived from the Greek *thrix* (hair), *tillein* (to pull), and *mania* (madness)[2]. This self-inflicted hair-loss can range from small, barely noticeable patches on various areas of the body to total baldness[3]. Although no broad-based population epidemiologic studies had been conducted as of 2009, the lifetime prevalence of TTM is estimated to be between 0.6% (overall) and as high as 1.5% (in males) to 3.4% (in females)[4]. Hair pulling tends to occur in episodes, exacerbated by stress, or sometimes by relaxation (when reading a book or watching television, for example). People with TTM experience an increasing sense of tension immediately

before pulling out a hair or when attempting to resist hair-pulling. When the hair is pulled, they experience immediate feeling of pleasure, gratification, and relief. Historically, it was conceptualized as symptoms of obsessive-compulsive disorder (OCD). However, the etiology of the condition is not known and different hypotheses, including impulse-control disorders, obsessive-compulsive disorders, behavioral problems and addiction, have been proposed to explain the condition. Few brain imaging studies have been performed, and these were with a relatively small number of TTM patients. These studies showed a wide range from no difference to an increased gray matter density in the striatum, left amygdalo-hippocampal formation, and multiple cortical regions[5].

TTM is diagnosed in all age groups. Onset is more common during preadolescence and young adulthood, with mean age of onset between 9 and 13 years of age, and a notable peak at 12–13 years. Among preschool children the genders are equally represented; there appears to be a female predominance among preadolescents to young adults, with between 70% and 93% of patients being female[6-7].

According to some authors, there are two forms of TTM: (a) Acute form: This form usually involves children or adolescents and is more likely to be stress-induced habit response. Usually scalp is involved, initially asymmetrically, later may involve both sides of the scalp, eyebrows and eyelashes. The clinical course is frequently episodic with periods of complete remission occurring 2-

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3 times a year. (b) Chronic form: This form usually involves adults and older patients and is associated with significant psychopathology. Usually involves the scalp, face and also secondary sexual hairs. The clinical course is progressive and chronic with a poorer prognosis[8-9].

Various medications that have been used in treating TTM include clomipramine, selective serotonin reuptake inhibitors (SSRIs), olanzapine, quetiapine, aripiprazole, bupropion, naltrexone, topiramate, lamotrigine, oxcarbazepine, and N-acetylcystein[5]. A recent Cochrane review concluded that no particular medication class definitively demonstrates efficacy in the treatment of TTM. Preliminary evidence suggests treatment effects of clomipramine, N-acetylcystein and olanzapine based on three individual trials, albeit with very small sample sizes[10]. Non-pharmacological therapeutic modalities which have been considered include (a) Supportive psychotherapy, (b) Directive and autogenic training. (c) Behaviour therapy which involves various techniques-self monitoring; coping strategies; motivation enhancement; awareness training; competing response; relaxation training. and (d) hypnosis [5,11]. The present case which is chronic form of TTM was treated with medications and behavior therapy mainly based on the application of the habit reversal training.

Case Report

A 49 year old unmarried female was on treatment for last 10 years as in-patient with a diagnosis of Schizophrenia. Her problems comprised of aggressive and disruptive behaviour, muttering to self, delusion of persecutions, increased psychomotor activities, wandering behaviour, and decreased need for sleep. Her treatment started with antipsychotics but despite treatment she never achieved complete remission. She had history of sudden mood alteration, sudden crying, laughing and unprovoked fighting with other patients and multiple somatic complaints. It was observed that when people ignored her complaints she would become aggressive. After fulfillment of her requirements or desire she would become happy and start showing excess love and concern. Most of the time she would wander around, sing songs to self, laugh to self, mutter to self and sometime she would try to hide herself. She explained this behavior by saying that people were coming to kill her because they hated her due to her pious nature. After few years of treatment she started pulling hair from her head. Gradually the intensity of pulling hair increased and she developed patches of baldness on her head. When

somebody tried to stop her from pulling out her hair, she would become aggressive. Her sleep and appetite were decreased. She was able to maintain her personal hygiene. Initially fluoxetine was added to olanzapine with which she was being treated but after 6 weeks there was no improvement and therefore it was decided to start behavior therapy.

Procedure

Initially, two sessions were conducted for assessment purpose. During this assessment period of 45 minutes her behaviour was observed. During this time period the duration, intensity and frequency of hair pulling behaviour was noted. In the initial assessment period, intensity was high and frequency was 18. After the assessment intervention was planned which included the following [12]:

Awareness training: To develop awareness of the motor movement associated with hair pulling.

Identifying response precursors: The patient's pinpoints actions that often precede hair pulling. In the present case she touched or stroked her hair just before starting to pull.

Identifying habit prone situations: Identify those situations which often precede the behavior. The patient began pulling her hair after getting annoyed and during stress and whenever she could not fulfill her desires.

Competing reaction training: It involved training to learn an incompatible response that prevents hair pulling. It included physically inconspicuous activity, such as muscle tightening, hand grasping, clasping, or clenching an object. These activities were used for three minutes, and then released for one minute. This was repeated five more time.

Relaxation training: Training in deep muscle relaxation, deep breathing exercises. It was used when the urge to pull was urgent, or when stress was high.

Prevention training: Practice a competing response when and where pulling was likely to occur.

Positive attention (overcorrection): The practice of positive hair care (e.g., hair brushing) after every episodes of hair pulling.

Self recording: Through self recording of all hair pulls and urges, the patient acquired increased awareness as well as feedback on improvement.

Social support or reinforcement: Ward staff, nurses and recovered patients were instructed to prompt and

reinforce the patient's habit control. Cosmetics, comb and hair care products were used as reinforcement. These kinds of reinforcement greatly helped in recovery of the patient.

By the end of 12th sessions the patient had fully recovered. After completing the intervention, post assessment was done. Duration of post assessment was 45 minutes, during which intensity and frequency of hair pulling behaviour was noted. In the post assessment period, frequency of hair pulling behavior was zero. Thus a significant improvement was seen in the patient.

Discussion

According to behavioral theory, TTM occurs through a learning process, similar to the formation of habits, like the habit of thumb sucking or nail biting [4,13]. It may also develop as a coping behavior in response to stress and is reinforced through tension reduction [14]. Habit-reversal training is the preferred behavioral treatment for TTM. It involves three primary components: a) awareness training b) competing response trainings and c) social support or reinforcement. Other techniques have been incorporated into the habit-reversal training routine such as stimulus control, cognitive restructuring, relaxation training and thought stopping [12].

In an early study, Azrin et al, randomly assigned subjects to either the habit reversal group (n=19) or the negative practice group (n=15) [15]. In the former group, pullers were instructed in the essentials of habit reversal in one 90 minutes session. In the latter group, subjects were asked to mimic hair pulling (without actual hair extraction) when standing in front of a mirror for a 30-second period every hour. Negative practice exercises were continued for 4 days after total cessation of hair pulling. Subjects recorded hair pulling occurrence or duration (when the habit was more continuous). Both treatments showed rapid reductions on the first day post-training (habit reversal, 99%; negative practice, 58%). At 3 months of follow-up reductions in hair pulling in excess of 90% were reported for the habit reversal group versus 52% - 68% decrement in pulling for the negative practice group. The results from two recent studies are similar to previous studies, showing that behavioral therapy is superior to pharmacotherapy [16,17]. In a 2006 study, TTM abated considerably immediately after brief behavioral therapy [18]. However, despite positive results, the effectiveness of behavioral and cognitive strategies varies across patients and there is a significant risk for relapse [19]. In a study comparing a single modality approach with CBT

and pharmacotherapy to a dual modality approach using the two treatments combined, the dual modality was found to be slightly more effective [20]. Therefore in the present case multimodality treatment was preferred with gratifying results.

References

1. Franklin ME, Zgrabbe K, Benavides KL. Trichotillomania and its treatment: a review and recommendations. *Expert Rev Neurother.* 2011;11(8):1165-74.
2. Hallopeau H. Alopecie par grattage (trichomanie or trichotillomanie) *Ann Dermatol Syphiligr.* 1889; 10:440-6.
3. O'Sullivan RL, Keuthen NJ, Christenson GA, Mansueto CS, Stein DJ, Swedo SE. Trichotillomania: behavioral symptom or clinical syndrome? *Am J Psychiatry.* 1997; 154: 1442-49.
4. Christenson GA, Mackenzie TB, Mitchell JE. Characteristics of 60 adult chronic hair pullers. *Am J Psychiatry* 1991; 148 (3): 365-70.
5. Shoenfeld N, Rosenberg O, Kotler M, Dannon PN. Trichotillomania: pathopsychology theories and treatment possibilities. *Isr Med Assoc J.* 2012 Feb;14(2):125-9.
6. Hamberlain SR, Menzies L, Sahakian BJ, Fineberg NA. "Lifting the veil on trichotillomania". *Am J Psychiatry* 2007; 164 (4): 568-74.
7. Sah DE, Koo J, Price VH. "Trichotillomania" *Dermatol Ther* 2008; 21 (1): 13-21.
8. Swedo SE, Rapaport JL. Trichotillomania. *J Clin Psychol Psychiatry* 1991; 32:401-409.
9. Hautmann G, Hercogova J, Lotti T. Trichotillomania. *J Am Acad Dermatol* 2002; 46: 807-820.
10. Rothbart R, Amos T, Siegfried N, Ipser JC, Fineberg N, Chamberlain SR, Stein DJ. Pharmacotherapy for trichotillomania. *Cochrane Database Syst Rev.* 2013 Nov 8; 11: CD007662. doi: 10.1002/14651858.CD007662.pub2.
11. Millard LG. Trichotillomania. In: Lebowitz M, Heymann WR, DerthJones J, Coulson I, editors. *Treatment of Skin Disease.* Mosby: London, 2002: 637-639.
12. Flessner CA, Busch AM, Heideman PW, Woods DW. Acceptance-enhanced behavior therapy

- (AEBT) for trichotillomania and chronic skin picking: exploring the effects of component sequencing. *Behav Modif* 2008; 32 (5): 579-94.
13. Duke DC, Keeley ML, Geffken GR, Storch EA. Trichotillomania: a current review. *Clin Psychol Rev* 2010; 30: 181-93.
 14. Voth D. Trichotillomania: a treatment overview. *J Pract Nurs* 2006 Winter-2007 Spring; 57 (1): 34-7.
 15. Azrin NH, Nunn RG, Frantz SE: Treatment of hair pulling (Trichotillomania): a comparative study of habit reversal and negative practice training, *J Behave Ther Exp Psychiatry* 11: 13-20, 1980.
 16. van Minnen A, Hoogduin KA, Keijsers GP, Hellenbrand I, Hendriks GJ. Treatment of trichotillomania with behavioral therapy or fluoxetine: a randomized, waitinglist controlled study. *Arch Gen Psychiatry* 2003; 60: 517-22.
 17. Bloch MH, Landeros-Weisenberger A, Dombrowski P, et al. Systematic review: pharmacological and behavioral treatment for trichotillomania. *Biol Psychiatry* 2007; 62: 839-46
 18. Keijsers GP, van Minnen A, Hoogduin CA, Klaassen BN, Hendriks MJ, Tanis-Jacobs J. Behavioral treatment of trichotillomania: two-year follow-up results. *Behav Res Ther* 2006; 44: 359-70.
 19. Winchel RM, Jones JS, Stanley B, Molcho A, Stanley M. Clinical characteristics of trichotillomania and its response to fluoxetine. *J Clin Psychiatry* 1992; 53: 304-8.
 20. Dougherty DD, Loh R, Jenike MA, Keuthen NJ. Single modality versus dual modality treatment for trichotillomania: sertraline, behavioral therapy, or both? *J Clin Psychiatry* 2006; 67: 1086-92.

