

Under-diagnosed Psychiatric Syndrome I: Trichotillomania

S M Ko,* *FAMS, MBBS, M Med (Psych)*

Abstract

Trichotillomania is a chronic psychiatric condition characterised by uncontrollable, self-inflicted, hair pulling, resulting in noticeable hair loss. The hair pulling may occur anywhere on the body; with the scalp and eyelashes most commonly affected. Onset is often during childhood or early adolescence. Once presumed to be an obscure condition, the estimated lifetime prevalence is 1.5% for male and 3.4% for female college students. In very young patients, a more equal sex ratio is observed. On the whole, women show 5 to 10 times higher prevalence rates than men. Majority of the sufferers disguise their hair loss very well. Because of the secrecy and shame about their behaviour, many remain silent sufferers, and treatment is often delayed. Serotonin reuptake inhibitors currently are the pharmacological treatment of choice, although other drugs like naltrexone and antipsychotics like pimozide and haloperidol have varying responses. Behaviour therapy includes habit reversal coupled with exposure therapy and response prevention.

Ann Acad Med Singapore 1999; 28:279-81

Key words: Hair loss, Hair pulling, Self-inflicted, Treatment

Introduction

Trichotillomania (TTM) is a chronic psychiatric condition characterised by uncontrollable, self-inflicted, hair pulling, resulting in noticeable hair loss. First described by Hallopeau¹ a century ago, it was previously regarded as an obscure condition. Trichotillomania was incorporated into the DSM-III-R² as an Impulse Control Disorder not Elsewhere Classified, and has remained so in the DSM-IV.³ In the latter, it describes a mounting tension prior to hair pulling or during attempts to resist it, and pleasure, gratification or relief once the hair is pulled out.

Epidemiology

Like its spectrum cousin Obsessive Compulsive Disorder (OCD), trichotillomania is no longer as rare as was previously thought. Christenson et al⁴ reported a prevalence of 0.6% among 2534 college students. When the criteria requiring associated affective states with hair pulling were ignored, the lifetime prevalence rose to 1.5% for male and 3.4% for female students. In very young patients, a more equal sex ratio is observed.⁵ On the whole, women show 5 to 10 times higher prevalence rates than men.^{5,6}

Clinical Features

The hair pulling may occur anywhere on the

body, with a decreasing frequency on scalp (67%), eyelashes (22%), eyebrows (8%), pubic hair (2%) and extremity hair (1%). Onset is often during childhood or early adolescence,^{7,8} and a chronic course seems to be the rule.⁷ Very early onset with less than six months duration at presentation are found to have better prognosis.⁹ After pulling the hair, patients often collect them, or else may even ingest them (trichophagy) resulting in trichobezoars – this occurs between 5% and 18% of patients.^{6,7}

With its onset during a period not uncommonly associated with psychological disturbance in self-image, trichotillomania sufferers often develop low self-esteem. This has been found to be related to the level of depression and anxiety, frequency of hair pulling, and bodily dissatisfaction.⁸ This is further aggravated by the sufferers' secrecy and resultant shame, leading to delay in treatment.

Majority of the patients disguise their hair loss very well – by styling their hair, applying makeup to eyelashes or eyebrows, or the wearing of wigs. Single hair is pulled each time, although some would pull groups or tufts of hair. Short or new-grown hair and coarse or thick ones are more likely targets than old and fine ones. Hair pulling often occurs during sedentary activities like watching television, reading, listening to a lecture or doing paper work. Because of the shame, most sufferers

* Associate Professor and Consultant

Department of Psychological Medicine

National University of Singapore

Address for Reprints: A/Prof Ko Soo Meng, Division of Stress Medicine, Department of Psychological Medicine, National University of Singapore, c/o National University Hospital, 5 Lower Kent Ridge Road, Singapore 119074.

would only pull when alone or in the presence of immediate family members.

Neurobiology

Research into the possible biological basis of trichotillomania has recently been in the fields of neuroimaging and neurochemistry. Swedo et al¹⁰ compared resting positron emission tomography (PET) profiles of trichotillomania patients with normal healthy subjects, and found elevated global, bilateral cerebellar and right superior parietal glucose metabolism. In the first report of structural brain abnormality, O'Sullivan et al¹¹ reported that the left putamen volume was significantly smaller in trichotillomania subjects compared with normal matched controls on morphometric magnetic resonance imaging (mMRI).

Because of the somewhat similar phenomenology between trichotillomania and obsessive compulsive disorder, the presumption has been that both disorders may be characterised by serotonergic dysregulation. Although critical analysis of cerebrospinal fluid did not reveal differences in levels of the serotonin metabolite 5-hydroxyindoleacetic acid (5-HIAA) between trichotillomania patients and a control group matched for age and education, nor any correlation between trichotillomania severity and 5-HIAA level,¹² a role for central serotonin turnover in treatment response was suggested by a correlation between baseline 5-HIAA level in trichotillomania patients and response to serotonin reuptake inhibitors.¹² A later study challenging a group of trichotillomania patients with the serotonin receptor partial agonist meta-chlorophenyl piperazine (m-CPP) showed no difference in neuroendocrine response compared with a control group.¹³

Pharmacological Treatment

Until recently, reports of pharmacological treatment for trichotillomania were mainly confined to anecdotal ones. However, since the first double-blind, 10-week crossover study comparing clomipramine,¹⁴ a relatively potent serotonin reuptake inhibitor (SRI) with the relatively adrenergic desipramine involving 22 patients, where clomipramine proved statistically superior on all measures of trichotillomania severity and impairment, it followed that subsequent pharmacological studies attempt to demonstrate the utility of SRI in this disorder. Another 10-week double-blind crossover study with the selective SRI fluoxetine or clomipramine showed both drugs to be equally effective.¹⁵ Other reports involving paroxetine¹⁶ and sertraline¹⁷ appeared to show modest response. The non-uniform results of trichotillomania response to SRIs is probably due to the heterogeneity of this condition. For instance, comorbid anxiety or borderline personality disorder impacts negatively on response to clomipramine.¹⁸

Apart from the SRIs, the only other controlled drug trial in trichotillomania is the opioid receptor antagonist naltrexone. The rationale for its use is the observation that majority of trichotillomania patients do not describe pain as associated with hair pulling.¹⁶ It has thus been suggested that opioid receptor antagonism may reduce pain threshold, leading to the experience of pain with hair pulling.¹⁹ This would result in greater awareness of the behaviour, or else acts as an aversive consequence of hair pulling. A placebo-controlled trial of naltrexone²⁰ in 17 trichotillomania patients demonstrated statistically significant reduction in its severity while on the active drug compared with placebo. Finally, a case was reported where the addition naltrexone to fluoxetine therapy further decreased hair pulling.²¹

Lithium is the only mood stabiliser to have demonstrated efficacy in trichotillomania patients with moderate to complete success in 8 of 10 patients.²² However, 4 of the 8 had a history of affective disorder. Even though concomitant anxiety is common in trichotillomania, surprisingly there is little in the literature regarding the use of anxiolytics e.g. benzodiazepines in its treatment. And because trichotillomania displays some similarities to Gilles de la Tourette's syndrome, antipsychotics e.g. pimozide, haloperidol and chlorpromazine, either alone or as augmentation to an SRI, have demonstrated some efficacy in the treatment of trichotillomania, but often in the presence of confounding variables like psychosis or autism.²³

Finally varying responses to novel treatment with topical corticosteroids (to reduce pruritus when present), levonorgestrel (a progestin) and fenfluramine (a serotonin agonist) only point to the deficient understanding we have about this fascinating psychiatric syndrome.

Non-pharmacological Treatment

Currently the most widely used behavioural strategy in the treatment of trichotillomania is habit reversal. It involves self-monitoring and competing response application. This is often used in conjunction with exposure therapy. Thus the patient who finds that mirror gazing can evoke hair pulling is asked to look into the mirror, and then deliberately applies competing behaviour, like holding on to the seat with both hands, so that hair pulling is not possible. Alternatively, she may wear a pair of thick gloves where hair pulling will be difficult, if not impossible.

Hypnosis has also been used with some success. Here the focus in hypnotic suggestions includes greater awareness of hair pulling, pain during pulling, relaxation instead of pulling, and substitution of behaviours other than hair pulling. As in most psychiatric disorders, especially the impulsive and compulsive spectrum disorders, the combination of pharmacotherapy and behavioural strategies yield better results than either alone.

And because of the intense secrecy and shame involved, group support from patients with the same disorder may elevate their already diminished self-esteem, and encourage perseverance with treatment which is likely to be long term.

Conclusion

Once regarded as rare, this under-diagnosed condition is fast gaining more attention in research into its aetiology, psychopathology and pathophysiology. On the treatment front, more studies are required to focus on the differential responses, less on monotherapy and more on combined strategies both pharmacologically and otherwise, to alleviate the silent suffering of patients with this chronic and frequently treatment-resistant disorder.

REFERENCES

- Hallopeau M. Alopecie par grattage (trichomanic on trichotillomanic). *Ann Dermatol Venerol* 1889; 10:440-1.
- American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 3rd ed. Revised. Washington DC: American Psychiatric Association, 1987.
- American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 4th ed. Washington DC: American Psychiatric Association, 1994.
- Christenson G A, Pyle R L, Mitchell J E. Estimated lifetime prevalence of trichotillomania patients in college students. *J Clin Psychiatry* 1991; 52:415-7.
- Muller S A. Trichotillomania. *Dermatol Clin* 1987; 5:595-601.
- Schlosser S, Black D W, Blum W. The demography, phenomenology and family history of 22 patients with compulsive hair pulling. *Ann Clin Psychiatry* 1994; 6:147-52.
- Christenson G A, Mackenzie T B, Mitchell J E. Characteristics of 60 adult chronic hair pullers. *Am J Psychiatry* 1991; 148:365-70.
- Soriano J L, O'Sullivan R, Baer L, Philips K A, McNally R J, Jenike M A. Trichotillomania and self-esteem: a survey of sixty-two female hair pullers. *J Clin Psychiatry* 1996; 57:77-82.
- Chang C H, Lee M B, Chiang Y C. Trichotillomania: a clinical study of 36 patients. *J Formos Med Assoc* 1991; 90:176-80.
- Swedo S E, Rapoport J L, Leonard H L. Regional cerebral glucose metabolism of women with trichotillomania. *Arch Gen Psychiatry* 1991; 48:828-33.
- O'Sullivan R L, Rauch S L, Breiter H C, Grachev I D, Baer L, Keuthen N J, et al. Reduced basal ganglia volumes in trichotillomania measured via morphometric magnetic resonance imaging. *Biol Psychiatry* 1997; 4:39-45.
- Ninan P T, Rothbaum B O, Stipetic M, Lewine R J, Risch S C. CSF 5-HIAA as a prediction of treatment response in trichotillomania. *Psychopharmacol Bull* 1992; 28:451-5.
- Stein D J, Hollander E, Cohen L, Simeon D, Aronowitz B. Serotonergic responsibility in trichotillomania: neuroendocrine effects of m-chlorophenylpiperazine. *Biol Psychiatry* 1995; 37:414-6.
- Swedo S E, Leonard H L, Rapoport J L. A double-blind comparison of clomipramine and desipramine in the treatment of trichotillomania. *N Engl J Med* 1989; 321:497-501.
- Pigott T A, L'Heueax F, Grady T A, et al. Controlled comparison of clomipramine and fluoxetine in trichotillomania. Abstracts of Panels and Posters of the 31st Annual Meeting of the American College of Neuropsychopharmacology; 1992 December; San Juan, Puerto Rico. Puerto Rico: American College of Neuropsychopharmacology, 18:157.
- Minichiello W E, O'Sullivan R L, Osgood-Hynes D. Trichotillomania: clinical aspects and treatment strategies. *Harvard Rev Psychiatry* 1994; 1:336-44.
- Rahman M A, Gregory R. Trichotillomania associated with HIV infection and response to sertraline. *Psychosomatics* 1995; 36:417-8.
- Swedo S E, Leonard H L. Trichotillomania: An obsessive compulsive spectrum disorder? *Psychiatric Clin North Am* 1992; 15:777-90.
- Christenson G A, Raymond N C, Faris P L, McAllister R D, Crow S J, Howard L A, et al. Pain thresholds are not elevated in trichotillomania. *Biol Psychiatry* 1994; 36:347-9.
- Christenson G A, Crow S J, Mackenzie T B, et al. A placebo-controlled double-blind study of naltrexone for trichotillomania [abstract]. New Research Program and Abstracts of the 150th Annual Meeting of the American Psychiatric Association; 1994 May; Philadelphia, PA. Philadelphia, PA: American Psychiatric Association, 26:212.
- Carroll V C. Naltrexone for the treatment of trichotillomania: a case report. *J Clin Psychopharmacol* 1995; 15:444-5.
- Christenson G A, Popkin M K, Mackenzie T B, Realmunto G M. Lithium treatment of chronic hair pulling. *J Clin Psychiatry* 1991; 52:116-20.
- Stein D J, Hollander E. Low-dose pimozide augmentation of serotonin reuptake inhibitors in the treatment of trichotillomania. *J Clin Psychiatry* 1992; 53:123-6.