Efficacy of Hydroxyzine in the Treatment of Trichotillomania: an Open-Label Study

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ABSTRACT:
Efficacy of hydroxyzine in the treatment of trichotillomania: an open-label study

Objective: Trichotillomania (TM) is a complex psychiatric disorder characterized by repetitive severe hair pulling which may cause hair loss. Trichotillomania is a rare disorder whose actual incidence remains unknown. Treatment of trichotillomania includes psychotherapy and various medication. We examined the efficacy and safety of hydroxyzine in the treatment of trichotillomania.
Methods: Twelve adolescent patient with diagnosis of TM were administered 30 mg/day of hydroxyzine for 4 weeks. The patients were assessed before the treatment and reassessed after one month by using the Children Depression Inventory (CDI), the Children State Anxiety Inventory (CSAI), and the Children Trait Anxiety Inventory (CTAI).
Results: All patients who completed the treatment showed significant improvement with the whole symptoms. The total CSAI and CTAI scores also revealed significant improvement at the end of the study period ($p<0,002$). The total CDI scores were not found statistically significant.
Conclusion: In conclusion, findings suggest that hydroxyzine may be an effective monotherapy for trichotillomania.

Key words: trichotillomania, hyroxyzine, pharmachotherapy, adolescent

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INTRODUCTION

Trichotillomania is a complicated psychiatric disorder characterized by repetitive severe hair pulling which may cause hair loss. It is defined by the Diagnostic and Statistical Manual, fourth edition (DSM-IV) as a complex syndrome of "increasing sense of tension immediately before pulling out the hair; followed by pleasure, gratification or relief when pulling out the hair" (1). However, in a study about adult hair pullers, 17% of them failed to describe both rising tension before hair pulling and relief during or after pulling (2). The most commonly involved hair pulling sites by the order of frequencies are, the scalp (75%), eye lashes (53%), eye brows (42%), pubic region (17%), arm (10%), beard/face (10%), mustache (7%), leg (7%), chest (3%), and abdomen (2%) (2). The age of onset is reported to be mostly between 11-15 years of age.

Trichotillomania is a rare disorder whose actual incidence remains unknown (3). Although the disorder was once considered to be rare, one recent study, among 2,579 freshman-year college students, revealed the life time prevalence of trichotillomania according to DSM-III-R as 0.6%. Using a more liberal definition of trichotillomania, neglecting the DSM-IV criteria for rising tension and tension reduction or gratification, this study estimated the prevalence of hair pulling as 3.4% among women and 1.5% among men respectively (4).

In the past, some theories about etiology and psychiatric approaches for the treatment of trichotillomania were proposed. TM was supposed to have a relationship with endogenous disorders or neurotic conflicts. Later, trichotillomania was accepted as an anxiety reducing factor (5). Swedo suggested (6) that phenomenological, neurochemical, and genetic aspects of trichotillomania may have a relationship with obsessive compulsive disorder. Trichotillomania and obsessive compulsive disorder show

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similarities in phenomenological symptoms, comorbidity, and the changes on positron emission tomography (PET scan) with treatment response. Neuropsychological testing also supports the relationship between trichotillomania and obsessive compulsive disorder. Although trichotillomania is classified under impulse control disorders in DSM-IV; known to illustrate a good treatment response to serotonergic agents, it is also proposed to be a subtype of serotonin spectrum disorders (6,7,8,9).

In some studies, affective disorders and anxiety disorders are proposed to be the most common comorbid diagnoses with trichotillomania (6,9). Keser and colleagues conducted a study about anxiety disorders in 19 patients with trichotillomania and found that 31.6% of them had comorbid diagnoses of anxiety disorders (10).

Both psychotherapy and pharmacotherapy are considered to be useful for the treatment of trichotillomania (3,9,11). There are many studies which suggest the effectiveness of SSRIs in the treatment of trichotillomania (9,11,12). The results of pharmacological trials (9,11,13) however, have been inconsistent. An initial controlled study comparing clomipramine to desipramine in a cohort of hair pullers demonstrated a significant reduction in hair pulling symptoms with clomipramine alone (9). In another controlled trial, both fluoxetine and clomipramine were found to be superior to placebo (12). However, other placebo controlled, double blind trials with fluoxetine did not indicate any therapeutic effect on trichotillomania symptoms (11,13). Additional data from case studies and open reports demonstrated the efficacy with other agents including lithium (14), tricyclic antidepressants (15) and neuroleptic augmentation with SSRIs (16,17).

Drugs that block activity at peripheral and central histamine receptors are also used for the treatment of anxiety. Hydroxyzine and diphenhidramine are the agents which are most commonly used for this purpose. Hydroxyzine has a moderate affect as an antianxiety and sedative agent. Hydroxyzine can be used 25-100 mg/ day for the treatment of anxiety disorders in children or adolescents (18).

In this study, we investigated the efficacy and safety of hydroxyzine as an antianxiety agent with no potential risk for dependence in the treatment of trichotillomania.

METHODS:

The subjects were recruited from the outpatient psychiatry clinics of Erciyes University Hospital and Inonu University Hospital between April 1997 and April 2000. The sample was consisted of two boys and 10 girls who met DSM-IV criteria for trichotillomania. All subjects were between 13-17 years of age (mean ± SD: 14.75 ± 1.14). The written informed consents of the patients and their families were obtained. A dermatologist assessed the patients before the treatment. The patients were reassessed at the end of the first month for their response to the treatment and examination of the level of hair growth. Alopeciac areas to which a hand could easily reach and remnants of hair particles were searched for.

The patients were assessed before the treatment and reassessed after one month by using the Children Depression Inventory (CDI) (19), the Children State Anxiety Inventory (CSAI) and the Children Trait Anxiety Inventory (CTAI) (20,21).

The Children Depression Inventory (CDI) is a 27-item self-rated symptom oriented scale suitable for use by children and adolescents ranging in age from 7 to 17 years. It is developed by Kovacs and it discriminates between those with a psychiatric diagnosis of major depressive or dysthymic disorder and those with none or other psychiatric conditions. It is sensitive to changes in depression over time and is acceptable as an index of the severity of depressive disorder (19,22).

The Children State Anxiety Inventory (CSAI) and the Children Trait Anxiety Inventory (CTAI) are 20-item self-reported inventories developed by Spielberger (20) and are suitable for use by children and adolescents ranging in age from 9 to 17 years (21,23).

All subjects were administered 30mg hydroxyzine daily without any change in dose during whole trial period.

All statistical analyses were conducted by using SPSS 10.0 for Windows. The data were analyzed by Wilcoxon test.

RESULTS:

Twelve patients were included in this study. Ten patients (83.4%) were girls and two patients (16.6%) were boys. The subjects were between 13-17 years of age. The mean age and SD were 14.75 ± 1.14 years. The average education years for all subjects were 6.75 ± 1.54 years. Twelve adolescents with trichotillomania completed a 4-week trial of hydroxyzine. After the treatment, a decrease in the amount of hair remnants and area of alopecia was found.And an increase with the growing up hair was found. The data were evaluated dermatologically by clinicians in dermatology department.

Total CDI scores of the subjects were 9.50 ± 1.31

before the treatment and were 9.33 ± 1.07 after the treatment. This decrease in total CDI scores was not found statistically significant (p>0.05).

Total CSAI scores of the subjects were 30.50 ± 4.19 before the treatment and were 24.33 ± 2.02 after the treatment. Among these results, the changes in CSAI were statistically significant (p=0.002). Total CTAI scores of the subjects were 40.67 ± 2.77 before the treatment and were 26.08 ± 4.58 after the treatment. The changes in total CTAI were statistically significant (p=0.002) (see Table 1).

Table 1. CDI,CSAI and CTAI scores in before and after treatment period.

		Before treatment	After treatment		
	n	Mean+SD	Mean+SD	Z*	P
CDI	12	9,50±1,31	9,33±1,07	- ,743	n.s.
CSAI	12	30,50±4,19	24,33±2,02	- 3,065	0,002
CTAI	12	40,67±2,77	26,08±4,58	-3,065	0,002

CDI: Children Depression Inventory, CSAI: Children State Anxiety Inventory, CTAI: Children Trait Anxiety Inventory, n.s.: not significant, *: Mann-Whitney U test.

DISCUSSION:

Trichotillomania has a strong preponderance for females (24). The ratio of women in trichotillomania was between 84 to 98% in some trials (10). In the present study the frequency of TM in girls was 83.6%. In some trials the onset time of trichotillomania was reported to be in childhood and adulthood (2). In our study all subjects were between 13-17 years of age and we found the average age of the subjects as 14.75.

Psychotherapy, pharmacotherapy and behavior modification therapy can be effective in the treatment of trichotillomania (3,9,11). Psychoanalysis and intensive psychotherapy are also reported to be effective. But, the illness is usually resistant to the treatment and relapses may occur during the course of illness (19). In some trials, the efficacy of some antidepressants was reported in pharmacotherapy of TM. In a study of Swedo and his colleagues, 12 of 13 subjects showed improvements in their symptoms, and 3 of them had full recovery after tricyclic antidepressant, clomipramine treatment (9). Another group of antidepressant shown to be effective in the treatment of trichotillomania is SSRIs. Fluoxetine was found to be effective in a double blind, placebo controlled study (11). But in some trials SSRIs were found to be ineffective (11,25). For instance, fluvoxamine was found to be ineffective in the study of Stanley and his colleagues (25).

There are no trials of large series with antianxiety agents. There is a case report of effective treatment of buspirone which is 5-hydroxytriptamine agonist (26). It is suggested that there is a relationship between hair pulling behaviour and anxiety. The finding that hair pulling behavior increases while going to school in stressful events in course, and decreases in vacations, is an interesting one. So, environmental stress and anxiety due to this stress could be an important factor in hair pulling behaviour (27).

In our study we used hydroxyzine as an antianxiety agent. We reported full improvement in anxiety symptoms of all subjects. In the present study the scores of CSTAI after the treatment were lower than the scores before the treatment (Table 1). The improvements in CSTAI scores were statistically significant after the treatment. Such a decrease may be an indicator of the anxiolitic effect of the drug.

In conclusion, hydroxyzine may be considered to be an effective and safe treatment choice of trichotillomania. But this effect is debatable whether this effect is indirectly the result of anxiety reduction or the drug directly affects the symptoms of trichotillomania. Major limitations of this study are due to its open-label nature as not having a control group and the small number of subjects in the study. Controlled trials with large sample size are needed in order to search for the efficacy of hydroxyzine in the treatment of trichotillomania.

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