

A Clinical Study of Seven Cases of Trichotillomania in Singapore

D S S Fung,*^{MBBS, M Med (Psychiatry)}, H Y Chen,**^{MBBS}

Abstract

The aims of this paper were: to study the profile of trichotillomania cases referred to a child guidance clinic in Singapore, to identify potential risk factors and to study the management and outcome of these cases.

This is a descriptive, retrospective study of all cases of trichotillomania presenting to the clinic between January 1996 and January 1998. There were 7 cases seen in a 2-year period which is less than 1% of new cases seen at the clinic. The female to male ratio was 1.33:1 with a mean age of 9.3 years. All cases met the DSM-IV criteria for trichotillomania. All 6 pulled their hair in tufts with 1 who was almost hairless. Associated problems included tics, nail-biting, anxiety and shortness of temper. Treatments included behavioural treatment, stress management, parental education and counselling as well as medications. Two improved and were discharged, with 3 still undergoing treatment and 2 defaulted follow-up. The 7 cases seen in Singapore are similar in clinical features to cases found overseas. A behavioural approach with reduction of environmental stress is most effective. Drugs were less effective. More systematic studies need to be done.

Ann Acad Med Singapore 1999; 28:519-24

Key words: Adolescents, Children, Compulsions, Hair pulling, Obsessions

Introduction

Trichotillomania was first described by a French dermatologist Hallopeau (1889) of a young man who pulled out his hair in tufts. The word trichotillomania is derived from the Greek *thrix* which means hair; *tillein*, to pull; and *mania*, madness or frenzy. This term is somewhat of a misnomer as it implies a psychotic process. Currently, in the present international classification systems; ICD-10¹ and DSM-IV,² trichotillomania is classified under impulse-control disorders, and is defined as the "recurrent pulling of one's hair, resulting in noticeable hair-loss", and is associated with the following features:

1. an increasing sense of tension immediately before pulling out of hair, or when attempting to resist the behaviour;
2. pleasure and gratification or relief when pulling out the hair;
3. the disturbance not better accounted for by another psychiatric condition or general medical condition e.g. dermatological illness;
4. the disturbance causes clinically significant distress or impairment in social, occupational or other important areas of functioning.

Trichotillomania is an interesting but considerably rare condition in psychiatric settings. Some of the few studies done overseas report positive cases in less than

1% of the clinic samples of children.³⁻⁵ However, the problem is probably under-reported because embarrassed sufferers or parents conceal their behaviour and do not seek treatment. Also, a proportion of the cases may go to the dermatologist or trichologist instead of seeking psychiatric management.

We are particularly interested in trichotillomania as studies have shown it is up to seven times more common in children compared with adults,⁶ and there are often significant underlying family pathology and other psychological issues.

Whether trichotillomania is itself a disorder or a symptom of an underlying diagnosis has been debated, although the DSM-IV qualifies it as a separate disorder. When it occurs alone i.e. in the absence of coexisting psychiatric disorder, some authors consider it a form of obsessional-compulsive disorder, supporting the rationale for use of anti-obsessional agents such as fluoxetine and clomipramine.^{7,8} Others propose that trichotillomania is a symptom of an underlying disorder e.g. depression, and management would then constitute treatment of this disorder.^{9,10}

In preschool children, hair pulling is usually benign, much like thumb-sucking and nail-biting, an illustration of increased body manipulation observed in this age-group,¹¹ or that of a "nervous habit" or tic.⁴ However,

* Registrar

** Medical Officer

Department of Child and Adolescent Psychiatry

Woodbridge Hospital & Institute of Mental Health

Address for Reprints: Dr D S S Fung, Child Guidance Clinic, Institute of Health, Institute of Health Building, 3, Second Hospital Avenue, #03-01, Singapore 168937.

pathological situations may arise. Trichotillomania has been described as a means to work through object relations by use of hair as a transitional object.¹²⁻¹⁴ Emotional deprivation of a maternal figure has also been implicated in its development.⁴

In familial studies, increased rates of affective disorders, obsessive-compulsive disorder (OCD) and trichotillomania have been found clinically. In one systematic family study,¹⁵ a higher risk (11.9% age-corrected) of severe primary OCD was found in first-degree relatives than would be expected in the general population (2%).

The Department of Child and Adolescent Psychiatry of Woodbridge Hospital provides psychological and psychiatric services for children and adolescents. It is the only psychiatric service in Singapore that caters to children and adolescents exclusively. The Department runs Child Guidance Clinics at the Institute of Health (previously known as the Child Psychiatric Clinic), Bukit Batok, Geylang and Tampines Polyclinics as well as at Woodbridge Hospital. Child psychiatrists from the Department also provide services to the Kandang Kerbau Hospital for Children. The Department also has an inpatient unit at the Woodbridge Hospital which provides inpatient services for children and adolescents with severe emotional and behavioural problems.

Aims

- To study the clinical profile of trichotillomania cases referred to the Child Guidance Clinic at the Institute of Health.
- To identify potential risk factors for trichotillomania.
- To study the management and outcome of these cases.

Materials and Method

This is a descriptive retrospective study. All cases seen at the Child Guidance Clinic between January 1996 and January 1998 were reviewed. The following areas were reviewed:

1. Demographic profile of the child
2. Family background
3. Description of hair pulling
4. Educational aspects
5. Other associated problems
6. Therapeutic management
7. Outcome

The diagnosis was matched against the criteria provided by the DSM-IV.⁴

Results

Demographic Profile

There were 3 boys and 4 girls identified in the period of our study giving a female to male ratio of 1.33:1. The age of onset ranged from 1 to 10 years with a mean age

at onset of 7.6 years. The age of presentation ranged from 6 to 10 years with a mean age at presentation of 9.3 years. Patients (and their families) presented for treatment from almost immediately to 5 years after onset. All cases were Chinese with the exception of 1 who was a Eurasian. Almost all were in upper primary schools except 1 who was in primary 2 and another in preschool. Four were first-born. Source of referral was mainly from the family doctors or the School Health Clinic.

Features of Hair Pulling

All cases satisfied at least 3 of the 5 criteria in DSM-IV for trichotillomania. Only 1 case fulfilled all 5 DSM-IV criteria. All cases consisted of hair pulling from the scalp. Six of the cases had hair left in small tufts (Fig. 1) with 1 who was almost hairless. Associated problems revealed that 4 out of 7 had problems of tics, nail-biting, anxiety and shortness of temper.

Psychosocial Factors

Parents came from all social classes and occupations, ranging from company's vice president to cleaner. Four of the mothers were housewives. One patient's father was deceased. Mean paternal age was 47.8 years but in 1 patient, the father had died 3 years ago. The mean maternal age was 45.1 years. All 7 families were nuclear families, of which 2 were single-parent (1 divorced and 1 in whom the father died). There was no family history of trichotillomania or other mental disorders. Family problems highlighted included critical and strict mothers and high parental expectations. Almost all the parents, particularly mothers, scolded the children for developing such a bad habit. This did not improve the problem but accentuated it. Two of the children had low average intelligence, low verbal IQ compared to performance IQ (more than 15 point difference) with reading backwardness. One child was a slow learner while the rest were of normal intelligence. One was actually an above average student but started pulling his hair because he did not make it into the Gifted Education Programme (GEP).

Management

All cases were treated with behaviour therapy. Parental education regarding the behaviour as well as the reduction of criticisms on the children were also employed. Stress management techniques were also taught in 5 patients. One case was referred to the dermatologist for exclusion of other causes of alopecia as the patient complained of itch. Another patient was referred by the dermatologist for psychological management. Only 2 cases were started on anti-obsessional drugs, namely clomipramine and fluvoxamine. Low doses were used as the children were young. Clomipramine (25 mg at night) was not well tolerated in both and stopped after 1 week. Fluvoxamine (50 mg at night) was better toler-

ated and continued for 4 months in 1 patient with improvement in hairpulling (Figs. 2 & 3). The other patient stopped voluntarily after 2 weeks due to a complaint that he felt unnatural and controlled.

Outcome

Two of the 7 cases defaulted after 1 visit. Two im-

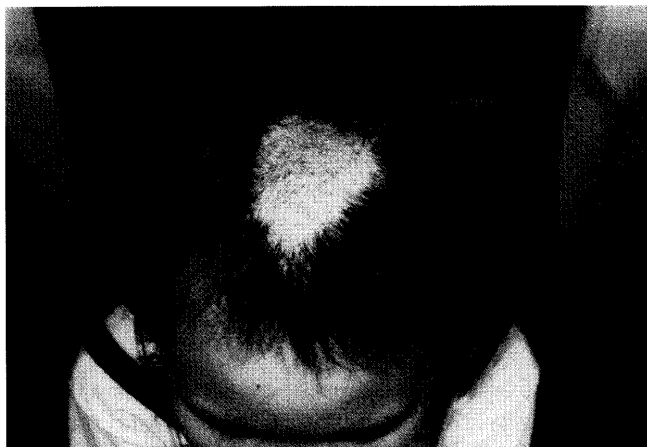


Fig. 1.



Fig. 2.



Fig. 3.

proved and were discharged after 2 months. Three are still on regular follow-up by 1 of the authors. Of the 2 who improved, both were of normal intelligence and their improvement coincided with reduction in environmental stressors. In 1 case, sibling jealousy fuelled by parental bias was identified and with increased parental awareness, the child stopped pulling her hair. In the other case, high parental expectations in examinations were made known to the parents who became more understanding. Of the 3 who are still on follow-up, 2 have improved in that the bald patches are growing back. One continues to pull her hair whenever she is idling at home.

Case Histories

These are presented to illustrate the different presentations and possible aetiologies.

Patient 1

LF was a 6-year-old boy of Italian-Chinese descent. An only child with divorced parents, he started hair pulling since he was 1 year old. Coincidentally, his parents were divorced when LF started hair pulling. The mother who had custody of LF decided to seek treatment only 5 years later as his hair pulling was not severe and occasional. There was associated nail biting. LF had average school results and was generally happy. He was hyperactive throughout the clinic visit. The mother was taught to monitor the behaviour and use distraction techniques to minimise the hair pulling. LF and his mother did not return for follow-up visits.

Patient 2

KM was a 7-year-old Chinese girl who was in primary 2 of a prestigious school. Her father worked in a shipyard while the mother is a housewife. KM had a younger brother who was doing well in school. Her parents often remarked about how the younger brother was so smart in front of KM. Her relatives and mother were quite fond of the younger brother. KM was extremely jealous and this was worsened by the mother's frequent criticism. KM had difficulties in her English as the family was Chinese-speaking. She started pulling her hair in the first 2 months of the new year and was brought to the Clinic for help. Parental counselling was given. The mother's biased view of her children was emphasised and KM was given a star chart to encourage non-hair pulling. KM did not return to the Clinic after the first visit.

Patient 3

CH was a 10-year-old Chinese girl who was studying in primary 5. The youngest child in a family of 3 siblings, her parents were poorly educated and the father worked as a cleaner while the mother stayed at home with the

children. Over an 8-month period, CH pulled her hair in large clumps and was almost hairless. The parents had previously brought her to the National Skin Centre and the dermatologist, having excluded medical causes, had confirmed the diagnosis of trichotillomania. No obvious stressors were identified. CH's mother was described by her to be fierce and frequently scolded her for being dreamy and inattentive. The mother was a perfectionist who demanded that her children study hard. CH improved with a star chart that encouraged her to stop hair pulling. She was discharged after 5 visits with reportedly no more hair pulling.

Patient 4

LH was a 10-year-old who has been pulling her hair for the last 3 years. Her hair pulling behaviour was intermittent and sometimes could be very severe. She also pulled the hair from her legs leaving deep and ugly scars. LH is the younger in a family of 2 siblings. Her father was a storeman in a warehouse while the mother was a housewife. LH had learning difficulties and her IQ test showed below average intelligence with even poorer verbal IQ. This means she has difficulties in languages. She was failing all her exams and was not a happy girl. Her reading was more than 2 years behind her chronological age. She was often the laughing stock in school and the teachers were not encouraging. LH's mother was so exasperated with her behaviour that she frequently beat her. The parents even resorted to changing her name after they consulted a medium who felt that LH had an inauspicious name. Management of LH consisted of lowering parental expectations of LH and getting her teachers to encourage her in her work. Individual therapy with LH consisted of using behavioural techniques particularly habit reversal. It was difficult to engage LH as she preferred to keep quiet during sessions with the therapist. LH improved after 6 months.

Patient 5

KC was a 10-year-old boy whose parents referred him to the Child Guidance Clinic as he presented with a 6-month history of hair pulling. KC is the eldest in a family of working executive parents. KC's problems started when he failed in his attempt to get into the GEP. He was extremely disappointed. His parents were equally disappointed. KC was described to go through a period of sadness and he started developing tics and eye blinking. When his parents stopped his sudden movements, he started pulling his hair. Initially, the bald patch was small and not noticeable. Gradually, it grew bigger and was soon too prominent to hide. KC resorted to wearing a hat. KC's mother frantically searched for means of helping KC, printing out large parts of Internet sites on the topic of trichotillomania. Despite constant warnings, cajoling and criticism, KC could not stop his hair pulling. The following was a passage KC wrote:

"Last year, after my end-of-year examinations, I started a bad habit of pulling hair. I didn't know why and how come I started this bad habit of mine, maybe it was because of pressure or grief. My parents continuously told me not to pull my hair. Every time I try to pull my hair, I try to control myself but I can't. How I wish I could stop and forget this habit. Five months passed and the hole grew bigger. I was continuously scolded by my parents as the hole grew bigger and bigger. I felt very glum, sad and angry since this habit started. People kept running away and teasing me that I am ugly. How I wish that I can stop this bad habit and let all my hair grow back so that I can look like my normal self."

KC responded to behaviour therapy (habit reversal) and his parents were counselled regarding their high expectations. In 2 months, his hair had grown back.

Patient 6

W was a 10-year-old Chinese boy, the elder in a family of 2 siblings whose father was a technician and mother, a housewife. He was referred to the Child Guidance Clinic by his school for his tendency to jerk his neck and pulling his own hair. W started having involuntary jerking movements of his head and neck since the middle of 1995 and this progressed to hair pulling. W, who was generally quiet and reserved, described his hair pulling as uncontrollable and usually done while he was studying at home. No hair pulling occurred in school. He only pulled the hair from his scalp. The hair pulling did not stop when his mother scolded him. The apparent stressor was W's primary 4 streaming examinations which were fast approaching. W expressed great difficulties coping with his school work. Although W was not developmentally delayed in his milestones, he was a slow learner since starting school. By the time he was in primary 4, he was failing in every subject. IQ testing showed that he was functioning in the low average range of intelligence. His reading and comprehension age was about 4 years behind his chronological age.

Management of W consisted of both individual counselling and behaviour therapy, both of which was unsuccessful because W's reticence and unwillingness to cooperate. After some discussion with the mother, W was placed on fluvoxamine 50 mg at night for 4 months and he showed improvement. W's learning difficulties were communicated to the school and he also received reading and comprehension remediation from a social service agency.

Patient 7

X was a 12-year-old girl taking her PSLE examinations, an only child in a single parent family. X's father died when she was 9 years old in a tragic accident at his

worksite where he was a construction worker. This occurred shortly after X had started plucking her hair. Neither X nor her mother could identify the exact precipitating event for her hair pulling. However, the family did not seek help for the problem except through traditional means. The mother initially thought that X was not eating nutritious food which resulted in hair loss. X was untreated for 3 years until her prominent bald patch (Fig. 1) was noted by the nurse making a health visit to her school. X described her hair pulling in a classical manner, occurring at home when she was not doing anything. She would feel an urge to pull which was irresistible. She felt that the hair pulling was silly but could do little to prevent it. A referral to the dermatologist revealed no dermatological abnormality with hair broken off at different levels. There was no evidence that there were unresolved grief issues.

X responded very poorly to medication despite trials of clomipramine, fluvoxamine and fluoxetine. X is presently being treated with behaviour therapy (habit reversal) for the last 4 months with no significant improvement. She has completed and passed her primary school examinations and was promoted to secondary school express stream.

Discussion

Our study is only a preliminary exploration into a fairly rare condition. It lacked the precision of using a standardised structured interview or diagnostic instruments, as it was a retrospective case review. However, 3 of the 7 cases are still on follow-up by the authors and form the basis for future detailed study of follow-up and outcome.

Trichotillomania is said to be more common in females than in males.^{8,11,15,16} Typically, hair is pulled out singly, less often in clumps, from the scalp. Other less common sites including eyebrows, eyelashes, pubic and axillary hair.^{4,15} Whilst systemic illnesses or drugs cause hair loss that is more general, the clinical picture of trichotillomania is that of partly linear or bizarrely shaped patchy hair loss. Cosmetically, disfigurements varies from small bare spots that can be concealed easily, to obvious large patches. Typically the periphery is spared whilst the contralateral region of right and left-handed individuals is affected. The fronto-parietal and the fronto-temporal regions are often involved, as is the occipital region in younger children, with short broken strands of different length remaining in the affected region.¹⁶ In our small series, the hair was pulled mainly from the scalp with only 1 case of leg hair being pulled.

Differential diagnoses include various forms of dermatological conditions: alopecia areata, alopecia totalis, traction alopecia, common baldness, discoid eczema, lupus erythematosus, lichen planopilaris, follicular mucinosis and tinea capitis.^{6,17,18} In children, tinea capitis

is the most frequent. Sometimes a scalp biopsy is required to make the diagnosis, especially since the symptom is often denied by patients. In our series, only 2 cases were seen by a dermatologist with no scalp biopsy done. Observation under the magnifying glass revealed hair broken at different levels with no observable scalp pathology.

Associated features include nail-biting (onychophagy), thumb-sucking and hair-eating (trichophagy) resulting in abdominal pain and hair-balls.^{7,16} Other studies have shown that hair pulling is associated with tics and obsessive compulsive spectrum disorders. In our series, 1 had nail biting while 2 had a history of tics. Two others had anxiety symptoms and shortness of temper. What was interesting was that none of these symptoms occurred simultaneously with the hair pulling. Instead, each behaviour appeared in sequence.

Treatment for trichotillomania is typically described as difficult. Numerous modalities have been reported which include:

1. Behavioural therapy is the only modality that has been systematically studied e.g. habit reversal,¹⁹ covert desensitization,²⁰ self-monitoring and relaxation,²¹ negative practice training and aversion therapy. Habit reversal appeared to be most effective.
2. Cognitive approaches which address maladaptive behaviours with cognitive restructuring and alternative skills training.^{22,23}
3. Hypnotherapy has been successfully used in the treatment of hair pulling.²⁴⁻²⁶ This involves using hypnosis to bring the patient back to the point in which the psychological trauma presumably precipitated the hair pulling. Hypnotic suggestions of greater awareness of the hair pulling as well as increasing the associated pain have also been described.
4. Psychodynamic psychotherapy is used to address the defence to decrease anxiety through a "narcissistic, autoerotic mechanism"⁴ and to address the means to work through object relations in dealing with hair as transitional object.¹³ This, however, is often ineffective because of the ego-syntonicity of the symptom, and concomitant parental pathology."
5. Pharmacological treatment: To date, there has been few controlled studies in this area. In adults, clomipramine, a serotonin-specific tricyclic antidepressant with antiobsessional properties, was found superior to desipramine in females with long-standing trichotillomania.⁷ Fluoxetine was reported in 1 case to be effective,²⁷ but in a double-blind placebo-controlled study in adults, no superior efficacy was found. Comparatively, in children and adolescents, data on pharmacological treatment of trichotillomania is sparse. One case report illustrated the successful treatment with imipramine in a 7-year-old girl with co-morbid depression.¹⁰ In cases where con-

comitant or underlying psychiatric disorders are present e.g. depression and obsessive-compulsive disorder, pharmacological treatment of these disorders with respective agents will likely result in improvement of hair pulling also.^{9,10} However, underscoring these are potential side-effects and symptom-rebound following treatment discontinuation both of which merit caution.⁷

In our series, behavioural therapy with environmental reduction of stressors was the most effective combination. The behaviour therapy was administered by our psychologist and consisted of habit reversal. This is composed of 5 steps: awareness training, learning a competing response, relaxation training, contingency management, and generalisation training. Awareness training focuses on keeping track of the first instance of hair pulling and is self-monitored. This is followed by teaching the patient to engage in an activity that physically inhibits the act of hair pulling. Most of our patients tend to pull hair when they are watching television or sitting around, we therefore made them read a book and hold it tightly when they get an urge to pull. In order to perform the competing process effectively, relaxation training helps to reduce the urge. Our patients found deep breathing exercises the most effective relaxation technique. Contingency management means arranging for rewards once the urge is combated successfully and requires the support of family members. For our patients, a star chart was a useful method. Generalisation training involves using the habit reversal techniques in all situations when hair pulling occurs. Drugs did not appear to help unless anxiety was a prominent feature.

In summary, trichotillomania is an intriguing problem in a child psychiatric setting. However, much basic information about its prevalence, course and treatment needs further study. Professionals dealing with children need to be made aware of the condition as much misery can be under-recognised as was seen in several of the cases in our series. More systematic study of the condition needs to be carried out.

Acknowledgements

The authors would like to thank Dr Aw Soh Choo for reading through the manuscript and Dr Cai Yiming, for his permission, support and supervision of the study.

REFERENCES

1. World Health Organisation. International Classification of Diseases. 10th ed. Geneva: World Health Organisation, 1994.
2. American Psychiatric Association. Diagnostic Statistical Manual. 4th ed. Washington DC: American Psychiatric Association, 1996.
3. King R A, Zohar A H, Ratzoni G, Binder M, Kron S, Dycian A, et al. An epidemiological study of trichotillomania in Israeli adolescents. *J Am Acad Child Adolesc Psychiatry* 1995; 34:1212-5.
4. Mannino F V, Delgado R A. Trichotillomania in children: a review. *Am J Psychiatry* 1969; 126:505-11.
5. King R A, Scahill L, Vitulano L A, Schwab-Stone M, Tercyak K P, Riddle M A. Childhood trichotillomania: Clinical phenomenology, comorbidity, and family genetics. *J Am Acad Child Adolesc Psychiatry* 1995; 34:1451-9.
6. Mehregan A H. Trichotillomania-a clinicopathological study. *Arch Dermatol* 1970; 102:129-33.
7. Swedo S E, Leonard H L, Rapoport J L, Lenane M C, Goldberger E L, Cheslow D L. A double-blind comparison of clomipramine and desipramine in the treatment of trichotillomania. *N Engl J Med* 1989; 321:497-501.
8. Swedo S E, Rapoport J L. Annotation: trichotillomania. *J Child Psychol Psychiatry* 1991; 32:401-09.
9. Krishnan K R R, Davidson J R T, Miller R. MAOI therapy in trichotillomania associated with depression: case report. *J Clin Psychiatry* 1984; 45:267-8.
10. Weller E B, Weller R A, Carr S. Imipramine treatment of trichotillomania and coexisting depression in a seven-year-old. *J Am Acad Child Adolesc Psychiatry* 1989; 28:952-3.
11. Oguchi T, Miura S. Trichotillomania: its psychopathological aspect. *Compr Psychiatry* 1977; 18:177-82.
12. Buxbaum E. Hair pulling and fetishism. *Psychoanal Study Child* 1960; 15:243-60.
13. Greenberg H R. Transactions of hair-pulling symbiosis. *Psychiatr Q* 1969; 43:662-74.
14. Monroe J T Jr, Abse D W. The psychopathology of trichotillomania and trichophagy. *Psychiatry* 1963; 26:95-103.
15. Lenane M C, Swedo S E, Rapoport J L, Leonard H L, Sceery W, Guroff J. Rates of obsessive compulsive disorder in first degree relatives of patients with trichotillomania: A research note. *J Child Psychol Psychiatry* 1992; 33:925-33.
16. Oranje A I, Peereboom-Wynia J D, De Raemaker D M. Trichotillomania in childhood. *J Am Acad Dermatol* 1986; 15:614-9.
17. Muller S A, Winkelman R K. Trichotillomania: a clinicopathologic study of 24 cases. *Arch Dermatol* 1972; 105:535-40.
18. Stengel F, Ackerman A B. Diagnosing the common alopecias. *Am Fam Physician* 1978; 18:76-82.
19. Azrin N H, Nunn R G, Frantz S E. Treatment of hair pulling: a comparative study of habit reversal and negative practice training. *J Behav Ther Exp Psychiatry* 1980; 11:13-20.
20. Levine B A. Treatment of trichotillomania by covert desensitization. *J Behav Ther Expr Psychiatry* 1976; 7:75-6.
21. McLaughlin J G, Nay W R. Treatment of trichotillomania using positive covariance and response cost. *Behav Ther* 1975; 6:87-91.
22. Dumas J E. Treating antisocial behaviour in children: child and family approaches. *Clin Psychol Rev* 1989; 9:197-200.
23. Meyers A W, Craighead W E. Cognitive behavioural therapy with children. New York: Plenum Press, 1984.
24. Gardner G G. Hypnotherapy in the management of childhood habit disorders. *J Paediatr* 1978; 92:838-40.
25. Faber W, Dy A J. Hypnotic treatment of trichotillomania: two cases. *Int J Clin Exp Hypnosis* 1974; 22:210-5.
26. Adam B S, Kashani J H. Trichotillomania in children and adolescents: review of literature and case report. *Child Psychiatry Hum Dev* 1989; 20:159-68.
27. Premaeu F, Fontaine R. Obsessive disorder with self mutilation: A subtype responsive to pharmacotherapy. *Can J Psychiatry* 1987; 32:699-700.