Abstract

Trichotillomania is a disorder of recurrent hair pulling, resulting in the dermatological expression of partial or total hair loss. Trichotillomania has been thought rare for many years, but recently it has been speculated that it is far more common than previously believed. The number of patients is increasing daily. In 1987, a new definition was proposed in the United States, and trichotillomania is now considered to be distinct from mere hair pulling behavior. Worldwide, a debate about the conditions and cures for trichotillomania continues, specifically debates based on the definition adopted in the United States. The author reviews the latest Japanese reports on trichotillomania, comparing key literature from abroad.

Key Words: trichotillomania, obsessive-compulsive disorder (OCD), DSM-III-R, hair pulling, impulse-control disorder

Patients in Japan with trichotillomania are often referred to dermatology, pediatrics, or psychiatry clinics. Trichotillomania has traditionally been thought to be rare, but recently it has been speculated that it is far more common than previously believed. The number of patients is increasing daily. Moreover, some researchers in the United States have recently noted that trichotillomania is generally chronic. Other researchers have discounted the chronic nature, instead asserting there are periods of exacerbation and remission.

The goals of this study are to review the Japanese reports concerning trichotillomania, excluding conference resumes, published between 1995 and 2005 and to compare these with the most important literature from abroad.

Brief History of the Changing Concept of Trichotillomania

Trichotillomania (TM) is a disorder of recurrent hair pulling, resulting in the dermatological expression of partial or total hair loss of the scalp as well as from the eyelashes, eyebrows, beard, and/or pubic area. Hair loss is the result of hair pulling by the patient. In 1889, French dermatologist Hallopeau presented a case of self-depilation of the scalp and named it trichotillomania (tricho: hair, tillo: pull out in Greek, mania: insanity). More than 100 years have passed, but even now, in 2005, the epidemiology, prognosis, and etiology, not to mention a lasting effective treatment, are still unclear. Hallopeau’s case involved a young insane man. At that time, TM was thought to be one of the symptoms of mental illness. Later, in 1930, TM was divided into two categories. In the first, TM was a symptom of...
mental illnesses such as schizophrenia and depression. In the second, TM was one of the main symptoms within the broad range of neurotic disorders. In Japan, in the same year Doi reported on a TM case involving a 17-year-old girl with mental retardation. After this report, except for two psychiatric reports, the TM cases that were reported for the next one-third of a century were only from a dermatological perspective.

At the beginning of the second half of the 20th century, TM was vaguely thought of as a specific symptom of obsessive compulsive disorder (OCD). Philippopoulos reported on a case study using a psychoanalytical approach on a 16-year-old female. At that time, there were many psychoanalytical arguments about the onset mechanism of TM. For example, etiological interpretations relating to female psychosexual development were suggested.

In Japan, in 1959 Takaishi et al reported on six cases of children under the title “Psychiatric Study of TM”, and in 1962 Kimura et al reported on four adolescent cases under the title “Speculation on TM: Its’ Developmental and Psychodynamic Mechanisms”.

Since 1990 new clinico-genetic and neurobiologic research has supported TM’s close relationship to OCD. Consequently, clomipramine, a drug found to be effective in treating OCD, was found to be effective in the treatment of TM. Selective Serotonin Reuptake Inhibitors (SSRIs), effective in treating OCD, have also been proven to be efficacious treatments for TM.

TM is recognized in the American Psychiatric Association’s Diagnostic Statistical Manual (DSM) classification system. With the publication of DSM-III-R in 1987, TM was classified under “impulse-control disorders not elsewhere classified” (Table 1) along with intermittent explosive disorder, kleptomania, pyromania, and pathological gambling. The fifth, and final, criterion for TM was added in DSM-IV(1994) and DSM-IV-TR (2000). The International Classification of Mental and Behavioural Disorders 10th Edition (ICD-10; 1992) places TM in the analogous category of DMS-III-R, namely “habit and impulse disorders”. These two diagnostic systems are characterized by the term “impulses” that cannot be easily controlled. Although the ICD-10 description of TM is almost the same as that in the DSM-III-R criteria, it does not follow the addendum of “associated distress or impairment of functioning” in DSM-IV (Table 2).

Table 1 Diagnostic criteria for 312.39 Trichotillomania

| A. Recurrent pulling out of one’s hair resulting in noticeable hair loss. |
| B. An increasing sense of tension immediately before pulling out the hair or when attempting to resist the behavior. |
| C. Pleasure, gratification, or relief when pulling out the hair. |
| D. The disturbance is not better accounted for by another mental disorder and is not due to a general medical condition (e.g., a dermatological condition). |
| E. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning. |

Table 2 Trichotillomania

A disorder characterized by noticeable hair loss due to a recurrent failure to resist impulses to pull out hairs. The hair-pulling is usually preceded by mounting tension and is followed by a sense of relief or gratification. This diagnosis should not be made if there is a pre-existing inflammation of the skin, or if the hair-pulling is in response to a delusion or hallucination.

Histology

Histology is sometimes necessary to correctly diagnose TM because the patient is in denial. Microscopic examination of hairs from the affected
area usually reveals that they have blunt ends. ‘Exclamation point’ hair (tapering of proximal shaft) and loss of pigment are never observed. The most relevant histologic feature of TM is the presence of normally growing hair among empty hair follicles\(^\text{17}\). This feature is due to the patient’s removal of the hair. When the trauma of extraction is severe, one may observe separation of the follicular epithelium from the surrounding sheath of the connective tissue. If necessary, the dermatological diagnosis can be made using a punch biopsy of the affected area. This usually reveals multiple catagen hairs\(^\text{18, 19}\).

In Japan, two reports\(^\text{20, 21}\) having almost the same conclusions from histologic studies of TM, emphasize that biopsy is not always necessary because careful observation can lead to an exact diagnosis.

**Epidemiology**

Even in the beginning of the latter half of the 20\(^{\text{th}}\) century, TM was thought to be rare. For example, one statistical report demonstrated a rate of five TM patients per 10,000 people treated for mental disorders (0.05%)\(^\text{22}\). However, 30 years later, a questionnaire was administered to approximately 2,500 college students in the United States, with a 97.9% response rate. This 1989 questionnaire indicated a lifetime TM prevalence of 0.6% in both male and female students\(^\text{23}\). This survey adopted the TM criteria in DSM-III-R. If the investigators would have ignored the diagnostic criteria referring to tension, pleasure, and gratification and instead only focused on the act of hair pulling, the prevalence would have increased to 1.5% of the male and 3.4% of the female students. In a similar investigation of hair pulling by self-report in everyday life, approximately 1% of the 700 college freshmen met the DSM-III-criteria\(^\text{24}\).

Consequently, it is apparent that all hair pullers do not suffer from TM using the DSM definition. The epidemiologic rate of TM may be inaccurate because the rate varies according to the adopted criteria. In fact, less than 10% of the individuals who chronically pull out their hair may meet the DSM-IV-TR criteria for TM. The problem arises as to whether ordinary hair pullers differ from those meeting the full criteria. It is also important for psychiatrists to recognize that dermatologists treating TM generally consider all of the cases of hair pulling as TM regardless of the DSM criteria. Because the precise epidemiologic TM data meeting the DSM criteria are unknown, the author hereafter regards all clinical hair pulling as TM.

**Gender Ratio and Onset Age**

In almost all of the reported TM cases, women outnumber men. For most patients, the onset of hair pulling occurs in infancy, in primary school, or during adolescence. Greenberg and Sarner\(^\text{25}\) reported that the majority of their patients began hair pulling in pre- and mid-adolescence, from 11 to 16 years of age. Mannino and Delgado\(^\text{26}\) reported on 16 cases (male 3, female 13), the youngest of which was two and one-half years old; the remaining cases ranged from 7 to 14 years of age at onset. Muller\(^\text{27}\) observed that onset is frequently between 5 and 12 years of age. He also reported that 62% of preschool-aged TM occurs in boys, which starkly contrasts with the 30% rate in male patients for other age groups. Mehregan\(^\text{18}\) reported that the number of TM children is seven times that of adults. Therefore, although TM can be diagnosed in all age groups, it is more common during the first two decades of life, particularly in female patients.

The female preponderance of TM may be, in part, due to willingness to seek medical care. Psychologically, women may show their aggression through a masochistic character. In addition, men may be able to hide their hair pulling better than women by creating the illusion of being naturally bald and, in some cases, totally shaving their mustaches or beards. However, whether the higher incidence in females is based on the sociological situation or a biological cause is still debated.
In Japan, the number of TM cases per medical report is rather small, but the tendency for female preponderance is common. For example, between 1995 and 2005 there were three TM reports that had in excess of 30 cases. In each, women overwhelmingly outnumbered men. A few reports did not distinguish between onset age and first referral age, but the distinction is absolutely necessary. Onset age is always more important than first referral age because the onset age is directly related to the prognosis.

Clinical Characteristics

In the majority of reported cases, hair pulling occurs nearly daily and, in total, may consume two or more hours each day. Hairs at the frontal, central, and temporal areas on the dominant hand side are most often pulled out, sparing the occipital base of the head. The affected areas are identifiable by the linear or circular patches with irregular borders that contain hairs of various lengths, the shortest being from where hair was most recently removed. Feelings of shame force the TM patients to not expose the damaged areas to others. In addition, it is common for the patients to not mention their hair pulling to anyone. The patients will be astonished to wake and find hair scattered around the bed. Even if they admit the hair pulling, it may be rationalized by the abnormal itching sensation of the scalp. Parents sometimes share in this denial. TM patients generally attempt to conceal the bald patch with creative hairstyles such as wigs, hairpieces, or bandanas. Hair pulling is associated with low self-esteem accompanying anxiety and/or depression. TM patients usually first visit a dermatologist, seeking treatment for the alopecia after a long period during which they avoided intimate communication with friends. Few visit a psychiatrist first. Frequently, the pulled hairs are examined. Some patients may ingest the hair (trichophagia). Situations likely to induce hair pulling include watching television, reading books, writing letters, driving a car, or talking on the phone. In addition, hair pulling occurs more frequently in the evening than during the daytime.

There have been many cases of TM associated with various medical or surgical diseases. Even bacterial or viral infections were suspected of causing hair pulling in response to an autoimmune reaction. Medical complications of TM are rare but, with the exclusion of skin infections at the pulling site, can be rather serious. Gastric hairballs (trichobezoar) are potentially life threatening and create uncomfortable symptoms such as abdominal pain, nausea, vomiting, and constipation, and in a few cases may cause gastric expansion, perforation, intestinal obstruction, or acute pancreatitis requiring surgical operation.

In Japan, cases of hair pulling are similar to those found abroad, and no particular type specific to Japanese patients exists. TM cases associated with cerebral infarction, anorexia nervosa, and atopic dermatitis were reported between 1995 and 2005. Ina et al observed that adult TM is usually the result of atopic dermatitis and psychological stress. Matuo et al reported on the case of an 8-year-old girl with trichobezoar who was treated surgically. The other 33 trichobezoar cases in Matsuo’s study also underwent surgery. Among them, very few were sent to psychiatrists to undergo psychotherapy. Since Matsuo, two additional cases have been reported.

Prognosis

A review of the prognosis of the patients with TM suggests that TM is episodic, very difficult to permanently cure, and in many adult-onset cases at least half tend to be chronic. According to Swedo and Rapppport, there are both remitting and exacerbating stages in cases that are recurrent throughout the patient’s lifetime. When TM occurs later in life, that is to say during adulthood or even at an older age, it is associated with more psychopathologic disorders and with a poorer prognosis, particularly in female cases. Chronic
hair pulling has often been associated with major depression, dysthymia, severe anxiety, personality disorders, and schizophrenia.}

Infancy-onset TM has been considered benign because it has been described as a bad habit like nail biting or thumb sucking. Hair pulling that occurs in infancy appears to be different from adult onset TM. Boys predominate in infancy, and TM seems to be more likely to remit spontaneously or with minimal treatment. TM that onsets between the ages of 5 and 12 may be yet another type of TM, different from TM that onsets after adolescence because the former has a high rate of recovery in the short term. This type of TM has been described as a symptom of an impaired mother-child (mainly daughter) relationship. Some researchers have emphasized how family tension about poor marital relationships characterized by ambivalence, hostility, and dependence provokes a patient’s hair pulling.

In Japan, from 1995 to 2005 there were no TM reports focused on prognosis, but in the past, there were at least three reports, including one co-written by the author. However, at the time of publication, none of the authors recognized the fact that some types of TM are chronic. Instead, therapy failure was thought to be the leading cause of the chronic nature.

Etiology

Psychological Factors

As mentioned above, since 1960 there have been many arguments concerning the onset mechanism of TM. Monroe and Abse stressed the sexual conflict involved in TM and considered hair pulling by females to represent castration or masturbation. Greenberg and Sarner described the mothers of hair pullers as critical, hostile, highly competitive, alternately infantile and parental, having a strong unsatisfied need for dependency, or being threatened by latent homosexual impulses. The mother-daughter relationship was seen as very close and symbiotic, with a great deal of ambivalence, hostility, and fear of separation, in other words, “hair-pulling symbiosis”.

Biological Factors

Huber referred to TM as a form of motor discharge involving both impulsive and instinctive processes resulting in subcortical lesions. As a result, he speculated that TM is a kind of organic disorder, but he did not conduct an experimental study. As the repetition of the hair pulling in TM and the compulsive behavior in OCD closely resemble each other, since around 1990 TM has been considered to be a variant of OCD, lying within the spectrum of OCD disorders. To explore a possible relationship between TM and OCD, 65 out of 69 first degree relatives of 16 chronic female TM probands were compared in detail with OCD and normal control groups. Three of the 16 TM probands had at least one first degree relative with a lifetime history of OCD, and there was an age-correlated rate of 6.4% to first degree OCD relatives. No relative in the normal group met OCD criteria. Consequently, the high OCD incidence in TM families suggests that TM lies within the OCD spectrum along with other pathologic grooming behaviors. Swedo and Leonard have also suggested that TM might be grouped with OCD in a spectrum of disorders having a common pathologic compulsion of excessive grooming. A neurobiologic study of the pharmacotherapy of SSRIs demonstrated similar outcomes for TM and OCD. The researchers concluded that TM is mediated by the same cortico−striatal circuits as OCD.

In Japan, Takaishi et al. asserted that TM may be an expression of a child’s masochistic aggression against his/her nurturer’s interference and domination. Kimura et al. found TM to be an expression of the “aggression-denial-selfpunishment cycle,” analogous to nail biting and thumb sucking, that was generated by psychological or biological factors. They discussed two neurotic and two epileptic cases. TM has also been discussed in terms of a daughter’s distorted aggression toward her mother, somewhat akin to
protest suicide. In contrast, Morioka pointed to socio-environmental factors such as three generations living together as more essential than the distorted mother-daughter relationship for the precipitation of TM. Considering biological factors after Kimura’s report, epilepsy was suspected to be the precipitating factor of TM, but because there was an abundance of electroencephalographically normal cases, this point was viewed with doubt.

During the past 10 years from 1995 to 2005, two reports have been written in Japan with a psychoanalytical orientation. Tsutsumi, trying to combine the patient’s impulsive tendencies with TM, discussed TM as resulting from a failure of “rapprochement” during adolescence. Another report also examined TM from the same viewpoint of developmental psychology and viewed TM as a type of distorted aggression.

**Pharmacotherapy**

Many drugs at first appeared to be promising for treating TM, but in fact, only one has been found to be effective in strictly controlled trials. This drug is clomipramine, one of the antidepressants. In the latter half of the 20th century, SSRIs have been extremely effective in treating all types of depressive states and OCD, so they were also tested for treating TM. Paroxetine and fluvoxamine have been proven to be effective, but some researchers insist that their effectiveness in the long term is doubtful. During the drug trials, the duration of the effect was frequently unclear, and the follow-up period was limited to a few weeks or months, at the longest one year. Even observation for five years may be too brief to correctly evaluate the effects on this chronic condition. In many cases, improvement is transitory. Therapy resistance may be caused by the inadequate treatment of the Axis II personality disorder. In such cases, the addition of a low dose of pimozide, risperidone, or haloperidol is sometimes effective in treating TM even if clomipramine monotherapy is ineffective. The TM patients whose hair pulling is strongly motivated by pleasurable sensations may benefit from administration of the opiate antagonist, naltrexone.

In Japan, some reports have reconfirmed the positive effects of clomipramine, fluvoxamine, and paroxetine on TM. As the effectiveness of SSRIs is suspected to be transitory, caution must be exercised when considering pharmacotherapy. Although fluoxetine was reported to be almost ineffective in crossover trials based on these reports in the United States, some researchers continue to wrongly suggest fluoxetine is effective in the treatment of TM.

**Behavioral Therapy**

The first reports of behavioral intervention in patients with TM consisted of the self-monitoring technique paired with the abolition of automatic response interruptions. To increase the validity of self-monitoring, several investigators have added other objective measurements. For example, patients have been asked to collect all the hairs pulled each day and count them before placing them in an envelope, write the correct number and the time of day on each envelope, and bring these envelopes to the next treatment session. The patients were told that doing so would provide a daily measure of progress since they would know exactly how much hair they pulled. This task seems to reduce hair pulling by increasing the behavioral cost of hair pulling and by drawing on the patient’s reluctance to share this severely embarrassing situation with the researcher.

In the treatment of hair pulling, habit reversal training seems to be the most successful self-management technique. Habit reversal training was first introduced as a generally effective treatment for neurotic habits by Azrin and Nunn, and was later tested with TM patients. If the patients are not affected by serious comorbidity, some researchers have had good results with a modified cognitive approach. The main techniques are coping strategies, motivation
enhancement, changing internal monologues, awareness training, competing responses, and relaxation techniques\textsuperscript{60, 66}.

In Japan, there have been many conference presentations about behavioral therapy or cognitive behavioral therapy, but there have only been two reports\textsuperscript{67, 68} between 1995 and 2005 discussing the effectiveness of self-report and grasping the handkerchief to prevent the act. However, because of these techniques, the patients were able to overcome their irresistible urges to hair pull.

**Hypnotherapy**

A variety of hypnotic techniques have been reported in case studies, usually adjunct to other behavioral therapy and/or psychotherapy. The techniques’ outcomes are not connected with the number of hypnotic sessions but are related to the patient’s ability to be hypnotized, specifically, to easily engage in age regression\textsuperscript{69}. Hypnotic suggestions have included pain on touching the scalp, and in cases where pulling was pleasurable, rituals other than hair pulling to increase gratification\textsuperscript{70}. Some researchers have outlined the guidelines for the posthypnotic suggestions to enhance the patient’s self-control. In view of the diversity of techniques and the absence of well-designed controlled studies, meaningful conclusions cannot be drawn concerning the utility of hypnosis in treating TM.

In Japan, there have been very few hypnotherapy reports, even when conference presentations are included.

**Psychotherapy**

Hair represents beauty and attraction and symbolically demonstrates activity and affection. Buxbaum\textsuperscript{71} asserted that hair pulling is an expression of despair and mourning. Therapists must genuinely consider each patient’s mental and emotional state to determine possible factors that have led to hair pulling. In spite of great advances in biological medicine, there is still an indispensable roll for psychotherapy. It is generally recognized that the administration of any single drug is ineffective in the treatment of chronic TM. The same can be said of psycho-therapy. Because a psychoanalytical approach to TM has a generally limited effect\textsuperscript{10, 25}, comprehensive psychotherapy is always necessary in order to maintain a good patient-therapist relationship. Any type of psychotherapy appears to be appropriate for this purpose; there seems to be no specific TM-oriented psychotherapy in the United States. However, TM patients with compulsivity akin to OCD are more apt to benefit from verbal psychotherapy than those with impulsivity akin to personality disorders\textsuperscript{79}.

In Japan, there were six psychotherapy reports from 1995 to 2005; three of them were non-verbal play therapy reports, one regarding sand play\textsuperscript{72} and two about picture drawing\textsuperscript{73, 74}. These reports discussed clients below 11 years of age. The remaining three studies were verbal psychotherapy reports\textsuperscript{75, 76, 77} discussing clients from 15 to 27 years of age. The former three provide examples of success, but this success must be tempered by the fact that in these cases of TM with onset in childhood, full recovery even without therapy is possible.

**The Difference Between TM and OCD**

OCD patients experience overwhelming anxiety accompanied by a compulsive urge that is relieved by performing the specific ritual. Most TM patients, like OCD patients, generally recognize hair pulling as inappropriate, so the act is performed in response to undesirable anxiety with resultant tension relief. However, careful observation has revealed important differences\textsuperscript{76}. OCD patients may have external locus of control and utilize “alloplastic” coping mechanisms. On the other hand, most TM patients report hair pulling as being pleasurable, so it may be concluded that they have internal locus of control and rely on “autoplastic” defenses\textsuperscript{79}. OCD compulsions are
never pleasurable, and hair pulling is performed intentionally, with patients aware of the resulting decrease in anxiety. Furthermore, OCD compulsions change with time; for example, clapping hands evolves into counting numbers. In contrast, TM patients only pull their hair but do not substitute any other compulsive rituals. In addition, hair pulling by TM patients has sometimes been successfully treated with a short course of hypnosis or any one of several behavioral therapy techniques to which OCD patients did not respond\(^7\).

Baer\(^8\) noted that there are at least two important differences between TM and OCD. OCD patients provide a logical explanation for their behavior, whereas TM patients rarely justify their hair pulling. The success of ritual response prevention in OCD patients eventually leads to anxiety reduction, whereas TM patients have less anxiety. A neurologic study by Christenson and Crow\(^9\) provided strong evidence that the relationship between TM and OCD is limited. TM patients did not exhibit an increased number of neurological soft signs, blunted neuroendocrine responses, or abnormalities of serotonin’s cerebrospinal fluid metabolite, all of which were present in OCD patients\(^10\).

In Japan there have been no biological studies concerning the differences between TM and OCD.

### Discussion

TM is currently believed to lie within the framework of the DSM-defined criteria, but based on character traits, the author would like to suggest that TM is not the same as other impulse-control disorders. Almost no TM patients have anti-social personalities. While it is true that a typical DSM-defined TM exists, TM cannot be limited to this type because the number of incomplete types of DSM-defined TM is too large to be ignored. Furthermore, the author contends that, on the basis of the above, TM is not attributable to OCD. The symptom of hair pulling is present in various disorders, and, in some situations, it may even be considered normal from a cosmetic point of view. TM is clinically somewhat similar over a broad spectrum of psychopathology from a transient normal habit to the clinical comorbidity expression of various mental disorders, to a symptom of mental retardation, including several kinds of neuroses such as OCD, impulse-control disorders, some types of personality disorders and the clinical comorbidity expression of various mental disorders. In each of these cases, hair pulling may be present as a mere symptom; consequently, it is important to have a correct psychiatric evaluation to categorically classify the hair pulling. TM resembles a depressive state that includes several kind of disorders, syndromes, and symptoms. Bad habits may be one key element. Compulsion, impulsiveness, and addiction tentatively coexist with the bad habit behavior. As a result, the author would like to suggest that TM is only understood theoretically as the existence of a bad habit, and the bad habit becomes stronger with age. Because of this hypothesis, in 1983 the author jointly proposed a TM classification system according to onset age\(^10\): infancy stage (0–5 years), school-child stage (6–15 years), and adult age (over 15 years old). This classification system was roughly consistent with the clinical literature on TM that was written in the United States at that time. Any type of therapy becomes increasingly difficult at the higher stages.

**First stage:** As many American researchers previously discussed, when the onset age is during infancy or early childhood, the TM should be differentiated from other onset stages because it is a bad habit akin to nail biting. Hair pulling is a symptom of frustration. TM with onset in this stage reveals no gender difference between males and females. Based on our clinical experience, even without therapy recovery is rapid when the mother changes her interpersonal attitude.
Second stage: In this stage, TM occurs during pre- and mid-adolescence. It sometimes at first appears severe and debilitating but becomes benign and generally does not continue into adulthood. TM in this stage may be a syndrome; there are marked gender differences, with a female preponderance. Generally speaking, the girl’s character is diligent and compulsive, the mother-daughter relationship is ambivalent, and the mother is alternately affectionate or indifferent. Experience suggests that TM which onsets from 6 to 15 years of age is grouped into the same category. TM treatment is rather difficult, requiring behavioral, cognitive, and family therapy as well as psychotherapy.

Third stage: TM generally is comorbid with severe psychopathology. Based on previous studies, the number of female patients is only slightly larger than the number of males. TM improves concomitantly with other coexisting psychiatric disorders such as depression, schizophrenia, and personality disorders.

Recently Oiji and Morioka created a TM classification system with three types: reaction, neurotic, and personality disorder. This system and the one the author proposed share some common points. However, some female patients suffered from TM that onset in infancy and, now, as adults have chronic TM. Currently, these cases cannot be easily explained. One possibility is that the patient may have inherent personality disorder.

The best treatment currently available is cognitive-behavioral therapy with pharmacotherapy of clomipramine or one of the SSRIs for chronic and incurable TM. Psychotherapy is also essential to maintain a good patient-therapist relationship.

Reference
523–524.


