

Trichotillomania and Skin Picking Disorder: Different Kinds of OCD

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Abstract (unstructured; 150 words)

Trichotillomania (Hair Pulling Disorder) and Skin Picking Disorder are common neuropsychiatric disorders, but are under-recognized professionals. Affected individuals repeatedly pull out their own hair or pick at their skin, and these symptoms not only impact negatively on the individual due to the time they occupy, but can also lead to considerable physical disfigurement, with concomitant loss of self-esteem, and avoidance of social activities and intimate relationships. The behaviors may also have potentially serious physical consequences. Trichotillomania and skin picking frequently co-occur, and both disorders commonly present with co-occurring depression or anxiety. Behavioral therapy appears, at this time, to be the most effective treatment for both disorders. Pharmacotherapy, in the form of N-acetyl cysteine or olanzapine, may play a role in treatment as well.

Clinical Context

Trichotillomania

Trichotillomania, also known as Hair Pulling Disorder, is characterized by the repetitive pulling out of one's own hair leading to hair loss and functional impairment¹ (see Table 1 for diagnostic criteria). The most common sites pulled include the scalp, eyebrows, and eyelashes; although any bodily site with hair can be affected.²⁻³ Pulling from multiple sites is common and pulling episodes can last from a few minutes to several hours.⁴ Nationwide epidemiological studies of Trichotillomania are lacking; but small studies examining the prevalence of Trichotillomania among college students in the United States, adolescents in Israel, and older adults within the community have found current rates ranging from 0.5% to 2.0%.⁵⁻⁷

Onset of hair pulling is generally in late childhood or early adolescence although onset of pulling behaviors can occur at any age.^{4,8} Trichotillomania appears to have a similar clinical presentation across cultures.^{6,9} In adults, Trichotillomania has a large female preponderance, however in childhood, sex distribution has been found to be

equal.¹⁰⁻¹¹ Trichotillomania is frequently associated with reduced self-esteem, and avoidance of social situations due to shame and embarrassment from the pulling and its consequences.^{3,12} Even though Trichotillomania interferes with a person's quality of life, the majority (about 65%) of individuals never seek treatment.³

The clinical presentation of trichotillomania varies. Individuals may report one or many triggers for their pulling, and these include sensory triggers such as the feeling of the hair or the scalp, emotional triggers such as feeling anxious, bored, or angry, and cognitive triggers such as thoughts about hair and appearance or rigid thinking.⁴ Many patients report not being fully aware of their pulling behaviors, also referred to as “automatic” pulling, whereas “focused” pulling generally occurs when the patient sees or feels a hair that is “not right”, that the hair may feel coarse, kinky, or “out of place”.⁴ Most patients pull with varying degrees of focused and automatic pulling, which can fluctuate over time.

Skin Picking Disorder

Skin Picking Disorder, also referred to as Pathological Skin Picking, Neurotic Excoriation, Dermatillomania, or Psychogenic Excoriation, is characterized by the repetitive and compulsive picking of skin, leading to tissue damage¹ (see Table 2 for diagnostic criteria). Although most individuals at some time pick at their skin, either to smooth out irregularities or to improve blemishes or acne, clinicians must differentiate between normal picking and more pathological forms. The diagnostic criteria for Skin Picking Disorder require that picking be recurrent and result in skin lesions, thereby

reflecting the frequency and intensity of the picking.¹ In addition, the clinical diagnosis requires that the picking result in the person feeling distressed or impaired.

Community prevalence studies in the United States have found that Skin Picking Disorder is relatively common. In a study of 354 adult subjects, 19 (5.4%) reported significant picking with associated distress/impact.¹³ A second study, comprised of 2513 telephone interviews in a representative sample, found that 1.4% picked to the point of having noticeable skin damage and reported distress or impairment due to the picking.¹⁴ Research suggests that the age of onset for Skin Picking Disorder varies substantially and may occur during childhood, adolescence, or adulthood.¹⁵⁻¹⁶ The clinical characteristics of Skin Picking Disorder appear the same across age cohorts and cultures.¹⁶ Many individuals with Excoriation Disorder report that the behavior began with the onset of a dermatological condition such as acne, but the picking continues even after the dermatological condition clears.

The phenomenology of Skin Picking Disorder bears striking similarities to that of Trichotillomania. Individuals with Skin Picking Disorder spend a significant amount of time each day picking their skin, with many reporting that the picking behavior occupies several hours each day.¹⁷ Although the face is the most commonly reported site of picking, other areas, such as the hands, fingers, arms, and legs, are also common targets. Picking from more than one body area is normal with one study finding that people picked at an average of 4.5 sites.¹⁷ The time spent picking, as well as the consequences of picking such as scarring, results in dysfunction related to work and social activities.¹⁸ Triggers to pick vary greatly between individuals, and multiple triggers are the norm.

Stress, anxiety, time away from scheduled activities, boredom, and feeling tired or angry, have all been reported as triggers.¹⁶

Common Characteristics

Symptoms

Both Trichotillomania and Skin Picking Disorder may result in unwanted medical consequences. Pulling of hair can lead to skin damage if sharp instruments, such as tweezers or scissors, are used to pull the hairs. Over 20% of patients eat hair after pulling it out (“trichophagia”), which can result in gastrointestinal obstruction and the formation of intestinal hair-balls (“trichobezoars”) requiring surgical intervention.¹⁹ In the case of skin picking, the behavior may result in significant tissue damage and often leads to medical complications such as localized infections and even septicemia (38% report needing some medical intervention due to picking).²⁰ The repetitive, excoriative nature of picking in severe cases may even warrant skin grafting or blood transfusions.^{16,20}

Patients often perceive Trichotillomania or Skin Picking Disorder as nothing more than “bad habits” rather than recognized psychiatric conditions, and the majority have never sought treatment or discussed their behaviors with health care professionals. In fact, fewer than 20% of patients with skin picking and approximately 40% with Trichotillomania seek treatment.^{3,18}

Neurobiology

Much remains unknown about the neurobiological underpinnings of these two disorders. Early research suggests that Trichotillomania is familial with heritability

estimates ranging from 0.32 to 0.78.²¹⁻²² In the case of skin picking, one study that examined 2,518 twins from the Twins UK adult twin registry found that clinically significant skin picking was endorsed by 1.2% of twins and that additive and non-additive genetics factors accounted for slightly more than over 40% of the variance in skin picking, with the remaining variance attributable to non-shared environmental factors.²³

Several brain structures and functions have been implicated in both Trichotillomania and Skin Picking Disorder. Excess gray matter density has been found in patients with Trichotillomania compared to controls, in the striatum, amygdalo-hippocampal formation, frontal and cingulate cortices, and supplementary motor cortex.²⁴ In a recent functional neuroimaging study, patients with Trichotillomania exhibited dampening of nucleus accumbens responses to reward anticipation (but relative hypersensitivity to gain and loss outcomes) as compared to controls.²⁵ Other neuroimaging studies have found disorganization of white-matter tracts involved in motor generation and suppression (i.e. bilateral anterior cingulate and right orbitofrontal and inferior frontal cortices) in both disorders.²⁶⁻²⁷ Neuropsychological studies have also shown that patients with Trichotillomania and Skin Picking Disorder exhibit deficits in cognitive abilities that are linked to the functioning of the frontal lobe and its related fronto-subcortical structures, such as executive functioning deficits, motor impulsivity, and insufficient cognitive-behavioral flexibility.²⁸⁻²⁹

Psychological theories of etiology

Because negative emotions such as anxiety, tension, and sadness often precede pulling and picking episodes, the question arises as to the role of these behaviors in regulating emotional states or stressful events.^{7,30} Therefore picking and pulling may function as a means for the person to escape from or avoid aversive experiences and the temporary reduction in these negative emotions maintains the behavior through a negative reinforcement cycle.³¹ Studies that have measured emotional regulation in individuals with and without pulling and picking found that individuals have greater difficulty regulating negative affective states than controls.³²⁻³³ In a related fashion, boredom may also trigger picking and pulling in some individuals.^{11,30} This has led some to hypothesize that pulling and picking may similarly help to adjust negative emotions brought on by a feeling of perfectionism characterized by unwillingness to relax.³⁴ This theory suggests that the perfectionism leads to feelings of frustration, impatience, and dissatisfaction when standards are not met and to boredom when productivity is impossible. Picking and pulling may therefore function as a means of releasing tension generated by these emotions. Pulling and picking are perhaps positively reinforced by a feeling of 'taking action'.³¹

Treatment Strategies and Evidence

Diagnosis

Treatment strategies are based on an accurate diagnosis. Misdiagnosis of Trichotillomania and Skin Picking Disorder is unfortunately common (Table 3). Individuals may be misdiagnosed with OCD, an anxiety disorder, body dysmorphic

disorder, or even drug addiction. Because treatments differ between these disorders and Trichotillomania and Skin Picking Disorder, proper diagnosis is necessary.

Psychotherapy

The evidence base for psychotherapy for Trichotillomania and Skin Picking Disorder is small but suggest the use of behavioral therapy for both disorders. Behavioral therapy for trichotillomania has generally used habit reversal therapy (HRT) and may have included components of acceptance and commitment therapy and dialectical behavior therapy as well. There are seven controlled studies of behavioral therapy, using HRT alone or with other components, in Trichotillomania and two controlled psychosocial treatment studies for Skin Picking Disorder. The studies for skin picking disorder involve one using of HRT and the other using cognitive-behavioral therapy. There are no controlled studies of other traditional therapies.

Habit Reversal Therapy (HRT)

Habit reversal training (HRT) was first developed approximately 40 years ago by Azrin and Nunn for the treatment of nervous habits and tics.³⁵ Although used in multiple forms throughout the years, the core aspects of HRT include self-monitoring (i.e., asking the patient to track his/her hair pulling, picking, etc.), awareness training, competing response training, and stimulus control procedures (i.e., modifying the environment to reduce cues for hair pulling or skin picking). Self-monitoring may begin by using a self-monitoring form that the patient fills out on a daily basis and maintains throughout the therapy period. Awareness training consists of having the therapist ask the patient to

describe in detail and even reenact the picking or pulling. The patient also needs to identify triggers for the pulling and picking. In competing response training, patients are taught at the earliest sign of pulling, or of the urge to pull, to engage in a behavior that is physically incompatible with pulling for a brief period of time until the urge subsides. For example, someone who pulls her hair might clench her fists or place her hands underneath her legs upon identifying a warning sign for hair pulling. Competing responses must be opposite to that of the targeted behavior, they must be maintained for 1 minute or until the urge to pull or pick subsides, and they should be socially inconspicuous. Stimulus control consists of modifying the environment to reduce the triggers of pulling or picking. For example, if someone pulls at work only when their office door is closed, then they need to keep the door open during the work day. HRT is similar to many other types of behavioral therapy. HRT differs somewhat from standard cognitive behavioral therapy in that the focus of HRT is on behavioral change and not generally on cognitive strategies to address dysfunctional thoughts that precipitate pulling.

HRT appears to be superior to wait list and minimal attention control based on controlled studies.³⁶ In addition, HRT has shown benefit with the addition of components of acceptance and commitment therapy and dialectical behavior therapy.³⁷⁻³⁸ HRT can be delivered in person, online using a self-help method, or in a group format.^{36, 39-40} Acute treatment gains obtained from HRT have been generally maintained from three to six months.

Typically HRT is conducted on a weekly basis, although higher severity of the disorder may necessitate more frequent sessions. HRT has shown benefit in many

different frequency formats and anywhere from 4-22 sessions (usually 60 minute sessions) may be helpful. Although in practice many clinicians use a combination of HRT and more traditional cognitive therapy, the empirical data support HRT as the first-line psychotherapy treatment for these disorders.

Pharmacotherapy

There are currently no pharmacotherapies that would be universally accepted as first-line treatments for Trichotillomania or Skin Picking Disorder. There are eight double-blind studies published for the treatment of Trichotillomania and four double-blind, placebo-controlled clinical trials for Skin Picking Disorder. Generally, pharmacotherapy should be avoided in children. A recent Cochrane review concluded that although clomipramine has demonstrated some benefit for Trichotillomania, there is no strong evidence of a treatment effect for the selective serotonin reuptake inhibitors (SSRIs).⁴¹

Glutamatergic agents have shown some promise in Trichotillomania, may have a useful role in the treatment of skin-picking disorder as well. One key example is *n*-acetylcysteine (NAC), which has demonstrated benefit in a double-blind placebo-controlled study for Trichotillomania and in case reports for Skin Picking Disorder.⁴²⁻⁴³ Based on the Trichotillomania data, NAC may be useful for reducing the urge to pick. Previous research has used up to 1200mg twice a day as a target dose with expected clinical benefits being observed after approximately 9 weeks. Side effects are generally mild and usually only involve some bloated feelings and flatulence.

Based on data from their potential efficacy in OCD, antipsychotic medications have also been used in the treatment of Trichotillomania. One small (n=23) double-blind, placebo-controlled study of olanzapine found the medication significantly beneficial in reducing the symptoms of Trichotillomania after 12 weeks using a mean dose of 10.8mg per day.⁴⁴ Olanzapine has been associated with metabolic syndrome and so the decision to use it in the treatment of Trichotillomania and Skin Picking Disorder needs to be tempered by its adverse side effect profile.

Opioid antagonists (e.g., naltrexone), which reduce self-licking in dogs with acral lick dermatitis, may also represent a viable option for Trichotillomania and Skin Picking Disorder, although such benefit has been limited to small samples (case reports of single patients, often with Prader-Willi) of individuals with Excoriation Disorder. Based on an 8-week double-blind placebo-controlled study of naltrexone (dosing of 50mg/day up to 150mg/day) in the treatment of 52 subjects with Trichotillomania, however, naltrexone may be useful for those with hair pulling or skin picking who have a family history positive for alcohol use disorders.⁴⁵

Sequencing Treatment

Psychotherapeutic and pharmacological treatments have documented evidence as effective monotherapies as well as in a combined treatment strategy.⁴⁶ Although, the optimal sequence of treatments has not yet been identified, we recommend HRT monotherapy for individuals who are motivated to cooperate with therapy demands, do not have severe depressive symptoms, or prefer not to take medications. Medication treatment as monotherapy (e.g., NAC, olanzapine, clomipramine) is recommended for

individuals who are not able to engage in HRT, report a previous response to a medication, or prefer medication treatments over psychotherapy.

Treatment of Comorbidities

Co-occurring anxiety and depression are common among individuals with trichotillomania and skin picking disorder. Assessment should attempt to understand, if possible, the temporal relationship of these comorbidities with trichotillomania and skin picking disorder – for example, is the depression or anxiety secondary to the effects of the hair pulling or skin picking? If so, then focusing on the hair pulling or skin picking would be the recommended initial approach. If such a temporal relationship is unclear, however, then expanding the behavioral therapy to also include cognitive approaches would be beneficial for both disorders potentially. In terms of pharmacotherapy, many individuals may need an antidepressant for the comorbid diagnoses even when the data suggest that they are largely ineffective for trichotillomania and skin picking disorder.

Prognosis

If Trichotillomania and Skin Picking Disorder are left untreated, the course is usually chronic, often with waxing and waning symptoms. Without treatment, response rates in adults are low (approximately 14%).³ When diagnosed early and appropriately treated, however, up to 50% of individuals may experience symptom reduction at least for the short term.⁴⁷ Therefore, accurate and early diagnosis followed by evidence-based treatment approaches are needed to prevent associated disability.

Questions and Controversy

Clinical treatment trials for Trichotillomania and Skin Picking Disorder have been largely short-term and have predominantly involved young or middle-aged adults. Data are lacking on the long-term benefit and risks among both children and the elderly. More research is also needed to identify predictors of poor outcomes.

Although HRT has demonstrated some benefit for Trichotillomania and Skin Picking Disorder, there are no data regarding how well HRT is performed in the community and what the results of HRT are when not performed by expert clinicians.

HRT has shown some promise but there are few if any data on whether more traditional therapies such as cognitive therapy or supportive therapy might also be beneficial for trichotillomania and skin picking disorder.

The genetic features of Trichotillomania and Skin Picking Disorder remain incompletely understood. Genes that confer susceptibility to these disorders have not yet been identified. Studies are needed to identify childhood and adolescent risk factors for Trichotillomania and Skin Picking Disorder and on how these variables interact with genetic factors. This may allow for the identification of children at risk and the development of early-intervention strategies.

The clinical trial data have largely focused on the core symptoms of Trichotillomania and Skin Picking Disorder but effective treatments are also needed for associated cognitive impairment and social dysfunction.

Although a range of etiological theories have been proposed, there is still a paucity of data examining this important area.

Improved dissemination of information about psychotherapy and medication shown to be effective for these disorders is warranted, since their availability remains limited.

Recommendations

- If untreated, Trichotillomania and Skin Picking Disorder are often chronic illnesses and may result in substantial psychosocial dysfunction and even lead to life-threatening medical problems.
- The evaluation for Trichotillomania and Skin Picking Disorder must begin with a thorough psychiatric assessment to establish an accurate diagnosis, assess for co-occurring psychiatric disorders, and rule out other disorders in the differential.
- In the case of Skin Picking Disorder, a thorough evaluation from a dermatologist with knowledge about the disorder may be necessary to assess for underlying dermatological conditions that may cause or worsen skin picking.
- Habit reversal therapy has demonstrated benefit for both Trichotillomania and Skin Picking Disorder but finding someone trained in habit reversal therapy is essential for appropriate treatment outcomes.
- In terms of pharmacotherapy, there is little evidence that SSRIs are beneficial. Based on our clinical experience, however, we find that N-acetyl cysteine in doses of 1200mg twice a day has been quite helpful in reducing urges to pick and pull and probably should be considered as the initial pharmacotherapy treatment.
- Since treatment response is often only partial, attending to quality of life and long-term functioning is critical.

Multiple Choice Questions

1. Which of these pharmacological options would be your treatment of choice for moderate-severe Trichotillomania in an adult patient? (select one)
 - a. Fluoxetine
 - b. Atomoxetine
 - c. N-Acetyl cysteine
 - d. Clonazepam
 - e. Escitalopram

2. Which statement is true in relation to Trichotillomania? (select one)
 - a. It has an equal gender ratio in adults
 - b. “Baby trich” requires early multimodal intervention including pharmacotherapy
 - c. Hair can be pulled from any body site with hair
 - d. Peak age of onset is around 25 years of age
 - e. The same treatments as for OCD are indicated

3. Which statement best captures our understanding of Trichotillomania and Skin Picking Disorder? (select one)
 - a. Cognitive profile identical to that of schizophrenia
 - b. Dysfunction of basal ganglia (striatum), anterior cingulate cortex, and frontal lobes, has been implicated
 - c. Symptoms usually occur secondary to focal brain lesions that can be viewed on single-subject MRI scan
 - d. Genetic factors play no role in risk of developing these two disorders
 - e. Robust attentional processing bias towards negative stimuli (sad faces, sad words)

4. In terms of the possible consequences of Skin Picking Disorder, which of these is not associated with the condition? (select one)
 - a. Localized skin infections
 - b. Systemic sepsis
 - c. Gastrointestinal obstruction
 - d. Scarring
 - e. Permanent disfigurement

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Declaration of Interest(s):

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10 Important and Evidence-Based Articles on Trichotillomania and Skin Picking
(in chronological order)

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Table 1. Criteria for Trichotillomania:

- Pulling of hair which results in hair loss
- The person endorses trying to either decrease or stop pulling
- Significant distress or impairment in some aspect of social, work, or other area of functioning results from pulling
- The pulling cannot be attributed to another medical condition
- The pulling cannot be better explained by another mental health condition (for example, pulling to improve one's appearance or a perceived defect as seen in body dysmorphic disorder)

This table is adapted from the American Psychiatric Association.¹

Table 2. Criteria for Skin picking Disorder

- Picking of skin that results in lesions
- The person endorses trying to either decrease or stop picking
- Significant distress or impairment in some aspect of social, work, or other area of functioning results from picking
- The picking cannot be attributed to the physical effects of drug use (such as cocaine) or a medical condition

- The pulling cannot be better explained by another mental health condition (for example, picking to improve one's appearance or a perceived defect as seen in body dysmorphic disorder, delusions or hallucinations as seen in a psychotic disorder, stereotypies, or intentional self-harm in a non-suicidal self-injury)

This table is adapted from the American Psychiatric Association.¹

Table 3. Some Common Misdiagnoses in Patients with Trichotillomania and Skin

Picking Disorder

Misdiagnosis	Reasons for and prevention of misdiagnosis
Obsessive Compulsive Disorder (OCD)	Trichotillomania and skin picking are often misdiagnosed as OCD because they involve compulsive behaviors. Trichotillomania and skin picking however generally lack significant obsessional thoughts and do not appear to respond to traditional OCD treatments.
Anxiety Disorder	Many clinicians assume that Trichotillomania and skin picking are merely manifestations of anxiety – i.e. nervous habits. Although anxiety may worsen pulling and picking, the behaviors persist even when no anxiety is present.
Stimulant Addiction	It is not uncommon for individuals who use stimulants, either illicit ones or by prescription, to report skin picking or possibly worsening of hair pulling.
Body Dysmorphic Disorder (BDD)	BDD is characterized by obsessions about and preoccupation with a perceived defect of one’s physical appearance. In BDD, individuals may pull hair with the aim of correcting a perceived defect of their appearance (e.g., “I know that my arms are too

	hairy and disgusting to people”) or pick their skin to improve their appearance.
Self-Injurious Behavior	Hair pulling and skin picking are not the same thing as self-injury. Pulling and picking are often used as a means of correcting a problem with the hair or skin and are not generated from the complex psychological factors that give rise to self-injury such as cutting behavior.