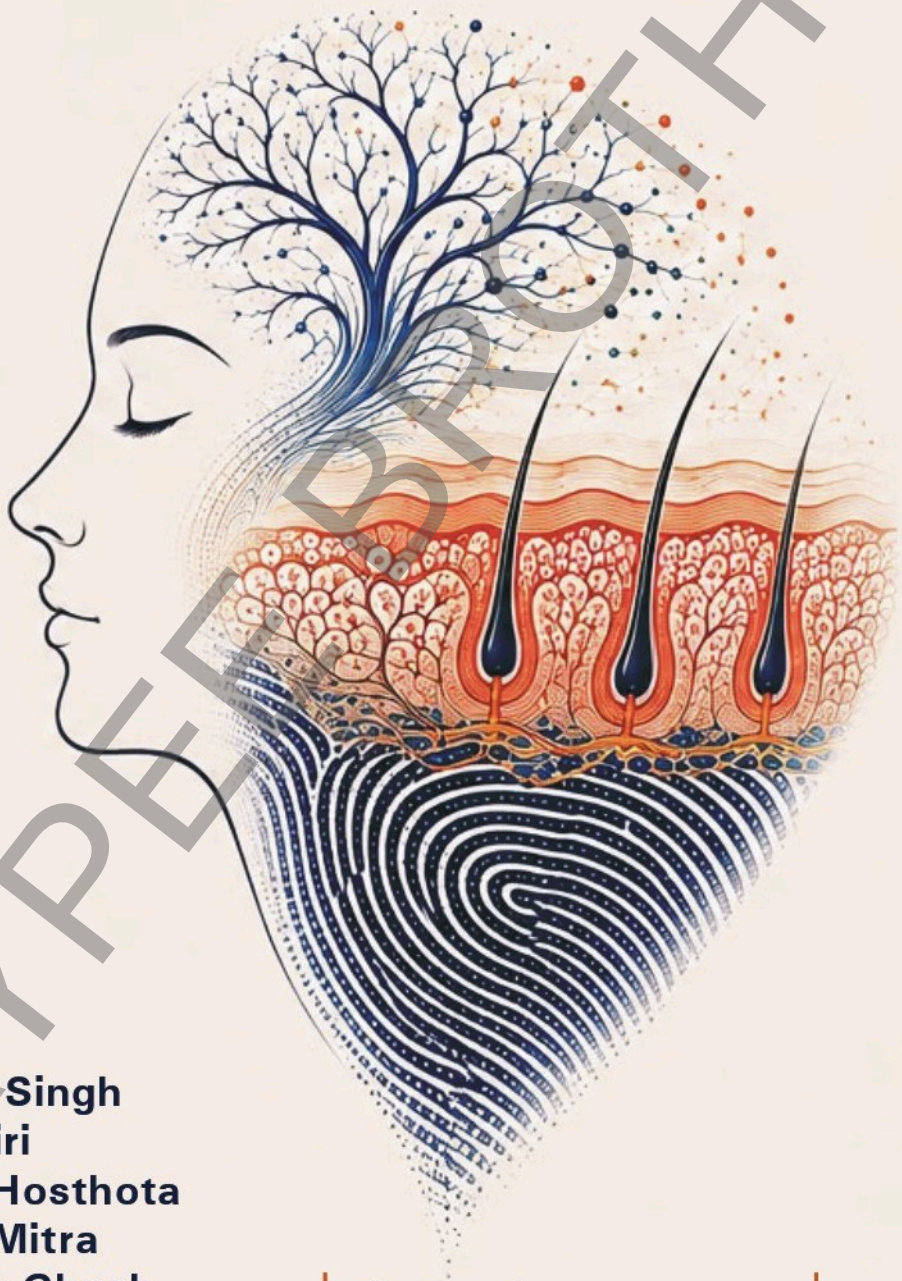
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PDAI Textbook of PSYCHODERMATOLOGY



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CHAPTER

18

Trichopsychodermatology

Koushik Lahiri, Sohini Paul

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ABSTRACT

Trichopsychodermatology is a specialized branch of psychodermatology that explores the bidirectional relationship between hair disorders and psychological health through the brain–hair follicle axis. Because hair is closely associated with identity, attractiveness, and self-esteem, both psychological disorders and organic hair diseases can profoundly influence each other. The spectrum of trichopsychodermatological disorders includes primary psychiatric disorders (e.g., trichotillomania, trichotemnomania, trichoteiromania, body dysmorphic disorder, and delusional infestation), secondary psychiatric disorders arising from genuine hair diseases [e.g., alopecia areata (AA), androgenetic alopecia (AGA), telogen effluvium, and cicatricial alopecia], and psychophysiological disorders in which stress aggravates hair disease. Advances in psychoneuroimmunology have demonstrated that psychological stress influences hair biology through activation of the hypothalamic–pituitary–adrenal axis, neuropeptides, mast cells, inflammatory cytokines, and disruption of hair follicle immune privilege, thereby contributing to stress-induced hair loss and disease exacerbation. Comprehensive evaluation requires careful dermatological examination, trichoscopy, assessment of psychosocial distress, and appropriate psychometric screening. Management is best delivered through a multidisciplinary biopsychosocial approach integrating evidence-based dermatological therapy with psychoeducation, cognitive behavioral therapy, habit reversal training, stress management, psychopharmacological interventions when indicated, and close collaboration between dermatologists and mental health professionals to improve disease control, treatment adherence, and quality of life.

Key Points

- *Trichopsychodermatology* examines the complex interaction between psychological factors and hair disorders through the *brain–hair follicle axis*, integrating dermatology, psychiatry, and psychoneuroimmunology.
- Hair disorders are broadly classified into *primary psychiatric disorders, secondary psychiatric disorders, and psychophysiological disorders*, each requiring distinct diagnostic and therapeutic approaches.
- *Trichotillomania* is the prototypical primary psychotrichological disorder and is characterized by compulsive hair pulling, characteristic trichoscopic findings (V-sign, flame hairs, tulip hairs, and black dots), and is best managed with *habit reversal training* supported by psychological and pharmacological therapy when required.
- Psychological stress activates the *hypothalamic–pituitary–adrenal axis*, neuropeptides (particularly *substance P*), mast cells, and inflammatory cytokines, leading to premature catagen transition, extracellular matrix degradation, and collapse of hair follicle immune privilege, thereby aggravating stress-responsive hair disorders.
- Hair disorders such as *alopecia areata, androgenetic alopecia, telogen effluvium, and cicatricial alopecia* are associated with substantial psychosocial morbidity including anxiety, depression, impaired self-esteem, social withdrawal, and reduced quality of life, often disproportionate to clinical severity.

- Comprehensive management requires a *multidisciplinary biopsychosocial approach* combining dermatological treatment, trichoscopy-guided diagnosis, psychological assessment, psychoeducation, cognitive behavioral therapy, stress reduction, habit reversal training, and appropriate psychopharmacological interventions in collaboration with mental health professionals.

INTRODUCTION

Trichopsychodermatology, a multidisciplinary subspecialty of psychodermatology that examines the complex and profound psychosocial and mental aspects of illnesses of the hair and scalp. This field is based on the ectoderm, which is the common embryonic origin of the skin, hair follicles, and central nervous system. The hair and scalp serve as the main targets for behavioral and internal emotional states due to their great visibility and accessibility.[1]

The involvement of dermatologists is at the forefront of this area. Due to a deep-seated denial of any underlying psychological illness and the outward presentation of damaged hair or scalp, patients with psychotrichological illnesses usually always seek dermatological care rather than psychiatric assistance. The dermatotrichologist serves as the evaluator and treatment provider for these patients, even though their underlying ailment is psychological.[2]

To rule out organic skin illnesses and build trust, a dermatologist must use standard dermatological examinations, such as thorough history taking, the hair pull test, scalp biopsies, and trichoscopy (dermoscopy of the hair and scalp). A patient often feels offended, fears stigmatization, and is lost to follow-up if a dermatologist ignores the patient's problems or quickly assigns him to a psychiatrist. As a result, the modern dermatologist needs to develop a "third ear", the capacity to listen for underlying psychosocial distress while conducting clinical dermatologic evaluations.[3,4]

Trichopsychological disorders can be broadly classified into three major categories:

1. *Primary psychiatric disorders*: All skin and hair pathology is self-induced or completely imagined [e.g., trichotillomania (TTM) and delusions of parasitosis]; there is no underlying organic hair disease.[5]
2. *Secondary psychiatric disorders (somatopsychic)*: The patient has a legitimate, frequently deforming hair condition [such as severe alopecia areata (AA) or androgenetic alopecia (AGA)] that causes significant psychological impairment, such as social anxiety, clinical depression, or extreme anxiety.[5]
3. *Psychophysiological disorders*: The patient has a real dermatological disorder [such as stress-induced telogen effluvium (TE) or scalp psoriasis] whose onset, severity, and natural course are significantly worsened by psychological stress **(Table 1)**.[5]

TABLE 1: Classification of trichopsychodermatological conditions.

Main group	*Subgroup*
Primary psychiatric disorders	
Self-induced diseases	• Trichotillomania • Trichotemnomania • Trichoteiromania • Trichodaknomania/ Trichodaknomanie by proxy • Trichorhizophagia • Trichobezoar • Skin picking syndrome
Somatoform disorders	• Somatization disorders • Hypochondriac disorders • Body dysmorphic disorder • Persistent somatoform pain disorder
Social phobia (anxiety disorders)	
Obsessive-compulsive disorders	
Personality disorder	• Obsessive personality disorder • Narcissistic personality disorder
Secondary psychiatric disorders	
Reactions to stress	• Acute stress • Post-traumatic stress disorder • Adjustment disorder: ○ Brief depressive reaction ○ Longer depressive reaction ○ Anxiety and depressive reaction ○ Disorder of social behavior
Comorbidity	• Depressive disorder • Anxiety disorder
Psychophysiological disorders	• Stress-induced telogen effluvium • Scalp psoriasis

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PRIMARY PSYCHIATRIC DISORDERS

These illnesses are frequently classified as obsessive-compulsive related disorders (OCRDs) or body-focused repetitive behavior disorders (BFRBDs), include self-inflicted physical harm to the scalp or hair. Patients frequently feel an overwhelming desire or increasing stress that can only be eased by repeatedly causing damage to their hair **(Table 2)**.[4,6]

- *Trichotillomania (TTM)*: Recurrent, compulsive hair pulling that results in visible alopecia is the hallmark of TTM, the most researched disorder in this group. It has a high female predominance and a bimodal distribution, culminating in childhood and adolescence. Usually found contralateral to the patient's dominant hand, the clinical appearance is characterized by asymmetrical, uneven patches of nonscarring hair loss **(Figs. 1 and 2)**.



FIG. 1: Trichotillomania in young child.

Source: Adapted from Harth W, Blume-Peytavi U. Psychotrichology: psychosomatic aspects of hair diseases. J Dtsch Dermatol Ges. 2013;11(2):125-35.

Clinical case scenario:
A 14-year-old girl, right-handed, arrived with a 6-month history of progressive hair loss. Clinical inspection showed multiple asymmetric incomplete patches of hair loss with irregular borders in the left parietal region and anterior hairline, other areas had normal long hair. Handheld trichoscopy revealed mechanical trauma with frayed "V-sign" hairs, flame hairs, tulip hairs, short "i-hairs", and unique black patches.
Clinically, there are three different zones:

1. Unaffected long hair
2. Acute onset of circumscribed alopecia as well as characteristic petechiae and sometimes broken hair shafts in the follicles from pulling the hair out.
3. Irregular regrowth of hair in previously bald areas.

The "V-sign" (frayed hair), flame hairs, tulip hairs, "i-hairs," irregularly coiled hairs, longitudinal split ends (trichoptilosis), hairs broken at different lengths, and black spots are typical findings of trichoscopy, an essential dermatologic diagnostic tool for TTM **(Figs. 3 and 4)**. Trichogram shows >95% hair in anagen phase. Histopathologically, scalp biopsies show pigment casts, a reversed anagen-to-telogen ratio, and trichomalacia, which is the distortion and breaking up of the hair shaft with melanin clumping **(Table 3)**.

- *Trichoteiromania*: Constant, obsessive rubbing and scratching of the scalp causes hair loss. It manifests as pseudoalopecia. Diagnostic brush-like splitting of the hair ends is shown by dermatologic examination under a light microscope.[6]
- *Trichotemnomania*: An uncommon obsessive-compulsive disorder (OCD) practice in which the patient purposefully shaves or cuts their own

TABLE 2: Self-induced alopecia, clinical features, and differential diagnosis.

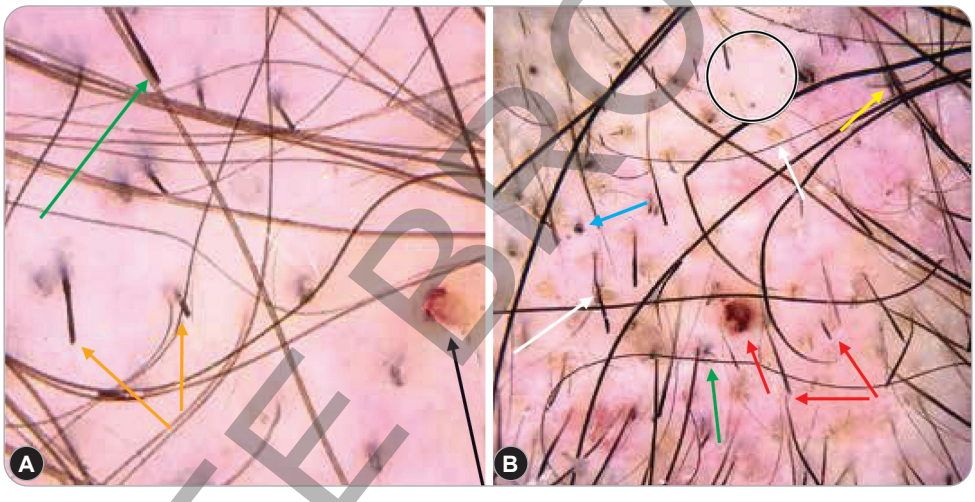
Type	*Clinical features*	*Differential diagnosis*
Trichotillomania	• Solitary or multiple bald, circumscribed irregularly bordered areas in parietal or vertex region • Varying hair lengths, broken hairs • Eyebrows, eyelashes, pubic hair, and beard are less involved • Mainly anagen hair seen in affected areas	• Alopecia areata • Androgenic alopecia • Tinea capitis • Trichotemnomania • Scarring alopecia
Trichotemnomania	• Hair shafts remain in follicles, hair is of same length, hair cycle-dependent regrowth • Hair appears to have been shaved or cut-off	• Alopecia areata • Trichotillomania
Trichoteiromania	• Macroscopic appearance of white hair tips and frizzy ends • Light microscopy shows brush like breakage • Broken hair shafts of different length • Erythema in affected areas	• Trichorrhexis nodosa • Tinea capitis

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FIGS. 2A AND B: (A) Extensive scalp involvement in trichotillomania (TTM) and (B) Bizarre pattern TTM.

Source: Adapted from Yadav S, Narang T, Kumaran MS. Psychodermatology: a comprehensive review. Indian J Dermatol Venereol Leprol. 2013;79(2): 176-92.



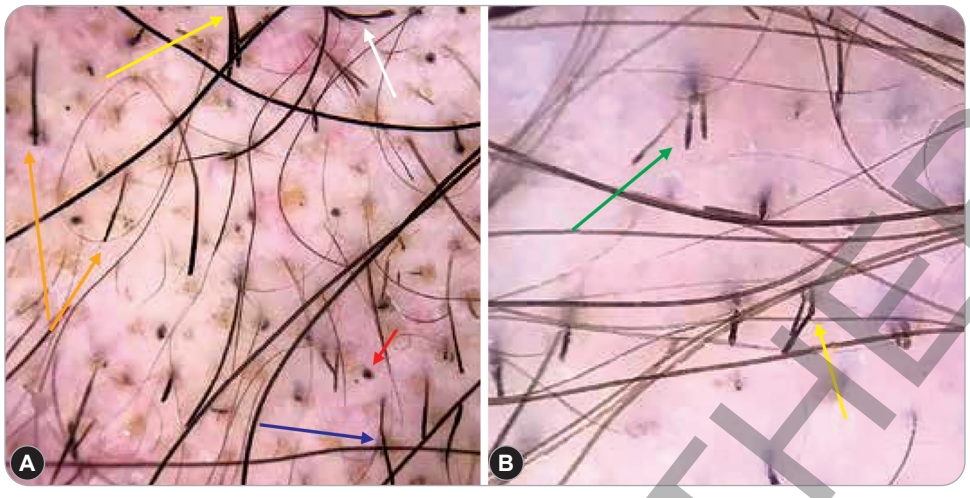
FIGS. 3A AND B: (A) Mace hair (green arrow), broken hairs at different levels (orange arrow), follicular hemorrhage (black arrow). (B) Hair powder (circle), yellow dot (white arrow), mace hair (yellow arrow), follicular hemorrhage (red arrow), broken hairs at different levels (orange arrows), regrowing pig tail hair (green arrow).

Source: Adapted from Elmas ÖF, Metin MS. Trichoscopic findings of trichotillomania: new observations. Postepy Dermatol Alergol. 2020;37(3):340-5.

hair. Patients frequently attribute their hair loss to shampoos or imagined illnesses, and they consistently and vehemently deny cutting their own hair. A totally healthy-looking scalp with follicular apertures filled with cut hair shafts (a "shaved" appearance) and no vellus or exclamation point hairs is the diagnostic key **(Fig. 5)**.

- *Trichophagia and trichorhizophagia*: Trichorhizophagia is the covert ingestion of only the hair root, whereas trichophagia is the compulsive chewing of pulled hair. Because swallowed hair cannot be digested and builds up in the gastrointestinal tract to produce a huge hairball known as a trichobezoar, this poses a serious health risk. Rapunzel syndrome, a potentially fatal surgical emergency that can result in intestinal obstruction or perforation, occurs when the hairball's tail spreads into the intestines **(Fig. 6)**.[4,6]
- *Trichocryptomania (trichorrhexomania)*: The compulsive use of fingernails to break or cut hair.
- *Trichodaganomania*: The compulsive habit of biting one's own hair.
- *Scalp dysesthesia (trichodynia)*: Painful, burning, stinging, or crawling sensations on the scalp without any objective dermatological or inflammatory symptoms are indicative of a somatoform and neuropathic pain disease. Hypothesized to be mediated by the local

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FIGS. 4A AND B: (A) V hair (yellow arrow), broken hairs at different levels (orange arrows), branched hair (white arrow), concentric hair (red arrow), angulated hair (blue arrow). (B) Mace hair (green arrow), angulated hair (yellow arrow).

Source: Adapted from Elmas ÖF, Metin MS. Trichoscopic findings of trichotillomania: new observations. Postepy Dermatol Alergol. 2020;37(3):340-5.

TABLE 3: Screening tools and rating instruments for trichotillomania.

Instrument	*Description*
DSM-5	Diagnostic tool by American Psychiatric Association
MGH-HPS	Self-reported questionnaire to assess repetitive hair-pulling
PITS	Clinician-rated tool assessing hair pulling
NIMH-TSS	Clinical interview of five questions discussing hair-pulling behaviors
NIMH-TIS	Clinician rating of hair impairment
CGI	Clinician rating of illness severity, improvement, and therapeutic response

(CGI: Clinical Global Impression scale; DSM-5: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; MGH-HPS: Massachusetts General Hospital Hairpulling Scale; NIMH-TSS: National Institute of Mental Health Trichotillomania Severity Scale; PITS: Psychiatric Institute Trichotillomania Scale)

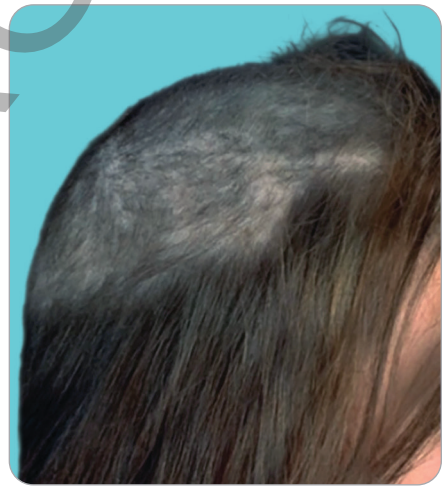


FIG. 5: Trichotemnomania in young female.

Source: Adapted from Harth W, Blume-Peytavi U. Psychotrichology: psychosomatic aspects of hair diseases. J Dtsch Dermatol Ges. 2013;11(2):125-35.

release of the neuropeptide substance P, which causes aberrant skin sensations. It frequently coexists with underlying anxiety and depressive episodes.[7]

- *Psychogenic pseudoeffluvium*: An obsessive, excruciating obsession with an imagined or greatly exaggerated hair deficit characterizes a body dysmorphic presentation. The patient is still certain that she is going bald even when the dermatologist finds an objectively normal trichogram, a negative hair pull test, and normal hair density.[6]

SECONDARY PSYCHIATRIC DISORDERS (SOMATOPSYCHIC)

Since hair is essential to gender identity, youth, and perceived physical attractiveness; genuine hair loss often leads to severe secondary psychological illness.[5]

- *Alopecia areata*: AA is a nonscarring, autoimmune hair loss disorder that often causes severe psychological trauma. Almost 74% of AA patients have experienced one or more psychiatric problems at some point in their lives, with significant depression and generalized anxiety disorder occurring in roughly 39% of instances. Intense social isolation, a significant decline in quality

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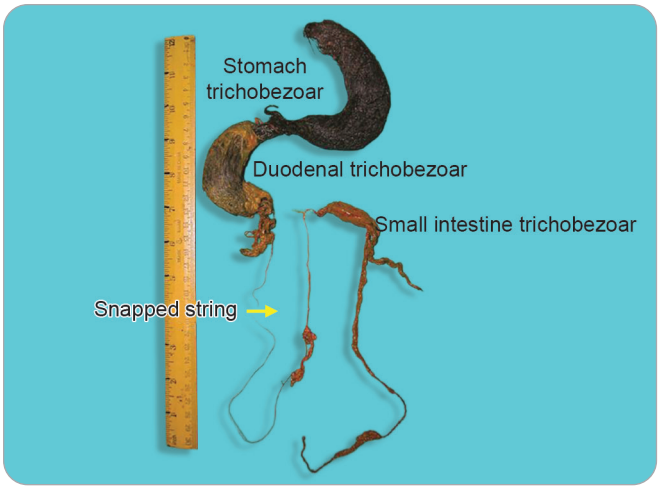


FIG. 6: Trichobezoar evacuated after surgery.

Source: Adapted from Yik YI, How AK. A 'Hairy' problem: Trichotillomania, trichophagia and trichobezoars. Singapore Med J. 2016;57(7):411.



FIG. 7: Young male with alopecia areata barbae.

Source: Adapted from Healthline. (2026). [online] Available from https://www.healthline.com/health/alopecia-areata#symptoms [Last accessed August, 2026].

of life, and occasionally suicidal thoughts are common among AA patients **(Figs. 7 and 8)**.

Clinical case scenario: A 28-year-old woman arrived with an acute and 3-week history of focal hair loss. Clinical examination showed a single, well-circumscribed, smooth, oval patch of nonscarring alopecia across her vertex. The underlying skin was normal and uninflamed. However, a localized hair-pull test at the active borders was significantly positive, producing many intact telogen hairs. Trichoscopy showed regular yellow dots, transient black dots, and pathognomonic exclamation mark hairs. A 4-mm punch biopsy confirmed a dense, peribulbar and intrabulbar lymphocytic infiltrate tightly surrounding the remaining anagen bulbs,



FIG. 8: Clinical image of alopecia areata showing multiple patches of nonscarring alopecia.

Source: Adapted from Healthline. (2026). [online] Available from https://www.healthline.com/health/alopecia-areata#symptoms [Last accessed August, 2026].

creating the classic *"swarm of bees"* histopathological appearance. This T-cell-mediated process resulted in a severely skewed anagen-to-telogen ratio. Acknowledging the severe psychological distress and social anxiety triggered by the rapid hair loss, the patient was initiated on first-line intralesional triamcinolone acetonide injections alongside targeted counseling to manage expectations regarding the variable course of autoimmune hair regrowth.

- *Androgenetic alopecia*: AGA is the most prevalent cause of hair loss. Early-onset AGA in men is closely linked to severe depression, increased neuroticism (emotional lability and hypersensitivity), increased introversion, and deep dissatisfaction with appearance. AGA in women is characterized by diffuse thinning over the crown with the frontal hairline intact. Women with AGA endure severe self-consciousness, jealousy of others, feelings of powerlessness, and a markedly greater risk of psychiatric maladjustment than men, since female hair loss is strongly stigmatized by society **(Fig. 9)**.

  Clinical case scenario: A 32-year-old male arrived with a 2-year history of progressive gradual loss of hair, predominantly affecting the frontal hairline and vertex of scalp and sparing occipital region. The clinical examination showed a gradual recession of the frontal hairline in a typical "M-shaped" pattern and an apparent decrease in hair density in the vertex. The diagnosis of AGA was confirmed immediately by trichoscopy showing the diagnostic sign of progressive miniaturization: a significant amount of diversity in hair shaft diameter, with dense terminal hairs largely replaced by fine, hypopigmented vellus-like hairs. Recognizing the profound dissatisfaction

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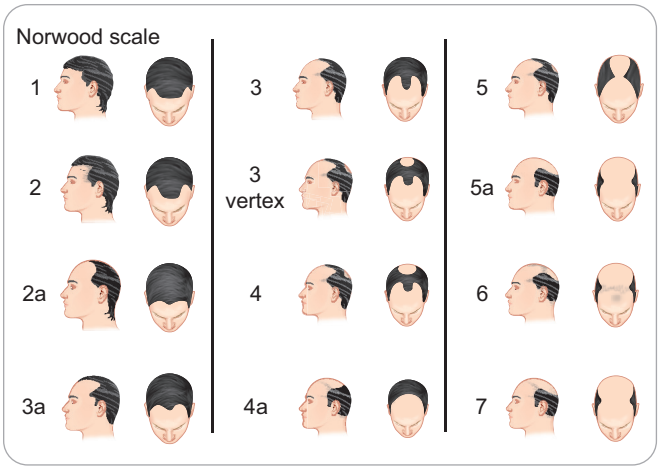


FIG. 9: Hamilton-Norwood scale of androgenetic alopecia.

Source: Adapted from My Hair Doctor. (2026). [online] Available from https://myhairdoctor.com/androgenetic-alopecia/ [Last accessed August, 2026].



FIG. 10: Cicatricial scarring alopecia.

Source: Adapted from Transitions International Group. (2025). [online] Available from https://www.transitionshair.org/what-is-scarring-alopecia/ [Last accessed August, 2026].

with his appearance and secondary anxiety triggered by his early-onset patterned thinning, the patient was started on a combined regimen of oral finasteride to block the peripheral conversion of testosterone to dihydrotestosterone (DHT) and topical 5% minoxidil solution to stimulate follicular vascularity, coupled with supportive counseling to address the chronic nature of cosmetic maintenance therapies.

- *Telogen effluvium*: Anagen hairs undergo a huge, premature transition into the telogen (resting) phase due to a condition of diffuse hair shedding that is frequently brought on by acute physiological or emotional stress. Extreme anxiety and concern are brought on by the abrupt, noticeable loss of hair clumps, which frequently prompts the patient to seek dermatological reassurance right away.
- *Cicatricial (scarring) alopecia*: Hair follicles are permanently destroyed by inflammatory conditions (such as frontal fibrosing alopecia or lichen planopilaris). These disorders are referred to as "trichologic emergency" since the hair loss is irreversible and physically deforming. Due to the unfavorable, irreversible prognosis, patients endure extreme social withdrawal and report significantly higher scores on Hospital Anxiety and Depression Scales (HADS) **(Fig. 10)**.

STRESS AND HAIR BIOLOGY

The biological link between the psychological stress and hair loss is the most important pillar of trichopsychodermatology, and this can be explained by the brain-hair follicle axis and the principles of psychoneuroimmunology.[8,9]

- *Hair follicle as an endocrine organ*: The human hair follicle has a functioning, localized counterpart of the systemic hypothalamic–pituitary–adrenal (HPA) axis, making it more than merely a skin appendage. The hair follicle actively produces cortisol, adrenocorticotropic hormone (ACTH), and corticotropin-releasing hormone (CRH) in reaction to psychological stress.[4,8]
- *Cortisol-induced extracellular matrix degradation*: Hair biology is severely impacted by elevated amounts of both localized and systemic cortisol. It has been demonstrated that elevated cortisol levels decrease the synthesis and hasten the breakdown of vital components of the skin and follicles, particularly hyaluronan and proteoglycans (including versican and decorin), by about 40%. Decorin is an essential anagen (growth phase) inducer, therefore when it is destroyed by cortisol, the hair follicle is forced into early regression.[9]
- *Substance P, NGF, and mast cell degranulation*: Dense concentrations of inflammatory neuropeptides, particularly substance P and nerve growth factor (NGF), are released by perifollicular nerve fibers in response to psychoemotional stress. Substance P causes widespread degranulation by binding to receptors on nearby mast cells. This starts a chain reaction of detrimental neurogenic inflammation by releasing histamine, proteases, and tumor necrosis factor-α (TNF-α). Keratinocyte death is directly induced by this inflammatory storm, which also causes the early catagen transition leading to premature halt of hair development.[8,9]

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- *Collapse of immune privilege*: The hair follicle bulb has "immune privilege," which allows it to conceal its autoantigens from the immune system when it is in good health. MHC class I molecules express themselves ectopically when substance P is produced under stress. As a result, the hair follicle's immunological privilege collapses due to stress, leaving it vulnerable to increased autoimmune attacks by CD8+ T-cells. This is precisely how autoimmune hair loss, such as AA, can be brought on or made worse by extreme emotional stress.[8,9]

QUALITY OF LIFE AND PSYCHOSOCIAL IMPACT

The loss of hair has a significant emotional impact since it is intricately linked to societal standards of youth, sexuality, and identity.[10,11]

- *Discrepancy between clinical and subjective severity*: Realizing that a patient's subjective psychological discomfort seldom correlates linearly with the clinical dermatologic severity of hair loss. Devastating emotional impairment, decline in self-esteem, sexual dysfunction, and social avoidance can result from even minor clinical thinning.[10]
- *Assessment instruments*: Both general and disease-specific psychometric instruments are employed to measure this burden. The HADS, the Short Form 36 (SF-36), and the Dermatology Life Quality Index (DLQI) are examples of generic instruments. But tools dedicated to dermatology and hair, such Skindex, Hairdex, the Alopecia Areata Quality of Life Index (AA-QLI), and the Alopecia Areata Symptom Impact Scale (AASIS), provide more accuracy. These instruments demonstrate that the quality-of-life impairments experienced by individuals with hair loss are on par with those of patients with serious, perhaps fatal systemic disorders.[11]

Delusional and Somatic Disorders Related to Hair

Patients can also come to the dermatologist with complaints about their hair or scalp that are only symptoms of serious underlying somatoform disorders or psychosis.[12,13]

- *Delusional infestation (delusions of parasitosis/Ekbom syndrome)*: Categorized as MHP, or monosymptomatic hypochondriacal psychosis. The patient has a persistent, unwavering, and false delusional conviction that living insects, parasites, or worms are infesting their hair or scalp. They have severe tactile hallucinations (formication or the sensation of insects crawling). The "matchbox sign," in which the patient presents the dermatologist with a container full of lint, skin detritus, or broken hair to "confirm" the infestation, is a traditional dermatological presentation. These patients vehemently object to psychiatric referrals, claiming that their issues are solely dermatological.[12,13]
- *Morgellons disease*: A condition that is comparable to delusional infestation, in which the patient thinks that their scalp and skin sores are protruding inanimate, multicolored fibers, threads, or filaments.
- *Body dysmorphic disorder (BDD)*: BDD, which falls under the obsessive-compulsive spectrum, is characterized by an excruciating, life-altering obsession with a minor or completely imagined flaw in appearance (e.g., reported hair thinning). Patients engage in time-consuming, highly repetitive behaviors, such as obsessively grooming, requiring continual reassurance, or spending hours looking in the mirror.[12]

COSMETIC AND AESTHETIC PSYCHOLOGY

The dermatologist must do a thorough psychological examination for aesthetic trichology, which includes hair transplantation, platelet-rich plasma (PRP), and cosmetic medications.[14]

- *The danger of treating BDD*: Cosmetic procedures are often sought after by patients with undiagnosed BDD or delusional disorders. It is strictly forbidden to perform cosmetic operations on these populations. The psychiatric disorder cannot be resolved by surgical or cosmetic treatment since the patient is projecting deep-seated psychological issues onto a perceived physical hair deficiency. For example, when a BDD patient receives a hair transplant, it almost always results in severe discontent, exacerbated mental symptoms, and possible legal action against the doctor.[14,15]
- *Lifestyle drugs and the "Dorian Gray" syndrome*: Finasteride and minoxidil are examples of lifestyle medications that are increasingly being used to treat hair loss. The "Dorian Grey syndrome"—a pathological, compulsive dream of perpetual youth and resistance to the normal aging process—drives some people's pursuit of these drugs and leads to the misuse of cosmetic dermatological procedures.[5]

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PEDIATRIC TRICHOPSYCHODERMATOLOGY

Children's psychotrichological illnesses present very differently from those of adults, necessitating a thorough developmental examination.[16,17]

- *Childhood versus adolescent trichotillomania*: Similar to thumb-sucking, hair pulling in early preschoolers is usually a benign, temporary habit that goes away on its own and is best treated with mild parental psychoeducation. On the other hand, TTM is extremely problematic when it manifests or continues into puberty and school age. Severe comorbid psychiatric disorders, such as significant depression, social anxiety, and a history of interpersonal trauma, physical abuse, or emotional neglect as a kid, are strongly associated with adolescent TTM.[16,17]
- *Rapunzel syndrome vulnerability*: In pediatric populations that are emotionally disturbed or neglected, eating pulled hair (trichobezoars) can cause dangerous gastrointestinal issues that require immediate medical and psychiatric attention.
- *Bullying and stigmatization*: Children with illnesses like AA that cause apparent hair loss are particularly vulnerable to cruel bullying and stigmatization by their peers. Their psychological development is severely hampered by this early social rejection, which results in lifetime social anxiety, poor academic performance, and severely damaged self-esteem.[17]

THERAPEUTIC APPROACHES AND MANAGEMENT

A thorough, biopsychosocial approach is necessary for the effective treatment of trichopsychodermatological diseases. The dermatologist must start both behavioral counseling and psychopharmacological therapy since patients typically decline psychiatric referrals. The gold standard of therapy is Liaison dermatology, in which a dermatologist works closely with a psychiatrist.

Nonpharmacological Therapies

- *Habit reversal training (HRT)*: The best empirically supported first-line psychotherapy treatment for body-focused repetitive behaviors, such as TTM, is HRT. It consists of "competing response training" (replacing the harmful pulling action with a benign, incompatible physical action, like clenching fists or manipulating a stress ball) and "awareness training" (assisting the patient in identifying their unique physical triggers and cognitive distortions leading to hair pulling). For patients of TTM, using a digital watch which chimes every hour is one of the creative strategies to help remind the patient about their hair pulling behavior.[18,19]
- *Cognitive behavioral therapy (CBT) and psychoeducation*: Used to reframe the patient's pessimistic thoughts about their hair loss and to cure the underlying anxiety or despair. To control expectations for hair regeneration, psychoeducation about the typical hair cycle is essential. The "5-minute rule" in TTM, where patients are asked to pay attention to obsessive thoughts occurring throughout the day as much as possible. Once they develop awareness of these thoughts, they are asked to place a 5-minute interval between the thoughts and actions that follow. The goal is for the patients to learn to abstain from their compulsive behaviors.[19]

Psychopharmacological Therapies

- *Glutamate modulators [N-acetylcysteine (NAC)]*: For adults with TTM, NAC is currently the first-line pharmaceutical treatment. NAC suppresses the compulsive need to pull by lowering oxidative stress and regulating glutamate in the brain since TTM is caused by glutamatergic dysfunction rather than just serotonergic pathways. Over the course of 9–12 weeks, the recommended dosage is titrated up to 2,400 mg/day from 1,200 mg/day.[20]
- *Selective serotonin reuptake inhibitors (SSRIs) and tricyclic antidepressants (TCAs)*: SSRIs, such as escitalopram, sertraline, and fluoxetine, are widely used to treat the severe comorbid anxiety and depression linked to hair loss. Clinical research indicates that SSRIs are often unsuccessful at preventing the primary hair-pulling behavior of TTM, even though they are beneficial in treating these secondary comorbidities. When NAC is ineffective, the TCA clomipramine is used to reduce hair-pulling impulses more effectively, although its anticholinergic side effects necessitate close cardiovascular monitoring.[21]
- *Atypical antipsychotics*: Atypical neuroleptics, such as olanzapine, have been shown to be effective in lowering tugging behaviors and anxiety in patients with treatment-resistant TTM or TTM with substantial functional impairment. The traditional gold standard antipsychotic for delusional illnesses, like delusions of parasitosis, is pimozide; however, contemporary atypical antipsychotics, such as risperidone, olanzapine, and aripiprazole, are becoming more and more popular because of their safer side effect profiles.[21,22]
- *Neuromodulators for dysesthesia*: In order to quiet the hyperactive, pain-transmitting nerve fibers, patients

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with scalp dysesthesia (trichodynia) frequently respond well to treatment trials involving gabapentin, low-dose amitriptyline, or doxepin.[21,22]

- *Proteoglycan replacement therapy*: Targeted dietary therapies are used to prevent the extracellular matrix of the hair follicle from being degraded by stress and cortisol. It has been demonstrated that oral supplementation with certain bioavailable proteoglycans (such as lectican, leucine versican, and decorin) successfully acts as a "proteoglycan replacement therapy" to reverse cortisol damage. This treatment is a very promising initial treatment for stress-induced TE and diffuse hair loss since it stimulates the anagen phase, revitalizes damaged follicles, and shields cells from oxidative stress-induced apoptosis.[22]

CONCLUSION

Trichopsychodermatology revolves around the complicated interplay between the mind and the hair. Hair is a fundamental pillar of human identity, self-esteem, confidence and social perception. Therefore, disorders of the hair and scalp cause profound psychological burden that is often quite different from the clinical severity of the disease. The spectrum includes primary psychiatric disorders, somatopsychic and psychophysiological disorders, thus it demands a comprehensive approach in which the dermatologist looks beyond the visible skin manifestations and employs appropriate psychiatric assessment to identify the underlying psychological factors. Successful outcomes rely on dismantling the stigma of psychogenic disorders through a multidisciplinary biopsychosocial model. An integrated approach combining evidence based dermatological management with psychoeducation, targeted psychotherapy (like cognitive behavioral therapy, habit reversal training) and appropriate psychopharmacological treatment can address both the dermatological disorder and the associated psychological distress.

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