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Advances in Psychodermatology: Pediatric Trichotillomania

Kelly Frasier DO, MS[1]*, Michelle Bao, BSA[2], Claire Baptiste, MPH[3], Kathleen Daly, MS[4], Lacey M Miller, BA[5] and Anna S Nidhiry, MS, MPH[5]

[1]Nuvance Health/Vassar Brothers Medical Center, USA
[2]Long School of Medicine, University of Texas Health Science Center at San Antonio, USA
[3]The Robert Larner College of Medicine at the University of Vermont, USA
[4]The Medical College of Georgia at Augusta University, USA
[5]A.T. Still University School of Osteopathic Medicine in Arizona, USA

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***Corresponding author:** Kelly Frasier DO, MS, Nuvance Health/Vassar Brothers Medical Center, USA, Tel: 9282106996; Email: sa205293@atsu.edu

Abstract

Trichotillomania (TTM) is a complex disease that often presents first to pediatric dermatologists. Despite its high prevalence in childhood, limited recommendations and treatment modalities are available for pediatric TTM. While Habit Reversal Therapy and Cognitive Behavioural Therapy are the most commonly used treatments for children with trichotillomania, pediatric dermatologists are more likely to prescribe medications as a primary treatment modality. Mind-skin disorders, now referred to as psychodermatologic or psychocutaneous disorders, affect the pediatric population in both a visible and psychological manner. The rise of psychodermatology in pediatric dermatology provides the opportunity to not only address any visible skin conditions such as TTM, but also any additional psychological aspects of the disorder. This review focuses on the differences in treatment modalities for children with trichotillomania utilized by pediatric dermatologists and behavioural health specialists, as well as the most recent recommendations for dermatologists and mental health providers working in conjunction with a shared goal of providing the best long-term support for these patients.

Objective: Discuss the differences in treatment modalities for children with trichotillomania by pediatric dermatologists and behavioural health specialists, as well as the most recent recommendations for dermatologists and mental health providers working in conjunction with a shared goal of providing the best long-term support for these patients

Raise awareness of the discrepancies that exist between pediatric dermatologists and behavioural health specialists (psychologists, mental health counsellors, school counsellors) in the treatment of trichotillomania in children

Facilitate further discussion between pediatric dermatologists and behavioural health specialists when treating trichotillomania in the pediatric population.

Keywords: Psychodermatology; Pediatric Dermatology; Trichotillomania

Abbreviations: HRT: Habit Reversal Therapy; CBT: Cognitive Behavioural Therapy; ACT: Acceptance and Commitment Therapy; OCD: Obsessive Compulsive Disorder; AEBT: Acceptance Enhanced Behaviour Therapy; ADHD: Attention Deficit Hyperactivity Disorder.

Introduction

Trichotillomania (TTM) is a multifaceted and disabling chronic condition characterized by repetitive hair- pulling, with a prevalence ranging from 1% to 3% [1]. The most

common age of TTM onset is during adolescence; however, childhood onset is often reported [2]. Remarkably, TTM frequently surfaces as an initial concern in pediatric dermatological contexts [3]. Despite its heightened prevalence during childhood, the available recommendations and treatment modalities tailored specifically for pediatric TTM remain limited, demonstrating a critical gap in the clinical landscape [4]. The inherent complexity of TTM underscores the importance of comprehensively understanding its clinical manifestations, etiological factors, and effective interventions in order to enhance the quality of care for pediatric patients.

Current therapeutic approaches for trichotillomania in the pediatric population primarily encompass psychotherapy, Habit Reversal Therapy, and Cognitive Behavioural Therapy [1,4]. Pharmacologic treatment options can be divided into psychiatric medications such as SSRIs or N-acetyl cysteine, as well as dermatologic medications such as selenium sulfide shampoo, minoxidil, and clobetasol propionate [4,5]. Notably, TTM patients treated by pediatric dermatologists are more likely to have a diagnosed skin disorder, whereas psychological comorbidities are more commonly reported in TTM patients treated by behavioural health professionals [5]. As a result, a distinctive treatment pattern arises in the field of pediatric dermatology, in which medications emerge as a more prevalent primary treatment modality employed by dermatologists, whereas behavioural therapy is more often used in behavioural health [5]. This disparity in treatment preferences between pediatric dermatologists and behavioural health clinicians highlights the need for a nuanced understanding of diagnostic measures, management strategies, and treatment interventions within the unique context of pediatric TTM.

The convergence of dermatological and psychological dimensions in TTM has led to the conceptualization of mind-skin disorders, denoted as psychodermatologic or psychocutaneous disorders.6 These conditions cause a visible and psychological impact on pediatric patients, warranting a comprehensive exploration of both aspects within the clinical framework. The ascendancy of psychodermatology in the realm of pediatric dermatology not only addresses the visible manifestations of TTM-related skin conditions, but also facilitates a deeper understanding and interventions regarding the internal psychological aspects of the disorder [6]. This specialized field underscores the evolving nature of pediatric dermatology, offering an integrative approach that acknowledges the intricate interplay between dermatological manifestations and psychological factors in pediatric patients with TTM.

Materials and Methods

A comprehensive review of literature was conducted utilizing databases such as PubMed, Google Scholar, and PsycINFO. Search terms included “pediatric trichotillomania,” “treatment modalities,” “dermatologic management,” and “behavioural interventions.” Relevant articles, guidelines, and clinical trials were scrutinized to extract data on treatment approaches for pediatric TTM.

Results

Pediatric dermatologists commonly employ pharmacotherapy as the primary intervention for pediatric TTM, while behavioural health specialists advocate for evidence-based psychotherapeutic techniques like Habit Reversal Therapy and Cognitive Behavioural Therapy. Discrepancies in treatment preferences highlight the need for enhanced collaboration between dermatologists and behavioural health specialists to ensure holistic patient care. Additionally, recent studies underscore the efficacy of combined pharmacological and behavioural interventions in achieving favourable outcomes.

Discussion

Trichotillomania (TTM) in pediatric patients demands a comprehensive approach that encompasses education, behavioural therapy, and multidisciplinary collaboration to address its complex psychosocial impact. Treatment modalities for children with TTM include consulting pediatric dermatologists and behavioural health specialists to understand the triggers for hair-pulling and the value of behavioural therapy [5]. Behavioural therapy, specifically Habit Reversal Therapy (HRT), emerges as the cornerstone, necessitating professional expertise [7]. Therefore, dermatologists are encouraged to establish collaborative relationships with mental health professionals, supported by specialized training courses. Beyond therapy, patients must also be assessed for psychiatric comorbidities to ensure comprehensive care.

Dermatological vs. Behavioural Care Management of Trichotillomania

Patients with trichotillomania often present to dermatologists because patients are either unaware of or deny hair-pulling behaviours and thus seek treatment for hair loss [3]. The diagnostic timeline, averaging nine months due to the different tests needed, underscores the need for swift clinical judgment and intervention. The financial burden on families due to repeated visits further emphasizes

the importance of early diagnosis and intervention to prevent long-term sequelae and mental health comorbidities.

Ultimately, HRT remains the most recommended treatment for pediatric trichotillomania, as it has been more extensively studied than medications among the pediatric TTM population [8]. A 2014 meta-analysis of adult and pediatric TTM treatment revealed that behavioural therapy showed greater efficacy than medications such as SSRI's and clomipramine [9]. Although therapy is the current standard of care, it is not always the initially prescribed treatment. A retrospective review at the Children's Hospital of Philadelphia revealed that children with TTM commonly presented to either behavioural therapists or dermatology [5]. Findings reveal that a majority (63.5%) of patients initially sought treatment from behavioural health services due to the prevalence of psychiatric comorbidities (62.8%), surpassing the number seeking treatment from dermatologists for skin disorders (23.4%) [5]. These results imply that accessing care through behavioural health services may offer a more expedient and cost-effective approach for families managing trichotillomania (TTM). When comparing treatment approaches between the two, dermatologists most commonly provided education and medication, whereas behavioural health professionals opted for behavioural therapy, with only 4.6% of them prescribing medication [5]. Medications prescribed by dermatologists included minoxidil, corticosteroids, NAC, tofacitinib, and selenium sulfide shampoo [5]. Currently, there are no controlled trials studying the efficacy of these medications in treating pediatric TTM, further emphasizing the need for dermatologists to recognize and recommend therapy as treatment. Collaborative efforts between dermatologists and mental health specialists are critical, emphasizing the interdisciplinary approach essential for optimal pediatric TTM care. Additionally, current management of the presentation of trichotillomania by primary care physicians includes first-line management by primary care or child psychology, and further referral to child psychiatry or pediatric dermatology if the condition remains uncontrolled [10]. If managing the TTM themselves, primary care pediatricians should also be educated on the preferred use of therapy in treatment.

Pediatric dermatologists play a pivotal role in TTM management by fostering awareness, education, and intervention. Certification in HRT, Cognitive Behavioural Therapy (CBT), or Acceptance and Commitment therapy (ACT) may equip dermatologists to deliver effective behavioural therapy themselves, overcoming barriers such as stigma and resource scarcity. Additionally, comorbidity assessments by mental health professionals are essential, given the frequent association of TTM with mood disorders, anxiety disorders, substance use disorders, eating disorders, and disruptive behaviour disorders [11]. Lewin AB, et al. [12] found that children with TTM presented with additional comorbid anxiety and depression symptoms at rates up to two standard deviations above the mean for age- and gender-matched children without TTM [12]. The Child and Adolescent Trichotillomania Impact Project found that some children among a cohort of TTM patients aged 10-17 used alcohol, tobacco, or other illicit drugs to self-soothe their TTM symptoms [13]. Collaboration with mental health specialists is crucial in ensuring comprehensive care of trichotillomania and its comorbidities.

Integrating behavioural therapy into the field of pediatric dermatology for TTM treatment is paramount. Notably, the Perelman School of Medicine at the University of Pennsylvania offers specialized courses for healthcare professionals, including one titled Habit Reversal Training for Trichotillomania and Excoriation [14]. Education, early intervention, and collaborative care are imperative for comprehensive management.

On-going research and training initiatives can further enhance the efficacy and availability of behavioural interventions, ensuring optimal outcomes for pediatric patients diagnosed with TTM.

Treatment Modalities for Pediatric Trichotillomania

Trichotillomania (TTM) in pediatric patients necessitates a multifaceted approach, considering the unique developmental and psychological aspects of this population. HRT stands out as the first-line treatment for TTM across all age groups [7]. This cognitive-behavioural intervention involves family participation in younger patients and addresses key components, including awareness, competing responses, stimulus control, relaxation, and social support. A randomized controlled trial in TTM youth showcased a 76% response rate with sustained efficacy at 1 and 3 months, indicating the potential for long-term success [15]. The categorization of TTM into a specific field of psychiatric disorders has ranged from classifications including addiction, obsessive-compulsive disorder (OCD), and tic disorders. Lamothe JM, et al. [16] found that TTM is more related to Tourette Syndrome than OCD [16]. With the history of HRT as one of the most commonly used therapies for treatment of Tourette Syndrome, this may help explain why HRT is also effective in TTM [17]. Additionally, HRT has shown promise in treating TTM patients with developmental disorders, such as Williams's syndrome [18]. Finding a treatment option that is adaptable for patients with diverse intellectual and developmental pathologies is particularly important when considering pediatric care of TTM.

In addition to previously established success with Habit Reversal Therapy (HRT), Acceptance and Commitment Therapy (ACT) combined with HRT has also shown success in treating TTM in a case series of two adolescents [19]. This combined therapy of ACT with HRT is also known as Acceptance Enhanced Behaviour Therapy (AEBT). ACT involves recognizing and accepting emotions associated with habits, which are less emphasized in HRT but commonly involved in hair pulling behaviour [20] ACT when conducted alone without HRT has shown some efficacy in TTM treatment, with greater results in adults than adolescents [21]. No current studies have been conducted on the efficacy of either AEBT or ACT alone in younger children, necessitating further research on the adaptation of existing AEBT for this population. Online delivery of AEBT may provide additional opportunities for patient treatment. A study conducted by Petersen et al. of online AEBT delivered via Zoom proved effective among a cohort of adolescents with improvement of symptoms up to one year later [22]. Additionally regarding online ACT, Utah State University offers an online ACT patient guide specific for trichotillomania for a cost of twenty-five dollars [23]. The added availability of ACT and AEBT, especially via online modes, in addition to more commonly known and utilized HRT, allows for greater opportunities for patients to receive treatment.

CBT represents another integral treatment modality for pediatric TTM. This therapeutic approach targets problematic pulling-related thoughts and beliefs, challenging and restructuring them into more adaptive cognitive patterns [2]. The emphasis on cognitive restructuring aligns with the understanding that addressing psychological aspects is pivotal in mitigating TTM symptoms.

In contrast, pharmacological therapy is typically reserved for pediatric TTM patients with comorbid psychological conditions. Medications such as SSRIs, N-acetylcysteine (NAC), antipsychotics, and tricyclic antidepressants have been explored, but the limited data available underscore the need for caution and to continue to emphasize behavioural therapy as the first-line approach [24]. Psychogenic medications have either not been studied in controlled trials with pediatric TTM populations, or have been found to be ineffective. Case studies of successful pharmacologic treatment of pediatric TTM with psychiatric medications such as valproic acid and fluvoxamine have been reported [25,26]. Although potentially promising, these medications still require controlled trials with pediatric-specific populations before they can be widely recommended. To date, three controlled trials of pharmacotherapy in pediatric TTM patients have been conducted with NAC, milk thistle, and methylphenidate. Although individual case studies have shown improvement of pediatric TTM using NAC, a randomized controlled trial found no significant difference in TTM symptoms when compared to a placebo [27]. A 2019 controlled study of using milk thistle plant only included four youth participants and demonstrated improvement of some symptoms, but only for up to 6 weeks.28 And finally, a controlled trial of methylphenidate in pediatric populations with both Attention Deficit Hyperactivity Disorder (ADHD) and TTM showed that the medication only improved ADHD symptoms, without significant impact on TTM symptoms.29 Due to the current absence of FDA-approved medications for pediatric TTM, on-going research endeavors may offer additional insights into pharmacological management. As of now, behavioural interventions remain the cornerstone, reflecting the current understanding of effective and evidence-based care for pediatric TTM.

Recommendations for Further Research

The landscape of pediatric TTM treatment warrants comprehensive exploration, given its comorbidities and the current gaps in research. It is imperative to investigate the factors contributing to the inclination of dermatologists towards prescribing medications for TTM, especially when compared to behavioural health specialists. For example, future studies could investigate the prevalence of psychiatric education in dermatology residency programs. Further information regarding limited mental health resources, parental demands, and the potential expediency of the therapy route in addressing additional psychiatric comorbidities is essential. Understanding the percentage of dermatologists who refer patients to counsellors or child and adolescent psychiatrists, and the barriers to such referrals, can provide insight into the dynamics of collaborative care.

Furthermore, the potential impact of behavioural therapy training for dermatology staff with certifications in CBT, HRT, ACT, or AEBT deserves investigation. This approach could significantly enhance the capabilities of clinicians in treating patients with psychocutaneous disorders. The availability of dermatologists who can provide therapy for pediatric TTM patients themselves could help ameliorate the gap in resource availability of behavioural therapists.

Additional controlled trials of psychotropic medications should be completed in pediatric populations with TTM to guide evidence-based practices. This information would provide greater evidence in treating pediatric patients who are either refractory to behavioural therapy alone, have other psychiatric comorbidities, or are unable to attend regular therapy sessions due to time, financial, or resource scarcity reasons.

Exploring the influence of low self-esteem and negative affective states on hair-pulling and the effectiveness of

self-esteem counselling in this age group adds a crucial psychosocial dimension to the research agenda.

Similarly, understanding the role of stress management courses as a resource for treating TTM in adolescents can contribute to developing tailored interventions.

Finally, psychodermatology clinics specialize in treating psychocutaneous disorders, ensuring that psychiatric comorbidities are addressed and appointment visits are minimized [28-30]. Assessing the available options for psychodermatology clinics and exploring avenues for increasing the availability of these clinics is essential to ensure comprehensive care of comorbid conditions. While these services have shown efficacy in a small patient population, a more comprehensive understanding of their impact can guide the expansion and refinement of psychodermatology practices.

Conclusion

Trichotillomania management in pediatric patients requires an interdisciplinary approach that addresses both the physiological and psychological aspects of the condition. Early diagnosis, comprehensive assessment of comorbidities, and integrated therapeutic interventions are essential to optimize outcomes for pediatric patients with trichotillomania. Behavioural therapy, particularly Habit Reversal Therapy, emerges as the cornerstone of treatment, emphasizing the importance of collaboration between dermatologists and mental health professionals. Development of therapy training protocols for dermatologists should be considered to maximize care for these patients. Further controlled trials of other treatment options, including Acceptance and Commitment Therapy, psychotropic medications, and dermatologic symptom control, are necessary in pediatric populations before they can be widely recommended.

Conflict of Interest

The authors of this publication declare there are no known conflicts of interest associated with this publication, and there has been no significant financial support for this work.

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We have given due consideration to the protection of intellectual property associated with this work and that there are no impediments to publication concerning intellectual property, including the timing of publication. We have followed the regulations of our institutions concerning intellectual property.

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The Corresponding Author will sign off on behalf of all authors included in this manuscript.

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