



Successful Management of Trichotillomania with an Integrated Approach: A Case Study

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ABSTRACT: Trichotillomania (TTM) is a chronic psychodermatological condition in which repeated hair-pulling leads to visible hair loss and significant emotional distress. This case study presents the successful management of a 22-year-old female with TTM using an integrated approach that combined Growth Factor Concentrate (GFC) therapy, supportive Ayurvedic medications, counselling, and yogic practices. Over five months, six sessions of GFC therapy were administered, resulting in steady dermatological improvement, including reduced broken hairs, increased anagen hairs, improved scalp density, and normalization of follicular openings. Alongside this, psychological interventions such as counselling, *Anulom Vilom*, and *Bhramari Pranayama* helped reduce hair-pulling urges, enhance emotional regulation, and improve awareness of triggers. No adverse effects were reported during treatment. The overall outcomes demonstrate that while GFC effectively restores hair health, long-term recovery in TTM is best achieved through a combined strategy that addresses both the dermatological and psychological components of the disorder. This case demonstrates that integrated dermatological and psychological therapy provides sustained improvement in TTM, indicating the importance of multidisciplinary management strategies.

KEYWORDS: Ayurveda, Pranayama, Growth Factor Concentrate, Integrative Medicine, Psychodermatology, Case study

INTRODUCTION

Trichotillomania (TTM), commonly known as hair-pulling disorder, is a chronic psychiatric condition characterized by repetitive hair-pulling behaviour, leading to noticeable hair loss and significant psychosocial distress.¹ Classified under Obsessive-Compulsive and Related Disorders in the DSM-5-TR, its exact etiology remains unclear, with potential contributors including genetic predisposition, neuropsychological anomalies, and environmental stressors.² Treatment for TTM requires a collaborative approach between psychiatry and dermatology. Psychiatrists focus on identifying underlying stressors and providing interventions such as counselling, psychotherapy, relaxation techniques, reverse behavioural therapy, and medications like antidepressants and anti-anxiety agents. Dermatologists address the physical manifestations of the disorder, primarily hair loss, through therapies that restore scalp health and promote hair regrowth.

This case highlights the dermatological management of TTM, focusing on the hair loss aspect while excluding psychological treatment, and emphasizing the need for an integrated approach to achieve comprehensive care.

CASE REPORT**Patient Information**

A 22-year-old female, residing in Tehsil Baijnath, District Kangra, Himachal Pradesh, presented to the Skin Care Unit and Derma Research Lab (OPD No. 715) of Rajiv Gandhi Government Post Graduate Ayurvedic College and Hospital (RGGPGACH), Paprola – 176115, on January 2, 2024, presented with hair fall for 4 years. Before this consultation, she had not taken any formal medical treatment from any other hospital. Due to the progression of the hair fall, she approached RGGPGACH, Paprola, for further treatment.

The patient has no past medical records and reports no history of hypertension, Type II diabetes mellitus, pulmonary tuberculosis, thyroid dysfunction, or any other chronic illness. There is no family history of similar conditions. Personal history reveals a good appetite, with normal urine and stool habits, and normal sleep patterns. Menstrual cycles are regular.

Clinical findings

On trichoscopy examination, the scalp revealed broken hairs accompanied by increased interfollicular space. The hair shafts appeared normal in terms of thickness, evenness, and the absence of nodes, with an average of 2–3 hairs per follicular unit. Additionally, hair follicular openings exhibited black dots, indicating areas of follicular activity or disruption.

On hospital visit (02/01/2024), vitals were within normal limits (BP 118/76 mmHg, Pulse 68/min).

Intervention

The patient was advised of Growth Factor Concentrate (GFC) therapy and additional supportive Ayurvedic proprietary medications.

Date of Visit	Dermatological intervention	Psychological intervention	Remarks
02/01/2024	<ul style="list-style-type: none"> Advised GFC on the next visit Cap. Stresscom (2 capsules at night before sleep) 	<ul style="list-style-type: none"> <i>Anulom Vilom Pranayama</i> for 5 minutes twice a day <i>Bhramari</i> 8 rounds twice a day 	
06/01/2024	<ul style="list-style-type: none"> GFC (1st sitting) Cap. Stresscom (2 capsules at night before sleep) 	<ul style="list-style-type: none"> <i>Anulom Vilom Pranayama</i> for 5 minutes twice a day <i>Bhramari</i> 8 rounds twice a day 	
03/02/2024	<ul style="list-style-type: none"> GFC (2nd Sitting) Tab. Follhair (1 tablet once a day after meal) Cap. Stresscom (2 capsules at night before sleep) 	<ul style="list-style-type: none"> <i>Anulom Vilom Pranayama</i> for 5 minutes twice a day <i>Bhramari</i> 8 rounds twice a day 	Tab. Follhair was added as a supplement for hair growth with the GFC procedure.
29/02/2024	<ul style="list-style-type: none"> GFC (3rd Sitting) Tab. Follhair (1 tablet once a day after meal) 	<ul style="list-style-type: none"> <i>Anulom Vilom Pranayama</i> for 5 minutes twice a day <i>Bhramari</i> 8 rounds twice a day 	

	<ul style="list-style-type: none"> • Cap. Stresscom (2 capsules at night before sleep) 		
23/03/2024	<ul style="list-style-type: none"> • GFC (4th Sitting) • Tab. Follhair (1 tablet once a day after meal) • Cap. Stresscom (2 capsules at night before sleep) 	<ul style="list-style-type: none"> • Cap. Fludac 20 mg (1 tablet once a day) • <i>Anulom Vilom Pranayama</i> for 5 minutes twice a day • <i>Bhramari</i> 8 rounds twice a day 	Cap. Fludac 20 mg was added after consultation with a modern psychiatrist.
23/04/2024	<ul style="list-style-type: none"> • GFC (5th sitting) • Tab. Follhair (1 tablet once a day after meal) 	<ul style="list-style-type: none"> • <i>Anulom Vilom Pranayama</i> for 5 minutes twice a day • <i>Bhramari</i> 8 rounds twice a day 	
16/05/2024	<ul style="list-style-type: none"> • GFC (6th sitting) • Tab. Extend Hair (1 tablet once a day after meal) • Syp. Liv 52 (5ml twice a day after meal) • Anagen Grow Hair Serum for application over scalp 	<ul style="list-style-type: none"> • Cap. Fludac 20mg (1 tablet once a day) • <i>Anulom Vilom Pranayama</i> for 5 minutes twice a day • <i>Bhramari</i> 8 rounds twice a day 	Anagen Hair Grow serum was advised to stimulate hair growth along with the GFC procedure.

Follow Up and Outcomes

Follow Up Dates	Outcomes and Key Observations
06/01/2024	Noticeable hair fall; trichoscopy revealed broken hairs and black dots (Figure 1)
03/02/2024	Reduction in hair shedding; increased awareness of pulling triggers
29/02/2024	Improved scalp density; fewer broken hairs; reduced pulling episodes; better emotional control and reduced stress
23/03/2024	Improved follicular density; reduced urge intensity; improved impulse control; family reported less pulling
23/04/2024	Significant clinical improvement; increased anagen hairs; reduced interfollicular spacing; normalizing follicular openings
16/05/2024	Marked improvement in density; reduced breakage; significant reduction in hair-pulling behaviour; no complications; advised continued stress-management (Figure 2)



Figure 1: On 1st Visit: 2/1/2024



**Figure 2: After 5 sittings of GFCs
Visit on 16/5/2024**

DISCUSSION

TTM is a condition where a person repeatedly pulls out their own hair because of emotional stress, chemical changes in the brain, and certain habits. It affects both the mind and the skin, so treatment must address both sides. In this case, Growth Factor Concentrate (GFC) was a treatment for the scalp and to help hair grow back. The patient's steady improvement showed that GFC works well, but also that counselling, pranayama, habit-reversal training, and techniques to control emotions are equally important in reducing hair-pulling behaviour. GFC promotes hair growth through a multifaceted mechanism involving the release of growth factors, such as PDGF, VEGF, TGF- β , EGF, and IGF-1, from activated platelets.³ These growth factors stimulate dermal papilla cells and keratinocytes by activating intracellular signaling pathways, such as MAPK and PI3K/AKT, to enhance cell proliferation and extend the anagen phase of the hair cycle. VEGF-driven angiogenesis improves blood supply and nutrient delivery to hair follicles, while anti-inflammatory cytokines reduce perifollicular inflammation. Additionally, TGF- β and PDGF boost collagen production and extracellular matrix remodeling, strengthening the dermal environment. IGF-1 further protects follicles from apoptosis, supporting hair density, thickness and reducing hair fall. This autologous therapy leverages the body's regenerative potential to safely and effectively combat hair loss and stimulate regrowth. In TTM, the hair follicles are mostly healthy; repeated pulling causes broken hairs, gaps between follicles, and mild inflammation. GFC works by supplying natural growth factors directly to the roots of the hair. This helps repair the damage, strengthen growing hair, and stimulate dormant follicles.⁴ Over six sessions, the patient showed steady improvement, fewer broken hairs, fewer black dots, and more hairs growing in the active (anagen) phase, showing that GFC is effective.

From an Ayurvedic perspective, TTM resembles conditions like *Bhutonmada* or *Manovahashrotodushti*, which involve repetitive, compulsive, and self-injuring behaviours. Modern medicine classifies it under obsessive-compulsive disorders.⁵ The improvement seen in both hair health and mental well-being makes it

clear that TTM should not be treated only as a hair problem, but as a mind and body condition requiring combined care from different specialties.

Overall improvement was not due to GFC alone. The patient also showed a gradual reduction in the urge to pull her hair, better emotional control, and more awareness of her behaviour. This progress came from counselling and regular psychological support. Yogic practices like Anulom Vilom Pranayama and Bhramari Kriya likely helped calm the mind, reduce stress, and improve self-control. This shows how closely the mind and body are connected, a concept well recognized in both Ayurveda and modern psychodermatology.

CONCLUSION

A combined approach involving both a dermatologist and a psychiatrist is essential for fully managing this condition and preventing recurrence. The significant results in this case demonstrate that treatments like GFC can help repair the hair damage caused by repeated hair-pulling. However, long-term improvement is possible only when the emotional and behavioural causes of TTM are also treated. The best recovery occurs when hair treatments are combined with counselling, stress-reduction practices, healthy lifestyle changes, and patient awareness. The combined approach used in this case, GFC therapy, medicines, hair serums, counselling, and *Pranayama*, proved to be very effective for this condition.

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