



Successful Management of Vitiligo Vulgaris with Unani Medicated Oil and Narrowband UV-B Phototherapy: A Case Report

Abstract

Introduction: Vitiligo vulgaris is a chronic depigmenting disorder that poses therapeutic challenges and psychosocial distress. Conventional therapies often yield inconsistent outcomes, necessitating alternative or integrative approaches.

Case Presentation: A 40-year-old male with multiple depigmented patches on the infraclavicular area, upper back, and lower back, with remarkable clinical improvement following combined therapy with Unani medicated oil and narrowband UV-B (NB-UVB) phototherapy.

Outcome: After three months of treatment, significant and stable repigmentation was achieved without adverse effects.

Conclusion: This case highlights the potential of integrating Unani topical medication with NB-UVB phototherapy as a safe and effective therapeutic strategy for vitiligo vulgaris unresponsive to prior treatments.

Keywords: Vitiligo vulgaris; Narrowband UV-B; Unani medicine; Babchi oil; Integrative dermatology; Case report

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Introduction

Vitiligo is an acquired pigmentary disorder characterized by the selective destruction of melanocytes, resulting in well-defined depigmented macules and patches. The global prevalence is approximately 0.5–2%, with significant cosmetic and psychological burden. Conventional management—comprising corticosteroids, calcineurin inhibitors, phototherapy, and surgical grafting—offers variable success and frequent relapse. (Parsad et al., 2006)

In Unani medicine, Bars (vitiligo) is attributed to the predominance of Balgham (phlegm) and dysfunction of the skin's *Quwwat-e-Mughayyirah* (transformative faculty). Topical applications of Babchi (*Psoralea corylifolia* L.), Kutki (*Picrorhiza kurroa* Royle ex Benth.), and herbal oils are traditionally employed to restore normal pigmentation through humoral balance and stimulation of melanogenesis. (Singh et al., 2010) Recently, (Ansari et al., 2025) reported successful management of poliosis associated with vitiligo using Unani medication, suggesting that integrative Unani-modern approaches may enhance therapeutic outcomes.

Patient Information

A 40-year-old male presented to the outpatient department with a 2.5-year history of gradually progressive depigmented patches involving the bilateral infraclavicular, upper back, and lower back regions. There was no personal or family history of autoimmune or pigmentary disorders. The patient denied systemic symptoms but expressed considerable cosmetic and psychosocial distress due to the visibility of the lesions.

Clinical Findings

Cutaneous examination revealed multiple, well-demarcated depigmented patches on the bilateral infraclavicular and dorsal regions. Wood's lamp examination confirmed complete depigmentation. No mucosal or hair involvement was noted. A summary of timeline of care is presented in Table 1.

Table 1. Timeline of Care

Duration	Intervention	Observation
0–6 months	Ayurvedic topical agents (soap, powder, oil, ointment)	No improvement
6–24 months	Unani oral therapy (Joshanda Munzij-e-Balgham, Safoof Bars)	Mild improvement in dorsal lesions
24–28 months	Unani medicated oil (Babchi, Kutki, alum, lemon juice, coconut oil) + weekly NB-UVB phototherapy	Significant repigmentation

Diagnostic Assessment

Diagnosis of vitiligo vulgaris was established based on clinical and Wood's lamp findings. Differential diagnoses such as pityriasis versicolor, post-inflammatory hypopigmentation, and indeterminate leprosy were excluded.

Therapeutic Intervention

Topical therapy: A Unani medicated oil was prepared using Babchi (Psoralea corylifolia L.), Kutki (Picrorhiza kurroa Royle ex Benth.), Shib-e-Yamani (alum), lemon juice, and Roghan-e-Narjeel (Cocos nucifera L.). The oil was applied daily to depigmented areas, followed by mild sun exposure for 15–20 minutes to enhance photosensitizing effects.

Phototherapy: NB-UVB (311 nm) was administered once weekly over affected regions, with incremental dosing as per tolerance. The patient adhered to the regimen consistently. No systemic or local adverse effects were observed.

Follow-up and Outcomes

Sequential improvement indicating progressive repigmentation was clearly evident at baseline, as well as at 1-, 2-, 3-, and 4-month follow-ups following the initiation of therapy. A comprehensive account of these observations has been systematically documented in Figure 1 to highlight the gradual pattern of clinical response over time.

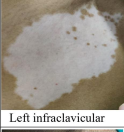
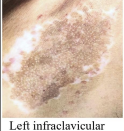
Time Line	Result		Remark
First Visit (Baseline)			The patient has well-demarcated vitiliginous patches with marked depigmentation over the left and right infraclavicular regions.
Second Visit (After One Month)			Early repigmentation was noted, evidenced by the emergence of pigmented macules within the previously depigmented patch.
Third Visit (After Two Month)			At the subsequent follow-up, repigmentation was particularly noted around the peripheral areas surrounding the original patch.
Fourth Visit (After Three Month)			At the following visit, the repigmented macules coalesced to form a patch, with the central area now closely resembling the normal skin color.
Fifth Visit (After Four Month)			At the final visit, the repigmentation became more uniform, with the patch showing further blending and the overall pigmentation now closely approximating the surrounding normal skin.

Figure 1. Sequential follow-up of vitiligo vulgaris treated with Unani medicated oil and narrowband UV-B phototherapy.

Discussion

This case underscores the promising role of Unani medicine in the management of vitiligo vulgaris, particularly when integrated with narrowband UV-B (NB-UVB) phototherapy. Although vitiligo is medically benign, its visible nature often results in psychological distress and social stigma, especially when lesions appear on exposed sites such as the chest or face.(Marques et al., 2023) Conventional monotherapies, including corticosteroids and phototherapy alone, frequently yield partial or unsustained outcome.

The integrative approach adopted in this case—combining Unani medicated oil with NB-UVB—produced consistent repigmentation within three months, highlighting potential therapeutic synergy. NB-UVB phototherapy (311 nm) is the current gold standard for non-segmental vitiligo due to its ability to stimulate melanocyte proliferation and migration, upregulate tyrosinase activity, and modulate local immune imbalance.(Singh et al., 2022) The Unani medicated oil employed in this case contained Psoralea corylifolia L. (Babchi), Picrorhiza kurroa Royle ex Benth. (Kutki), alum, lemon juice, and Roghan-e-Narjeel (Cocos nucifera L.). Each component contributes pharmacologically to melanogenesis, detoxification, and restoration of the normal humoral balance.

Psoralea corylifolia L. is rich in psoralen and isopsoralen, furocoumarins with potent photosensitizing and melanocyte-stimulating actions.(Li et al., 2021) When followed by UV exposure, these compounds promote melanogenesis by activating the MITF–tyrosinase pathway. Picrorhiza kurroa possesses immunomodulatory and hepatoprotective effects (Mishra et al., 2020), supporting systemic purification (*Tanqiya-e-Badan*) and humoral equilibrium (*Ta'deel-e-Mizaj*). Citrus limon (L.) Osbeck provides antioxidant flavonoids and vitamin C, which help neutralize reactive oxygen species and enhance collagen synthesis, thereby improving dermal repair. Shib-e-Yamani (alum) acts as an astringent, antiseptic, and keratolytic agent that facilitates local detoxification and epidermal regeneration. Roghan-e-Narjeel (Cocos nucifera L.) offers moisturizing, antioxidant, and anti-inflammatory benefits, strengthening the skin barrier and preventing transepidermal water loss.(Varma et al., 2019) Together, these ingredients exhibit synergistic properties that enhance microcirculation, promote melanocyte activation, and support the restoration of normal pigmentation.

According to Unani principles, Bars (vitiligo) arises from an excess of Balgham (phlegm) and a dysfunction of Quwwat-e-Mughayyirah (transformative faculty). The employed Unani formulation, possessing a hot and dry temperament, counteracts the cold and moist nature of the disease and restores the normal temperament of the affected skin.(Ibn Hubal, 2007; Majusi, 2010) By enhancing local warmth and metabolic activity, these agents rejuvenate impaired skin faculties—*Quwwat-e-Mughayyirah* and *Quwwat-e-Mushabbi*. The individual drug actions constituting the Unani medicated oil formulation are comprehensively listed in Table 2, highlighting their respective roles in the formulation's therapeutic profile.

Table 2. Actions of individual drugs used in the Unani medicated oil formulation

S. No.	Drug name	Pharmacological / Unani actions	References
1	Babchi (Psoralea corylifolia L.)	Detergent, blood purifier, concoctive, antioxidant, anti-inflammatory, photosensitizing, immunomodulatory, melanogenic	(Kabeeruddin, 2011; Khan, 2012; Singh et al., 2022, p. 2022; Wadud, 2021)
2	Kutki (Picrorhiza kurroa Royle ex Benth.)	Concoctive, purgative, detergent, irritant, antioxidant, immunomodulatory, hepatoprotective, photosensitizing	(Khan, 2013; Singh et al., 2022)
3	Leemu (Citrus limon L.)	Antioxidant, anti-inflammatory, antimicrobial, rich in vitamin C, enhances dermal repair	(Shamim and Kumar, 2023)

S. No.	Drug name	Pharmacological / Unani actions	References
4	Shib-e-Yamani (Alum)	Astringent, antiseptic, styptic, keratolytic, cleansing; aids epithelial regeneration and local detoxification	(Khan, 2012; Wadud, 2021)
5	Roghan-e-Narjeel (Cocos nucifera L.)	Moisturizer, emollient, antioxidant, anti-inflammatory, antimicrobial, protective to epidermal barrier	(Varma et al., 2019)
6	Lemon juice (fresh extract)	Mildly keratolytic, antioxidant, vitamin C-rich, photosensitizing, promotes collagen synthesis	(Shamim and Kumar, 2023)
7	Combined formulation	Enhances local blood circulation, induces muharrik (stimulant), muhammir (rubefacient) and muharriq (counter-irritant) effects; supports Tanqiya-e-Badan (systemic detoxification) and Ta'deel-e-Mizaj (temperamental correction)	(Ibn Hubal, 2007; Khan, 2012; Razi, 2007)
8	Overall effect	Promotes melanogenesis, restores Quwwat-e-Mughayyirah (transformative faculty) and Quwwat-e-Mushabbibah (simulative faculty), leading to repigmentation and skin rejuvenation	(Hussain et al., 2016; Ibn Hubal, 2007; Manzoor, 2020; Razi, 2007)

This case demonstrates that combining Unani topical therapy with modern phototherapy can yield enhanced repigmentation in vitiligo vulgaris. NB-UVB phototherapy remains a cornerstone of vitiligo management due to its safety and ability to stimulate melanocyte proliferation and migration.(Parsad et al., 2006) The Unani formulation employed in this case included Babchi and Kutki, both possessing melanogenic, immunomodulatory, and antioxidant properties.(Singh et al., 2010) This integrative approach mirrors the findings of Ansari et al. (2025), who achieved successful repigmentation in a pediatric patient with vitiligo and poliosis using Unani therapy. Together, these observations highlight the therapeutic potential of Unani medicine as a safe, culturally acceptable adjunct to contemporary dermatologic treatments.

Conclusion

This case report illustrates the successful management of vitiligo vulgaris using a combination of Unani medicated oil and NB-UVB phototherapy, resulting in significant and stable repigmentation. This integrative approach may serve as a promising, safe, and effective option for patients with recalcitrant vitiligo.

Patient Perspective

The patient expressed satisfaction with the therapy, reporting improved self-confidence and social comfort following visible repigmentation.

Informed consent

Written informed consent was obtained from the patient for publication of this case and accompanying clinical images.

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