



Dermatophytosis and Quba: Integrating Unani and Modern Medical Insights: A Narrative Review

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Abstract

Dermatophytosis, or ringworm is known as *Qūbā* in Unani medicine, is a highly prevalent and recurring fungal infection caused by fungi named dermatophytes (Trichophyton, Microsporum, Epidermophyton), which affects 20–25% of the global population, especially in humid, regions like Asia and Africa. The infection especially lead to keratinized tissues of skin, hair, and nails, manifested as tinea corporis, capitis, cruris, pedis, or unguium especially leads to keratinized tissues of skin hair and nails, manifested as tinea corporis, capitis, cruris, pedis, or unguium, with concerns over chronic, recurrent, and antifungal-resistant cases, especially in India. This narrative review aims scientifically the unani medication in dermatophytosis through Unani and modern medical perspectives, through holistic way it validates the etiopathogenesis, clinical manifestations, diagnostics, and treatments of unani medicine. *Qūbā* is caused by humoral imbalances, specifically morbid black bile (*Sawdā*) and phlegm (*Balgham*), treated with herbal and Herbo-mineral formulations, blood purifiers externally and internally in modern and unani there are similar clinical symptoms like redness ring circular patches and external risk factors like poor hygiene, humidity. Clinical studies suggest Unani treatments, such as *Qurs-e-Asfar* and *Rogan-e-Narjeel*, are more effective as conventional antifungals with lesser side effects, offering effective remedies for resistant cases .Future research may focus on standardizing Unani formulations externally and internally, validating their mechanisms, and conducting large-scale trials to integrate Unani and modern approaches Clinically, Unani therapies may be used as safe medication , particularly for antifungal resistant dermatophytosis.

Keywords: Qūbā, Humoral Theory, Dermatophytosis, Unani, Traditional Medicine, Antifungal Resistance

Introduction

Dermaphytosis is also known as ringworm, Tinea, and is defined as a superficial fungal infection which usually infects skin, hair nails, and it is caused by a fungus named dermatophyte, which is from the genera Trichophyton, Microsporum, and Epidermophyton. The most common causative species include Trichophyton rubrum, T. mentagrophytes, T. interdigitale, Microsporum canis, and T. violaceum. The condition usually presents as erythematous, pruritic, scaly, annular lesions, with or without alopecia if the hair follicles are involved. It usually occurs within 4–14 days following exposure [1]. It affects any part of the body and it is named accordingly, such as Tenia pedis, Tinea unguis, Tinea capitis, and Tinea cruris [2]. Predisposing factors are using

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public showers, contact sports such as wrestling, excessive sweating, contact with animals, obesity, and poor immune function[3,4]. In Unani medicine, a time-honoured system rooted in Greco-Arab-Persian traditions, dermatophytosis is referred to as *Qūbā*, a condition classified under *Amrāz-e-Jild* (skin disorders). Unlike modern medicine's focus on fungal pathogens, Unani attributes *Qūbā* to an imbalance of the four humors (*Akhlat-e-arba'a*), particularly the accumulation of morbid black bile (*Sawdā Fāsīd*) and phlegm (*Balgham Fāsīd*) in the skin [5-7]. Classical Unani texts, including those by Hippocrates, describe *Qūbā* as rough, itchy, scaly lesions, sometimes with colour changes or fluid discharge, closely mirroring the clinical features of modern dermatophytosis [8-10]. It is estimated that 20-25% of the global population is affected with dermatophytosis, which is significantly seen in warm, humid climates like Africa and Asia, due to their dense population, socio-economic conditions like poor hygiene, and crowded living conditions[2,11,12]. The prevalence of dermatophytosis in India ranges from 6.09% to 61.5%, while South India demonstrates a significantly higher prevalence than northern regions, with rates ranging from 6.09% to 27.6%. In a Hospital-based study in Tamil Nadu, the Chennai region shows 25-30%[13]. The causative fungi invade the stratum corneum (outermost layer of skin), which is rich in keratin. These fungi produce enzymes like keratinases, lipases, and proteases that act as tiny scissors, breaking down keratin into nutrients, and then they use it to grow and spread. This invasion can cause redness, itching, scaly patches, and sometimes form the classic ring-shaped rashes[14].

The key transcription factors, PacC, HacC, and StuA, control multiple processes essential for fungal survival and virulence. PacC balances pH signalling, keratinolytic activity, metabolism, and cellular homeostasis, HacA is responsible for stress response, thermotolerance, cell wall assembly, immune recognition, and drug susceptibility, and StuA helps morphogenesis, biofilm formation, pigmentation, cell wall composition, stress susceptibility, and keratinolytic activity, these three regulators enable the fungus to adapt the host conditions, suppress immunity. Overall, fungal pathogenicity relies on the interplay between transcriptional regulation and keratin degradation mechanisms. (figure:1) [15]. The severity of infection depends on our immune system, particularly T-cells, which usually fight back, triggering inflammation to stop the growth of fungi. The aggravating factors are a humid environment, poor hygiene or even genetic predispositions, which may lead to survival fungi and cause disease [16]. Individuals with compromised cell-mediated immunity, such as those with diabetes or on immunosuppressive therapies, are particularly susceptible to chronic or recurrent infections. The global rise in chronic, recurrent, and drug-resistant cases, especially in tropical regions like India, has become a significant public health concern [17].

Unani Pathophysiology

In Unani medicine, a holistic healing system is understood by the concept of four humours that maintain health. Diseases are caused by morbid or harmful material which are formed in major organs like the liver (*Aza ye rayeesa*). This morbid

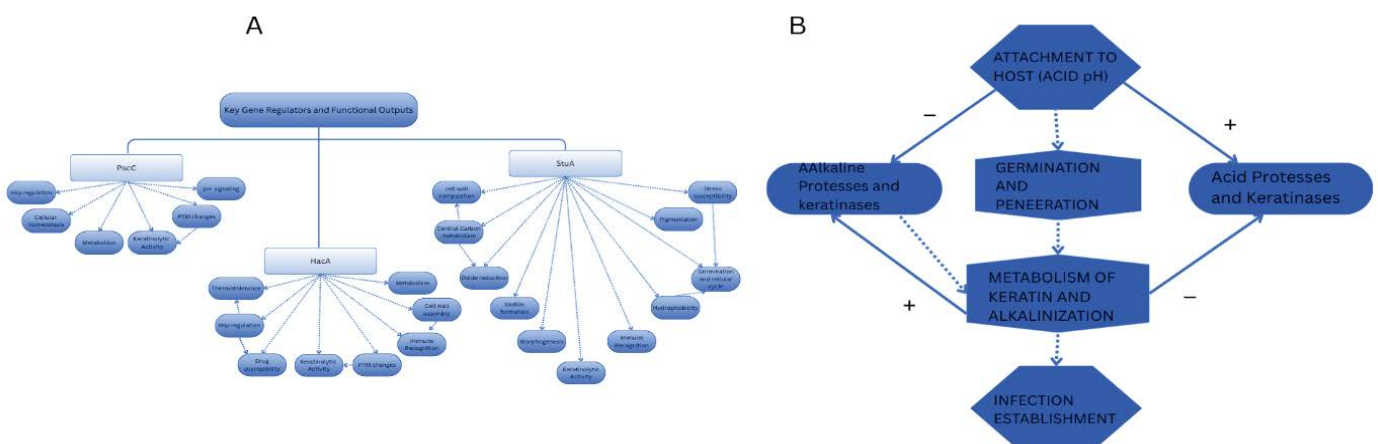


Figure 1: Pathophysiology of dermatophytosis

Diagram displaying proteins and enzymes involved in the infectious process: (A) The functionality of three transcription factors assessed in dermatophytes and the convergence of their roles during fungus-host interaction and infection outcome. Solid black arrows represent the current knowledge about the regulated processes. Dashed black arrows indicate a correlation between the regulated functions. Solid green arrows depict the possible interwoven paths that control some downstream effects. Dashed green arrows indicate a hypothesized correlation of processes through cross-related paths yet to be elucidated. PTM is related to post-translational modifications; (B) stages in the dermatophyte infection process. Positive and negative signals represent induction or repression, respectively.¹⁴

material causes disease by our own immunity (*tabiyath*). The morbid material is made up of two Humors: Aklath ghaliza, which is thick, dense, and slow-moving, and one is Aklath ghaliza which is thick and dense and slow-moving the other is, *Aklath latifa*, which is hot, thin, and quick to spread. The combination of these shows the pattern of disease. The hot

and thin humours cause a quick spread of disease, whereas thick humours cause a slow spread of disease, depending on the dominance of the affected humour. Disease pattern results, if hot and thin humours dominate, disease resolves faster due to its thin fluid nature: if thick and earthy humors dominate, healing is slow, as seen in (Figure No:2) [18].

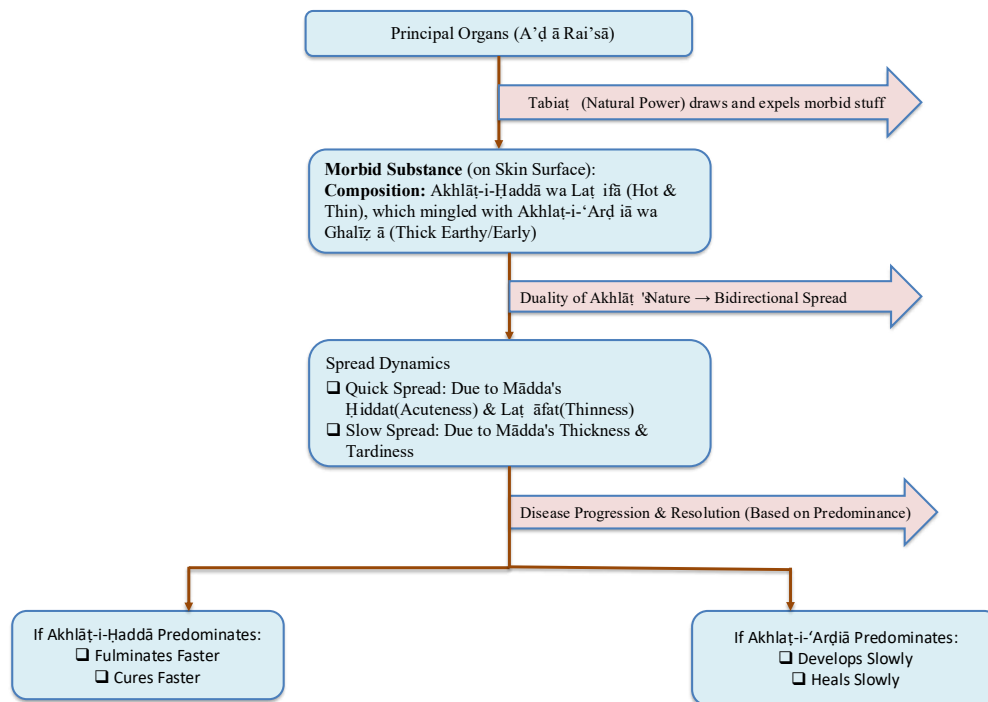


Figure 2: Unani pathophysiology of dermatophytosis

Diagnosis

Clinically diagnosed as Annular erythematous plaques with elevated, scaly margins and central clearing. In the laboratory, it is confirmed by direct microscopic analysis of skin scrapings in a solution of 10%–20% potassium hydroxide, which reveals septate hyphae [19]. Confirmation is done by Fungal Culture, which shows Trichophyton, Microsporum, and Epidermophyton are dermatophyte species that can be identified using Sabouraud dextrose agar culture [20].

Dermoscopy: Indicates "corkscrew hairs," "comma hairs," or "peripheral scaling" in tinea capitis [21]. Biopsy & Histopathology is done with PAS stain to reveal fungal hyphae within the stratum corneum [22].

The recent management depends on antifungal treatment and its recurrence, such as Terbinafine and Itraconazole, with topical creams like luliconazole and sertaconazole [33]. The growing challenges against antifungal resistance with severe systemic adverse effects. This has made it challenging to treat fungal infections in this era, leading traditional systems of medicine like Unani to come forward with its safe and effective medication [34].

In the Unani system of medicine, the concept of disease and treatment is based on humoral theory and its holistic approach. It balances the humours with safe medication with fewer side effects. The treatment in Unani comprises medication for humoral imbalances, blood purifiers, and immunity boosters [10,35]. The specific humour *Sawdā* (black bile) is the predominant morbid humour, then following therapies like *Munzij-e-Sawdā* (Decoction), *Mushil-e-Sawdā*, *Tabreed-e-Badan* are used. Similarly, if Balgham (Phlegm) is the predominant morbid humor, then *Munzij-e-Balgham*, then *Mushil-e-Balgham*, then for *Tabreed-e-Badan*, *Mubarriyat* (refrigerant medicines) are used [36] as shown in (Table No.2). If *Qūbā* is due to impurities in the blood, then *Musaffiyāt* (Blood purifiers) are used [37,38].

Previous clinical studies have shown that Unani treatments, such as oral *Qurs-e-Asfar* and topical *Rogan-e-Narjeel*, are as effective as standard antifungals like itraconazole and terbinafine, achieving mycological cure with minimal side effects [7,35,36]. Topical herbal creams that contain extracts of *Cassia tora*, *Brassica nigra*, and *Sesamum indicum* have shown remarkable antifungal activity in both in vitro and in vivo studies, showing a

Table 1: Research Articles in Unani in Dermatophytosis

First Author Year	Study Type	Case Treatment Sample	Control Treatment Sample	Sample Size (Total)	Case Control	Scale or another tool
Aaliya et al, 2019[23]	Case Series	Marham Kharish Jadeed (topical application)	Not applicable (no control group)	4 cases	No	KOH mount examination of skin scrapings, haematological & biochemical investigations, clinical signs (itching, erythema, scaling, central clearing with peripheral raised margins)
Dr. Nighat Parveen et al, 2019[24]	Case Report	Unani formulation pastes (Suhaga, Mardarsung, Kaat safed, Tukhm panwadh, Ghandhak, Raskapoor, Ghee) (local application)	Not applicable (single case)	1 case	No	Clinical examination, 20% potassium hydroxide microscopy for fungal hyphae, CBC, blood sugar, clinical symptoms (redness, scaling, vesicles, itching)
Adnan Mastan et al, 2021[25]	Review Paper	Not applicable (review of various Unani drugs)	Not applicable (review)	Not applicable (review)	N/A	Not applicable (literature review)
Adnan Mastan et al, 2020[26]	Comparative Study (Open labelOpen-label, randomized, standard controlled clinical trial)	Naqū' Shāhtra (systemic, once daily) and Dimād-i Dādd (local, twice daily)	Tab. fluconazole (150 mg orally weekly) and ointment clotrimazole 1% (local, twice daily)	60 cases (30 in test group, 30 in control group)	Yes	KOH examination, grading system for signs/symptoms (itching, erythema, scaling, vesicopapules, ring formation), Total Score for overall improvement, paired/unpaired 't' test for statistical analysis
Adnan Mastan et al., Rais Ur Rahman and Farah Naaz 2016[27]	Observational Study (Demographic Assessment)	Not applicable (demographic assessment)	Not applicable (no control group)	60 cases	N/A	Case Record Form (CRF) for demographic data, clinical presentation and KOH examination for diagnosis
Ahmed J et al, 2022[28]	Single-blind RCT	Ushq (Dorema ammoniacum) & Sirka (Vinegar) cream	Terbinafine 1%	30	Clinical scores, KOH mount, DLQI	Unani topical is equally effective and safe as terbinafine; significant improvement and mycological cure in both groups
Parveen N et al, 2019[29]	Case report		1			Clinical improvement in a dermatophytosis case with only topical Unani treatment
Musab Ahmad et al, 2023[30]	RCT, open-label	Compound Unani formula with topical application	Topical Terbinafine 1%	21	Clinical severity score, KOH microscopy, DLQI	Both groups showed significant clinical and mycological improvement; the Unani regimen was non-inferior to control; and safe
Saima Naseem et al, 2022[31]	RCT, open-label		Itraconazole + Topical Terbinafine	40	Clinical scores (itch/erythema/scaling), KOH, TSSS	Both Unani and allopathic arms are effective; similar improvement in signs, symptoms, and mycological cure; safe

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Aaliya Ansari et al, 2019[32]	Case series	Majoon Ushba (oral polyherbal) + Marham Raal	4		Clinical improvement, KOH test	All patients improved, negative mycology after treatment; no adverse effects; suggests antifungal activity
Sheeraz M et al, 2024[31]	Case report	Qurs-e-Asfar (oral polyherbal) + Rogan-e-Narjeel	1	case	PGA scale, KOH, photos	Symptom reduction observed PGA score dropped from 9 to 1 within 15 days No relapse reported Well tolerated
Arzeena J et al, 2019[23]	Case series	Marham Kharish Jadeed (topical Unani)	3	Case series	Clinical, KOH	All patients had complete clinical and mycological cure, with no adverse events noted
Rafiq. S. et al, 2022[33]	Review with cases	Marham-i-Qūba (topical Unani)	Several	Mixed	Literature review, case refs	Synthesis suggests topical Unani agents have clinical benefit, with most evidence from case-based reporting

Table 2: Management of Quba in Unani:⁽³⁹⁾

S. NO	LINE OF TREATMENT	ACTION	LIST OF DRUGS
1	Tanqiyahe dSawdā (Evacuation of Black Bile)	Munzijāte Sawdā	Gaozaban (<i>Borago officinalis</i>) 7g, Sapistan (<i>Cordia dichotoma</i>) 9, Unaab (<i>Zizyphus jujube</i>) 5, Asl-us-Soos (<i>Glycyrrhiza glabra</i>) 5g, Badranjboya (<i>Melissa parviflora</i>) 7g, Badiyan (<i>Foeniculum vulgare</i>) 7g, Parsiyaoshan (<i>Adiantum capillus-veneris</i>) 7g, Ustukhuddus (<i>Lavandula stoechas</i>) 7g, Shahtara (<i>Fumaria parviflora</i>) 7g(39)
		Mushilāte Sawdā	Joshande Haleela siyah (<i>Terminalia chebula</i>), Joshande Aftimoon (<i>Cascuta epithymum</i>), Ma-ul-jubn(39)
		Tabreed Badan	Loab-e-bahidana (<i>Cydonia vulgaris</i>), Loab-e-Aspaghol (<i>Plantago ovata</i>), Loab-e-resha khatmi (<i>Althaea officinalis</i>), Sheera Unnab (<i>Zizyphus jujube</i> Linn.); plenty of fluids, fruits, Hammām(39)
2	Tanqiyahe Balgham	Munzijāte Balgham	Asl-us-Soos (<i>Glycyrrhiza glabra</i>) 5g, Parsiyaoshan (<i>Adiantum capillus-veneris</i>) 7g, Anjeer zard (<i>Ficus hispida</i>) 2, Gule Surkh (<i>Rosa damascena</i>) 7g, Maweez munaqa (<i>Vitis vinifera</i>) 9gm (40)
		Mushilāte Balgham	Aftimoon (<i>Cascuta epithymum</i>) 20g, Mastagi (<i>Pistacia lentiscus</i>) 12g, Sana (<i>Cassia angustifolia</i>) 12g, Haleela siyah (<i>Terminalia chebula</i>) 40g, Mixture of Haleela kabuli 7g + Turbud (<i>Operculina turpethum</i>) 10g + Shahad(40)
		Tabreed Badan	Mubarrid (Refrigerant) medicines(40)
3	Blood Purification	Murakkab (Compound)	Majoon-e-Ushba, Neem Capsule, Arq-e-Shaetra, Sharbat-e-Unnab, Sharbat-e-Musaffi(37)
		Mufrad (Single)	Gule mundii, Gandhak, Charaeta, Shaetra, Unnab, Gilo, Neem, Sinkona, Sarphooka, Barge Neem, Barge Hina, Neelofer, etc(41).

safer alternative to conventional therapies [36-38]. Topical corticosteroids have been misused frequently for instant relief of symptoms, and they have aggravated the problem, resulting in antifungal resistance [42,43]. Standard protocol includes oral antifungals such as terbinafine and itraconazole, with topical agents like luliconazole and sertaconazole. Due to resistance to antifungal, there is an increased demand for traditional holistic approaches in systems like the Unani system of medicine [34].

Because of its spread, recurring nature, and prevalence,

dermatophytosis is poorly understudied in standardized global epidemiology and diagnostic methods [24]. Due to a lack of data, combined with antifungal resistance, there is a high demand for alternative and integrative treatment strategies. Unani medicine, with its safe medications and growing evidence-based medications, offers a healthy perspective that may adjunct modern approaches by comparing the etiopathogenesis, clinical presentation, diagnosis, and management of dermatophytosis in Unani and modern medical frameworks.

Table 3: Some Unani Drugs for Dermatophytosis [42]

	Internally Used	Externally Used	Both Internally and Externally
Sr. No.	Unani/Scientific Name	Unani/Scientific Name	Unani/Scientific Name
1.	Khūlanjān(43) (Alpinia officinarum)	Kāt Safaid(24) (Acacea catechu)	Neem(41) (Azadirachta indica)
2.	Sadabahār(44) (Catharanthus roseus)	Sūhagā(45) (Borax)	Rasaut(43) (Berberis aristata)
3.	Ushbā(46) (Smilax ornata)	Raskapūr(24) (Calomel)	Bathua(47) (Chenopodium ambrosioides)
4.	Shāhtra(48) (Fumaria officinalis)	Kāphūr(49) (Cinnamomum camphora)	Brinjal(50) (Solanum melongena)
5.	Halayla Siyah(51) (Terminalia chebula)	Narjīl(52) (Cocos nucifera)	
6.	Sana-i Makkī(53) (Cassia angustifolia)	Russa Grass(54) (Cymbopogon martini)	
7.	Mundī(49) (Sphaeranthus indicus)	Henna(46) (Lawsonia inermis)	
8.	Unnāb(51) (Zizyphus jujube)	Mardārsang(51) (Letharge)	
9.	Panwār(52) (Cassia tora)	Tea tree oil(53) (Melaleuca alternifolia)	
10.	Sarphūka(55) (Tephrosia purpurea)	Sindoor(53) (Plumbum)	
11.	Sumbulutibb(56) (Nardostachys jatamansi)	Gandhak(57) (Sulphur)	

Discussion

Qūbā ratab in which lesions are wet with oozing fluid, *Qūbā yabis* in which lesions appear white in colour, *Qūbā sai* in which lesions spread rapidly. The treatment of Unani is based on humoral balance. In this perspective, as *Qūbā* is caused by black bile initially, *muzij sauda* is given, followed by *mushil sauda*. This will remove the humours that are morbid, especially abnormal *sauda*. Following this, it is advisable to follow Dieto-therapy in which foods that make abnormal *sauda*, such as cold, moist non-vegetarian, spicy are to be avoided, and foods which boost immunity, such as high protein, easily digestible foods, are recommended. Usually in skin diseases are often managed by blood purifiers, which are given externally and internally; these The external application of *Qūbā* is made from drugs which are *mubarid* (refrigerant), anti-microbial, blood purifier with the property of wound healing, anti-septic astringent, anti-inflammatory, as seen in (Table no 3). Poly Herbal Unani Formulations

have proven to be very effective in treating *Qūbā* and its recurrence it has been proven scientifically. The Unani system has a holistic treatment approach with fewer adverse effects. Seeing its safety, tolerability cost effectiveness unani medicine promises effective treatment for dermatophytosis and its antifungal resistance. The present narrative review of dermatophytosis, referred to as *Qūbā* in Unani medicine by bringing together insights from both classical Unani sources and modern medical science. The persistent global prevalence of dermatophytosis, in humid regions such as India and across South Asia, creates an urgent need to reconsider existing prevention and management. conventional antifungal therapies (such as terbinafine and itraconazole are standard antifungal therapies and remain standard, but rising resistance and a recurrence of infection challenge the efficacy of current biomedical approaches alone. The most important dimensions of this review are it interrelation of parallel concepts of Unani medicine's pathophysiology of *Qūbā* and the pathogenesis of dermatophytosis described in modern medicine. Unani theory of disease manifestation is humoral imbalances, especially the accumulation of morbid black bile (Sawdā Fāsīd) and phlegm (Balgham Fāsīd). In modern medicine, dermatophytes thrive in humid, poorly sanitization environments and in immune compromised individuals

Modern mycology explains how the virulence of dermatophyte virulence acts at the molecular level by key transcription factors and keratinolytic enzymes, helping host invasion and immune evasion. This complex mechanism correlates with the Unani concept, which suggests that pathogenic humors create a biological factor that leads to chronicity and relapse. This can promote meaningful dialogue between medical systems, between integrative approaches to diagnosis and treatment. Several recent clinical studies, such as case series, comparative trials, and observational investigations, show promising results for Unani intervention both internally (e.g., Majoon Ushba, Qurs-e-Asfar) and externally (e.g., Roghan-e-Narjeel, Marham Qūbā, polyherbal creams with agents like Cassia tora and Brassica nigra). These interventions demonstrated clinical and mycological improvement; they show a significant safety profile, with minimal adverse events when compared to standard topical corticosteroids and oral antifungals. Randomized comparisons have shown effective Unani regimens to established modern treatments in terms of symptom resolution and negative mycological assessment, offering added value in patient acceptance, absence of adverse effects, and low cost. Reports show complete clinical cure with Unani-based topical preparations, as evidenced by case studies and small-scale trials; further validation is needed in chronic or resistant cases where modern regimens fail.

It is very critical to highlight the context of dermatophytosis as a public health challenge. Densely populated Populations,

humid environments, and poor personal hygiene are predisposing factors for fungal transmission. The Unani system emphasizes holistic management with dietary regulation, blood purification, immune enhancement, and hygienic practices for non-pharmacological, preventive strategies as adjuncts to medical intervention. The tendency of misuse of topical corticosteroids as self-medication has masked disease progression and leads to antifungal resistance, a serious consequence that strengthens the argument for evidence-based alternative solutions. Despite classical texts and studies, there are several limitations. This review also identifies a number of limitations in existing research on Unani interventions for dermatophytosis. These trials have limited sample sizes, non-random sampling, and no rigorous statistical analysis, thus restricting generalizability and validity of findings, also lack of multicenter, double-blind RCTs, and standard protocols for the preparation of Unani medicine which in turn further limits reproducibility and scientific credits. To further the discipline, future studies will need to focus on strict multicenter randomized trials, uniform protocols for drug quality and dosage, and long-term assessment of efficacy and safety. Integrative approaches with the use of molecular pharmacology, genomics, and convergent guidelines between conventional and alternative medicine are essential to generate strong comparative data, set Unani medicine's place in the treatment of resistant and recurrent dermatophytosis, and maximize patient outcomes. Future research should be directed to efficacy and safety, and exploring the mechanisms of action of polyherbal and Herbo-mineral formulation using modern pharmacological and molecular tools. Translational research can increase acceptance among practitioners and patients who are not aware of traditional therapeutics.

Conclusion

In summary, Unani and modern medicine, management of *Qūbā*/dermatophytosis, is far from mutually exclusive. Instead, these perspectives can and arguably should be synergistically harnessed. Unani medicine brings to the table centuries-old wisdom, a holistic model of disease, and a pharmacopeia that may offer uniquely effective and safe alternatives for challenging fungal infections. Modern science, conversely, supplies the tools of rigorous evaluation and mechanistic insight. By charting a path toward genuine integration, there is promise of achieving better health outcomes, particularly in populations most affected by the burden of dermatophytosis and its recalcitrant, resistant forms

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