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Unani Perspective on the Etiology and Treatment of Qooba (Dermatophytosis)

Abdul Rehman Ali[1], Munawwar Gouri[2], Mohd Anzar Husain[3], Mohd Rizwan[2], S.M. Abbas Zaidi[4], Yougshi Ilahi[1], Mehrun Nisa[1]

[1]PG Scholar, Department of Amraz-e-Jild Wa Tazeeniyat, Hakim Sayed Ziaul Hasan Government (Autonomous) Unani Medical College & Hospital Bhopal, (MP)

[2]Assistant Professor , Department of Amraz-e-Jild Wa Tazeeniyat, Hakim Sayed Ziaul Hasan Government (Autonomous) Unani Medical College & Hospital Bhopal, (MP)

[3]Professor & HOD, Department of Amraz-e-Jild Wa Tazeeniyat, Hakim Sayed Ziaul Hasan Government (Autonomous) Unani Medical College & Hospital Bhopal, (MP)

[4]Assistant Professor, Department of Moalajat, Hakim Sayed Ziaul Hasan Government (Autonomous) Unani Medical College & Hospital Bhopal, (MP)

ABSTRACT

Dermatopytosis are superficial infections of keratinized tissue caused by organisms of three genera of fungi known as the dermatophytes. This infection is prevalent worldwide, affecting 20-25% of the global population, with a higher prevalence in India.

The clinical presentation of Qooba includes lesions with erythematous borders and circular shapes, accompanied by itching and scaling. Unani physicians attribute Qooba to an imbalance of humors, while modern medicine identifies it as a fungal infection caused by dermatophytes.

This paper reviews the literature on Qooba from both Unani and modern perspectives, highlighting its classification, etiology, signs and symptoms, diagnosis, and management. The authors discuss various Unani formulations and treatments, including blood purification and local applications, which have been found to be effective in treating Qooba without adverse effects.

This paper explores that Unani treatment can be a viable alternative to modern treatment for Qooba, and further research is needed to explore the efficacy and safety of Unani formulations for the treatment of Qooba.

Keywords: Qooba, Dermatophytosis, Fungal infection, Humors, Unani medicine, Skin disease, Blood purification, Tenia.

Introduction

Dermatopytosis are superficial infections of keratinized tissue caused by organisms of three genera of fungi known as the dermatophytes. In India, it is the most prevalent skin condition. According to WHO estimates, this disease affects 20–25% of the world's population[1,2]. It belongs to the group of infections that are most common. Dermatophytosis has a recent prevalence of 36.6-78.4% in India[3]. The specific name for this infection is determined by the site of infection, namely Tinea capitis (head), Tinea barbae (beard and moustache), Tinea corporis (whole body), Tinea cruris (groin), Tinea pedis (foot), Tinea mannum (hand), Tinea unguium (nails), and Tinea faciei (face)[4,5]. Tinea corporis is said to be very common in India, according to scientific research. Common lesions with an erythematous border and a circular shape typically appear on the trunk in this medical disease. The lesion may contain scales, vesicles, or papules; the central portions of the lesion are typically visible, while the edges are typically elevated. The most prevalent symptom of yellowish rust is itching. Many individuals find these symptoms to be extremely bothersome. Qooba has detrimental effects on personality, mood, behaviour, sleep, and quality of life[6].

Various Unani scholars define Qooba in classical literatureof unani medicine is defined as a form of roughness that manifests on the skin as a hyperpigmented patch with itching the patch is often round in shape[7,8,9].

According to Allama Kabeeruddin, Sawdawiyat, Borqiyat-e Balgham, Ahtaraq-e Khoon, and Hiddat-e-Khoon are the causes of Qooba[10,11].

A Historical Viewpoint

One of the earliest and most prevalent skin conditions, qooba existed before its actual mycological nature was determined.

In their different scriptures, Ancient unani Scholar have given comprehensive information regarding Qooba. Below is a discussion of a handful of them:

People have known about qübä since the beginning of time, but the Roman encyclopaedist Aulus Cornelium Celsus is credited with describing the condition for the first time in his book De Re Medicina, which was written around 30 A.D. Jalinus, a Unani physician (Galen 129-200 A.D.), Abul Mansurul Hasan Qumri's book "Ghina Muna," Abul Hasan Ali bi Suhail Rabban Tabri in his book "Firdous ul Hikmat", Al Qanoon Fit Tib (Canon of Medicine) of Abu Ali al-Hussain Ibn Abdallah Ibn Sina (980–1037), "Akseere Azam," published between 1815 and 1902, by Mohammad Azam described Qooba[8,12,13,14].

According to Nafees Kirmani's 1906 article "Nafeesi" (Urdu translation), Qooba arrives on by the combination of Saudavi Khilte Ghaleez and Tez Raqeet Maeyat[15].

854-925/935. In his work "Al Havi Fit Tib," Abū Bakr Muḥammad ibn Zakariyyā al-Rāzī (Rhazes) described it as a roughness that itches and comes in two colours: reddish and black[16].

In his book Kitab al-Mu'alajat al Buqratiyyah, a medical encyclopaedia, Abu'l-Hasan Ahmed Ibn Muhammad alTurunji al-Tabari, writing around 970 AD, described Daad (Tinea) as a superficial skin disease that resembles urticaria and typically manifests as round, dotted lesions that spread like rings to cover a larger area. He distinguished three varieties of the disease: (i) Damvi, which is produced by the deranged blood (Fasade khoon) and the deranged fluid (Ratoobate Fasida); (ii) Ratoobi, which is caused by the derangement of ratoobat with heat and Afoonat (infection); and (iii) Saudavi, which is caused by Sauda that is formed when the akhlaat (humours) is burned[17].

According to Hakim Mohd Hussain's book "Tibe Akbar (Urdu Translation)," D-1722 Mohammad Akbar URF Mohammad Arzani bin Meer Haji Mohammad Muqeem Hussain described it as a roughness of the skin with itching in red or black, generally in circles. He also explained the disease's three stages: the first was limited to the skin, the second began to impact the subcutaneous area, and the third damaged the muscles[7].

"Qooba (Tinea) begins as a rough papule on the skin, which may be reddish or blackish," according to Mansur ibn Muhammad ibn Ahmad ibn Yusuf Ibn Ilyas's dissertation "Kefaye Mansoori," written between 1380 and 1422[18].

The Delineation of Cutaneous Diseases, an Atlas produced by Thomas Bateman in 1817, shows the distinctive features of the main genera and species that make up the late Dr. William's classification[19].

1886, The Comparative Morphology and Biology of Bacteria, Mycetazoa, and Fungi by Anton De Bary[20].

Classification of Dermatophytes

Trichophyton. There are 22 species in this genus. T. Rubrum, T. Mentagrophyte, and T. Violaceum are the three most significant. There are both animal and human species in this genus. It affects the glabrous skin, the nails, and the hair.

The 17 species in the genus Microsporum—of which M. Audouinii and M. Canis are the most significant—primarily affect hair, with glabrous skin being affected less frequently. Usually, nails are unaffected by these species.

Only one of the two known species in the genus Epidermophyton—E. floccosum—is harmful. Human skin and nails are impacted, while hair is left unaffected[24].

Table 1: Types of dermatophtes and infection site[1,25].

Genera	Site of infection		
	Skin	Hair	Nail
Trichophyton	+	+	+
Microsporum	+	+	-
Epidermophyton	+	-	+

Pathogenesis

Dermatophytes are keratinophilic fungi that reside in the stratum corneum on dead keratin. However, because their metabolic products penetrate deeper layers of the skin and cause delayed hypersensitivity, they cause inflammation in the skin[25].

Classification of Qooba according to the Unani System of Medicine

According to Zakariya Razi, Qooba falls under the category of :

• Qooba Ratab, also known as Damwi, appears as red, itchy sores that leak fluid. This kind is linked to Dam, or blood, which turns into sauda and results in Qooba.

• The appearance of Qooba Yabis (Saudawi) is pale. This kind is linked to saline phlegm, or balgham maleh, which is created by ehtiraq and then converted into sauda[26].

Qooba was divided into the following categories by Ibn-e-Sina: There is fluid leaking and itching, Damwi (Ratab). The ehtiraq (combustion) of balgham-e-maleh (saline phlegm) and the istehala (metabolism) of balgham-e-shor are the causes of saudawi (Yabis). Mutaqashshir is similar to bars-e-aswad because of its excessive dryness, which causes scaling. Without scaling, Ghair Mutaqashshir is a qooba.

Treatment for sai khabees is challenging since they spread to other areas of the skin. Waqif is a kind that is localised. Haad is a short-lived, acute disease that is simple to treat. Additionally, Radi type has a bad prognosis and is challenging to cure[14].

Qooba is categorised as Kaghzi daad in Ghina Muna literature when it extends to the muscular portion[12].

Rabban Tabari claims that Qooba has been categorised as:

Jins-e-damwi arises as a result of ratoobat-e-fasida (morbid fluid) and fasad-e-dam (blood irregularity). Jins-e-ratubi is caused by fasid ratoobat and afoona t (infection). After being burned, khilt transforms into sauda, causing jins-e-saudawi[17].

According to the passage in Kitab-al-Mukhtarat fil-tib, Qooba is categorised as dry (Khushk) daad, which is brought on by melancholy humour. Tar (wet) daad is a condition that happens when red blood is combined with melancholy humour[27].

Clinical Classification of Dermatophytosis

The clinical classification of dermatophytosis various types is based on the infection site.

Tinea manum

Found on the hand's dorsal surfaces. The lesion's asymmetrical or unilateral form is easily noticeable. Lesions are erythematosquamous, well-defined, polycyclic foci that extend to the edges and frequently have tiny pustules. T rubrum or T. mentagrophytes are nearly always the source of this. Tinea pedis is often linked to fungal infection of the palm[28].

Tinea Pedis

(also known as athlete's foot, ringworm of the foot, or mycosis of the foot) infection of the feet, primarily the soles and toes. Up to 70% of miners and athletes have it. Acrocyanosis and hyperhidrosis are risk factors for tinea pedis, and moist, heated circumstances within shoes are key contributors to the condition's formation. Squamous-hyperkeratotic and intertriginous forms are the most prevalent types[29].

Tinea Ungium

(Synonym: Onychomycosis) When dermatophytes infiltrate the nail bed, secondarily affecting the nail plate from the free border of the nail fold. All nail infections brought on by fungi, including yeasts and non-dermatophytes, are referred to as onychomycosis[30].

Tinea Barbae

The hairy area of the face and neck is infected by fungus. The species responsible is Trichophyton mentagrophytes. It appears as a purulent discharge from an isolated folliculitis, and the germs can spread through shaving. Soft furunculosis papulonodules and follicular pustules begin to form as the inflammation, which appears as redness, scaling, and pustules, develops superficially before quickly penetrating the hair follicle. Abscesses may combine to cover a lot of beard[28,30].

Tinea capitis

Another name for tinea capitis is black dot ringworm. Trichophyton and Microsporum species are responsible for this fungal infection of the hair-bearing area of the scalp, eyebrows, or eyelashes. Infants and school-age children are frequently impacted, whereas adults are rarely. Clinically, it can manifest as a yellow cup-shaped crust (scutula) that is penetrated by a hair (also called favus), a boggy mass of tissue (Kerion), a circumscribed area of alopecia with a thick crust, numerous hairs that have broken off at the level of the scalp (black dot ringworm), seborrhoeic dermatitis-like scaling without any alopecia, and patchy patches of hair loss with a few hairs[29,30].

Tinea Facie

It is a fungal conditions that affects the face other than the area around the beard and moustache. The most common cause is T. ruburum. Furthermore, T. mentagrophytes. Clinical manifestations include an erythematous, somewhat scaling, itchy lesion with fuzzy boundaries[28].

Tinea Corporis

It's the term for the body's fungal infection. Clinical manifestations include numerous big, red, scaly lesions with red elevated borders. Pustules and vesicles are the most obvious signs of inflammation at the lesion's margin. Since the lesion is clear in the middle, centrifugal propagation causes ringed lesions to appear after core clearing is finished. Lichenification and eczematization may develop into the complication of long-term cases[28,29].

Tinea Cruris

Also known as Dhobi's itch or tinea inguinalis. The inner sides of the upper highs are where this shape first appears. It then spreads to nearby areas of the vulva, perineum, scrotum, penis, and, eventually, the buttocks and trunk. Epidermophyton and Trichophyton are frequently the cause. A little circinate lesion is the first sign. It usually manifests as separate areas of scaling, vesicles, and pustules, with the inflammation more noticeable around the edges of the lesions[28,30].

Investigations and diagnosis

Examination under a microscope

Potassium hydroxide wet mount preparation: Direct microscopic visualisation of the branching hyphea in keratinised material is the most crucial test for the diagnosis of dermatophyte infection[31].

Scale sampling

With a scalpel, carefully scrape the skin with the dull edge. If there is a visible edge to the lesion, gather material from the active edge. To prevent infection and keep scrapings dry, collect them on folded paper. Dermatophytes can live for months in dry scrapings, while yeasts can live for weeks[32].

Mount of potassium hydroxide

Fungal infections are diagnosed using a 10–20% KOH solution. Fungal structures (hyphae, mycelium, and spores) become visible under a microscope when epithelial tissue is lysed by KOH solution. Keratinous material can be dissolved by heating the solution, however fungal structures can also be destroyed by too much heat. For the diagnosis of fungal infections in the skin, hair, and nails, the KOH test is helpful[31].

Three potential infection patterns are revealed by examining hair.

1. Ectothrix which is a sheath of tiny or large arthroconidia surrounding the hair shaft.

2. Endothrix which is an arthroconidia inside the hair shaft. and

3. Favic hyphae which are parallel to the hair shaft and surrounding it[32].

Fungi's culture and biological effects

Since the same oral and topical medications are effective against all dermatophyte species, it is typically not necessary to identify which species are causing the skin infection. For fungal infections of the hair and nails, a fungal culture is required[1,31].

Yeast culture medium: Hospital laboratory plates can be used to isolate yeast. AcuNickerson is a slanting commercial medium used for Candida species identification and isolation[31].

Wood's light analysis

The blue-green fluorescence of Microsporum canis and Microsporum audouinii, in particular, aids in the diagnosis of fungal infections.It also detects the coral-red glow of erythrasma, which is caused by Corynebacterium minutissimum.

A dark setting and a high-intensity gadget are necessary[31].

Biopsy:

a) Red hyphae are visible with PAS (Periodic-Acid Schiff Stain).

b) Black hyphae are visible with Methenamine Silver Stain[35].

Differential Diagnosis

1. Pityriasis Rosea

Non-irritating herald patch.

Symmetrical, bilateral, and widespread eruption 4–14 days later.

A V-shaped pattern on the upper chest and a distinctive "Christmas tree" look on the back.

2. Tinea Versicolor

Several distinct, finely scaly, brownish macules or patches in people with fair skin. patches or macules of hypopigmentation in people with dark skin. There is little to no erythema.

There is no scale collarette in any of the individual lesions. often asymptomatic.

3. Nummular Eczema

Coin-shaped, symmetrical, eczematous, scaly, well-defined, and itchy lesions. more often affects the extremities than the trunk. Serous exudate in lesions that are acute.

No clearing in the middle.

Topical steroids are quickly absorbed.

4. Plaque Psoriasis

Erythematous, round/oval, well-defined, sharply bounded, annular, itchy plaques.

Silvery-white micaceous scales that are loosely adhering.

Positive Koebner phenomena and Auspitz sign.

Geographic tongue, uveitis, arthritis, and nail pitting are related findings. favorable family background.

5. Atopic Dermatitis

Participation of the flexural muscles in older kids and teenagers. quite itchy.

Lichenification and excoriations in persistent lesions. course that relapses frequently.

6. Contact Dermatitis

Localized erythematous lesions that are clearly defined at the site of contact.

irritating sensations like burning or stinging.

In a delayed allergic reaction, pruritus.

7. Secondary Syphilis

Diffuse, pink to reddish-brown spots or macules without any symptoms. include lymphadenopathy, palms and soles, and a history of venereal exposure.

8. The Lichen Planus

The six Ps are: pruritic, polygonal, planar, purple, and papules/plaques. Wickham-striated lesions (white, lacy, reticular lines)[36].

Unani Management

1. **Excretion of Fasid Akhlat (deranged humor)**

Fasid Khilt (deranged humor) is thought to be the cause of the illness; this might be blood, balgham, or sauda. The majority of prominent Unani doctors, however, agree that it is caused by an excess of black bile (sauda), which is created from the disordered humor and must be eliminated from the body in order to maintain the equilibrium of the humor. Fasd and purgatives such as joshand-e-aftemoon and maa'al jabn can be used to aid with excretion[10,37,38].

Fasd (phlebotomy/venesection): Fasd is one of the traditional Unani medical techniques for clearing the body of excess and morbid humors and diverting them, which helps to reduce inflammatory congestion. The fasd would be administered at a given time and through designated veins in the body portion[39].

2. Blood Purification

In Qooba, various blood purifying medications are utilized to treat skin diseases, as this is the main principle in treating skin disease, which leads to the evacuation of waste and unwanted substances from the blood[38,40].

They are said to be effective and to have no negative side effects. Blood purifying properties are thought to be present in the medications listed below:

• **Murakkab medications (formulations):** Majoone Ushba, Neem Capsule, Arqe Shaetra, Sharbte Unnab, and Sharbate Musaffi, among others We have personally tested certain products in OPD and done clinical trials. All of them have produced really positive outcomes.

• **Single medications**, such as gule mundii, gandhak, charaeta, shaetra, unnab, giloneem, sinkona, sarphooka, barge neem, barge hina, neelofer, etc[41].

Local application

In addition to oral medication, Unani doctors have placed a strong focus on local remedies like ointment, zamaad, and tila. For this local application, such as roghan-e-gandum, roghan-e-alsi, roghan-e-badam talkh, roghan-e-narjil, butter, and ghee, is typically sufficient if the sickness is acute, superficial, and localized. Tila can also be made from wax combined with kateera and sibr[10,37, 41,42].

Marham Gulabi[32]

Kundur 2 parts + Saresham Mahi 4 parts Both components are mixed with sirka and applied to Qooba's lesions[43]

Apply a mixture of Mazu and Kateera (equal amounts) with sirka on the Qooba area[43].

Jalenoos: apply wet Roti mixtures with salt water on Qooba lesions[26].

Rufas: Local application of Mom + Honey + Suddab is good for Superficial Qooba lesions[26].

Gandhak, seemab, afyun, kafoor, alum, and suhaga (each three masha) are ground into a fine powder and combined with ghee to form a paste. This paste is used on Qooba for local applications[4].

Suhaga, katsafed, tukhmepanwadh, gandhak (each three masasha), raskapoor (2 surkh), and murdarsung (5 tola) should be ground into a fine powder and combined with ghee to form a paste[44].

Contemporary Management

Table 2: Dosages and duration of treatment of oral antifungals.

Type of Tinea	Antifungal	Dosage & Schedule
Tinea corporis/cruris	Griseofulvin(15-25mg/kg) Terbinafine (5 mg/Kg) Fluconazole (3-8 mg/Kg) Itraconazole (3-5/Kg)	500 mg-1gm/day for 4 weeks. 250 mg OD for 2-4 weeks. 150-300 mg/ week for 2-4 weeks. 100-200 mg/day for 2-4 weeks
Tinea pedis/manuum	Griseofulvin Terbinafine Fluconazole Itraconazole	250 mg TDS for 4-8 weeks 250 mg OD for 2-6 weeks 150 mg/week for 2-6 weeks 200 mg/day for 2-4 weeks
Tinea barbae	Griseofulvin Terbinafine Fluconazole Itraconazole	250 mg TDS for 4-8 weeks 250 mg OD for 4-6 weeks 150 mg/ week for 4-6 weeks 200 mg/day for 4-6 weeks.
Tinea faciei	Griseofulvin Terbinafine Fluconazole Itraconazole	250 mg TDS for 4-6 weeks 250 mg OD for 3-4 weeks 150 mg/week for 3-4 weeks 200 mg/day for 3-4 weeks
Tinea unguium	Griseofulvin Terbinafine Fluconazole Itraconazole	1 g/day Finger nail:4-8 Toenail: 9-12 months 250 mg/day Fingernail: 6 weeks Toenail: 12 weeks 150-300 mg once a week Fingernail: 3-6 months Toenail: 9-12 months 200 g/day for 12 weeks for toenail OR Pulse therapy 400 mg/day for 1 week/month Fingernails: monthly for 2-3 month Toenails: monthly for 3-4 months[2].

Prevention

Clothing and fomite should not be shared or come into close contact with an infected person.

Conclusion

Both Unani and Modern literature on Qooba (dermatophytosis) were extensively examined by the authors of this paper. While the etiology of Qooba differs across Unani and modern literature, the disease's presentation is the same. Modern physicians' opinions and Unani physicians' opinions of the clinical presentation of Qooba are very similar based on their clinical experiences. Several Unani formulas for the treatment of Qooba were discovered by studying the Unani literature. With no reactions, they are highly helpful in Qooba, and the most of them are still unmade or unutilized. As a result, people should be cautious of Unani preparations. It is now necessary to investigate Unani formulas, demonstrate their effectiveness, and demonstrate their profitability. Numerous topical and systemic alternatives to Unani Pathy are available for the treatment of Qooba. Allopathic treatment can be replaced with unani treatment without risk or adverse effects.

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