

THERAPEUTIC POTENTIAL OF KAMILA (MALLOTUS PHILIPPENSIS) IN SELECTED SKIN DISORDERS TINEA (QOوبا) & SCABIES(JARB): A COMPREHENSIVE REVIEW WITH MODERN EVIDENCE

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ABSTRACT

Background: “Qooba”(dermatophytes)and “Jarb”(scabies)are the most common infectious skin diseases which reduces the quality of life of an individual. This review aims to summarize the traditional and scientific evidence regarding the therapeutic potential of kamila (Mallotus philippensis) in the management of these conditions.

Materials and Methods: A comprehensive review of classical Unani literature and contemporary scientific sources. Relevant details regarding dermatophytosis(Qooba),scabies(Jarb), and the therapeutic role of Mallotus philippensis (Kamila) were collected from authoritative Unani texts, including “Khazain Ul Advia, Unani Pharmacopeia Of India, Standardisation of Single Drugs of Unani Medicine, Al-Qanun fi al-Tibb, Zakhira Khwarazam Shahi etc. Modern scientific data were obtained from peer-reviewed journals, standard textbooks, and electronic databases.

Results: The available evidence indicates that Kamila possesses antifungal, antiparasitic, antimicrobial, antipruritic, anti-inflammatory, and wound-healing properties. Its inclusion in several classical Unani formulations, such as

Roghan-e-Qooba, Roghan-e-Kamela, Marham e gulabi, Marham e kharish e jadeed and many more formulations further supports its traditional use in dermatological disorders.

Conclusion: Kamila shows considerable potential as a natural therapeutic agent for scabies and tinea; however, further well-designed clinical studies are required to establish its efficacy and safety.

Keywords: Mallotus philippensis, Kamila, Scabies, Jarb, Tinea, Qooba, Unani medicine.

INTRODUCTION:

The skin is the largest organ of the human body which acts as the primary protective barrier against physical, chemical, microbial, and environmental insults. Besides maintaining body homeostasis, it plays an essential role in immune defense. Disruption of the skin barrier by infectious agents, allergens, or environmental factors can result in a wide spectrum of dermatological disorders that significantly impair an individual's physical, psychological, and social well-being.^[1]

Skin diseases are said to be one of the most common causes of morbidity worldwide and affect people of all age groups. According to recent global estimates, skin and subcutaneous diseases account for billions of incident cases annually and remain among the leading causes of non-fatal disability. Among infectious diseases, dermatophytosis (tinea) and scabies are of particular public health importance, especially in low- and middle-income countries where overcrowding, poor hygiene, and limited access to healthcare facilitate their transmission. These conditions are characterized by persistent pruritus, recurrent infection, social stigma, and a considerable reduction in quality of life.^[2]

Although conventional antifungal and antiparasitic therapies are generally effective, challenges such as recurrent infection, emerging antimicrobial resistance, adverse drug reactions, and treatment non-compliance have increased interest in plant-based therapeutic agents with established safety and broad pharmacological activities.

The Unani system of medicine, one of the oldest traditional systems of healthcare, attributes skin diseases to disturbances in the balance of the humours (Akhlāt) and emphasizes restoration of humoral equilibrium through correction of temperament, elimination of morbid matter (Tanqiya-e-Mawad), and the use of herbal medicines possessing blood-purifying, antipruritic, antimicrobial, and anti-inflammatory properties ^[3]. Numerous medicinal plants have been recommended in classical Unani literature for the management of dermatological disorders. Among these, **Kamila (*Mallotus philippensis* Muell. Arg.)** occupies a prominent place in Unani medicine. Traditionally, it has been employed for the treatment of various skin diseases owing to its documented anthelmintic, antifungal, antimicrobial, anti-inflammatory, antioxidant, and antipruritic properties. Modern pharmacological studies have further demonstrated the presence of biologically active constituents such as rottlerin and flavonoids, which support many of its traditional therapeutic applications.

OVERVIEW OF SKIN DISEASES:

Modern Concept of Qooba (Dermatophytosis)^[1,4,5]

Dermatophytosis, commonly referred to as tinea or ringworm, is a superficial fungal infection involving keratinized tissues such as the stratum corneum of the skin, hair, and nails. It is caused by a group of keratinophilic fungi known as dermatophytes, which belong to the genera *Trichophyton*, *Microsporum*, and *Epidermophyton*.

Dermatophytosis is among the most prevalent fungal infections worldwide, affecting approximately 20–25% of the global population at any given time. The infection is more common in tropical and subtropical regions where high temperature and humidity promote fungal growth. Additional risk factors include excessive sweating, occlusive clothing, poor personal hygiene, overcrowding, diabetes mellitus, immunosuppression, prolonged corticosteroid use, and close contact with infected individuals, animals, or contaminated objects.

The disease is classified according to the anatomical site involved. Common clinical forms include tinea corporis (body), tinea capitis (scalp), tinea cruris (groin), tinea pedis (feet), tinea manuum (hands), tinea faciei (face), tinea barbae (beard region), and tinea unguium or onychomycosis (nails).

Clinically, dermatophytosis typically presents as well-defined erythematous, scaly, annular plaques with an active advancing border and central clearing. Pruritus is the predominant symptom, although its severity varies depending on the site of infection and the host's immune response. Diagnosis is based on characteristic clinical features and may be confirmed by direct microscopic examination using potassium hydroxide (KOH) preparation, fungal culture, or molecular diagnostic techniques when required.

Management includes topical antifungal agents for localized disease and systemic antifungal therapy for extensive, recurrent, scalp, or nail involvement. Preventive measures such as maintaining personal hygiene, keeping the skin dry, avoiding the sharing of personal belongings, and early treatment of infected contacts are essential to reduce recurrence and limit disease transmission

Unani Concept of Qooba:

In Unani medicine, dermatophytosis is generally correlated with **Qooba**, a skin disorder characterized by roughness of the cutaneous surface accompanied by pruritus and scaling. Classical Unani texts describe the lesions as erythematous or hyperpigmented patches that may gradually enlarge and spread to adjacent areas. In chronic cases, the lesions become dry and scaly, with exfoliation resembling fish scales.^[6]

According to **Ismail Jurjani** in *Zakhira Khwarazam Shahi*, the Persian term for Qooba is “**Payun**”^[7] while the disease is commonly known as **Daad** in the hindi.^[12] In *Taj-ul-Hikmat* Qooba is described as a contagious dermatological condition presenting with severe itching, progressive spread of lesions, and red or black discoloration of the affected skin.^[8]

Ahmad Tabri, in *Moalijat-e-Buqratiya*, described Qooba as a disorder resembling urticarial skin eruptions involving the superficial layers of the skin. The lesions are typically circular in configuration and may involve extensive areas of the body.^[9] In *Haziq* it is further noted that the disease initially presents with small papules or vesicles, which subsequently coalesce to form characteristic circular lesions.^[10] These classical descriptions closely resemble the clinical manifestations of superficial fungal infections, particularly dermatophytosis, and form the basis for the Unani understanding and management of Qooba.

Classification: Classical Unani scholars have classified **Qooba** into different types based on the predominance of humoral derangement, the nature of the lesions, and the clinical course of the disease.

According to **Ahmad Tabri**, as described in *Moalijat-e-Buqratiya*, Qooba is classified into three principal types:^[9]

1. **Qooba-e-Damvi** – associated with the predominance of **Dam (blood)**.
2. **Qooba-e-Rutubi** – characterized by excessive moisture and humid lesions.
3. **Qooba-e-Saudawi** – associated with the predominance of **Sauda (black bile)**, often presenting as dry, chronic, and hyperpigmented lesions.

In *Al-Qanun fi al-Tibb*, **Ibn Sina** provided a more detailed classification based on the clinical characteristics and progression of the disease. He described the following forms^[11]

1. **Qooba-e-Ratab (Damvi)** – the moist or humid form.
2. **Qooba-e-Yabis (Saudawi)** – the dry form associated with black bile.
3. **Qooba-e-Mutaqasshir** – characterized by prominent scaling of the lesions.
4. **Qooba-e-Ghair Mutaqasshir** – the non-scaly variant.
5. **Qooba-e-Haad** – the acute form with recent onset and active inflammation.
6. **Qooba-e-Muzmin** – the chronic form, marked by persistent lesions and prolonged disease duration.

Causes: ^{[7],[8],[10],[13]}

- Impaired Digestion (Su-e-Hazm)
- Poor Personal Hygiene
- Hepatic Dysfunction

- Predominance of Black Bile (Ghalaba-e-Sauda)
- Excessive Consumption of Sweet and Spicy Foods

B. SCABIES(JARB)

MODERN CONCEPT:^[5]

Definition: Scabies is a highly contagious parasitic skin infestation caused by the human itch mite, *Sarcoptes scabiei* var. *hominis*. Transmission occurs predominantly through prolonged direct skin-to-skin contact, although indirect spread may occur via contaminated clothing, bedding, or other fomites. The disease is more common in overcrowded environments and institutions where close contact facilitates transmission.

Etiology: Human scabies is caused by the mite *S. scabiei*, var. *hominis*.

Epidemiology: Scabies affects individuals of all age groups and both sexes. Although it can occur at any age, the condition is particularly common among children due to frequent close physical contact. The risk of infestation is increased in overcrowded settings, among populations with limited access to hygiene facilities, and in institutional environments such as hospitals, nursing homes, and residential care facilities.

Clinical Features: The incubation period is usually 2–6 weeks in individuals with a first infestation. Intense pruritus, which typically worsens during the night, is the hallmark symptom. Similar complaints among family members or close contacts strongly suggest scabies. Characteristic primary lesions include burrows, erythematous papules, and papulovesicles, while secondary lesions such as pustules, excoriations, eczematization, and nodules may develop as a result of scratching or secondary bacterial infection.

UNANI CONCEPT ^{[12] [14] [15] [16]}

In Unani medicine, Jarb is recognized as a contagious dermatological disorder characterized primarily by severe itching (hikka), papular or vesicular eruptions, and excoriations caused by persistent scratching. The disease commonly affects areas with thin and delicate skin, including the interdigital spaces, wrists, axillae, abdomen, genital region, and other skin folds. The itching is often more intense during the night, causing considerable discomfort and disturbance of sleep. Arab doctors were first to observe the scabies insect & the first book that mentions these insects is RABBAN TABRI book MOALIJAT E BUQRATIYA.

Etiology: akhlat e fasidah , unhygienic conditions, microbes etc

Types of Jarb (Scabies) ^{[12] [14]}

Jarb has been classified into two types on the basis of kaifiyat (properties)

1. Jarb-e-Ratab 2. Jarb-e-Yabis:

Jarb has been classified into 3 types on the basis of Akhlat (humour)

1. Jarb-e-Safravi 2. Jarb-e-Balghami 3. Jarb e saudawi

DRUG PROFILE

1. BOTANICAL DESCRIPTION:^{[17][21]}

a. Scientific name: *Mallotus philippinensis* Muell. Arg.

b. family - Euphorbiaceae family

c. Common names:- Arabic: Qinbeel; Persian - Kamila, kanbila

English - Indian Kamala, Rottlera, Monkey face tree; Hindi-Kamala., Kamela

Urdu- Kamila

d. Parts used – whole fruit



FIG 1: Mallotus philippensis (Kamila) plant showing leaves and mature fruits.



FIG 2: Glandular fruits and reddish-orange Kamila powder obtained from Mallotus philippensis.

UNANI DESCRIPTION OF THE DRUG^{[19] [21][23]}

It is a very common perennial shrub found in outer Himalayas. Mature fruits have glandular hairs which is collected as reddish brown powder.

a. Unani Name: “Kamela.”

b. Temperment: Hoth & dry (2)

c. Actions: Qatil-e-deedan ,Daf-e-Taffun, Muhallil-e-warm, Qatil-e-fungus^[22]

Daf-e-Hikka/Jarb

d. phytochemical constituents^{[17] [21][22][23]}

- Rottlerin
- Isorottlerin
- chalcones
- flavonoids.

- Tannins

e. **pharmacological activities**^{[24] [25] [26]}

- Antifungal
- Antibacterial
- Anti inflammatory
- Anti Oxidant
- Antiparasitic
- Wound healing

ROLE OF KAMILA IN QOOBA AND JARB :

In Qarabadeen Hamdard, it is mentioned that Roghan-e-Qooba is a classical Unani formulation recommended for the topical treatment of Qooba (ringworm). which consists of Kamila (*Mallotus philippensis*) as one of its key ingredients reflects its traditional use as an antifungal agent in Unani medicine. Similarly Roghan e kamila ia also a compound formulation which is used to Alleviate itching and to dry and heal the wounds because kamila has antimicrobial antipruritic and wound healing Properties.^[18]

In addition to these formulations, Kamila is also incorporated into several other classical Unani preparations used in the management of scabies, ringworm, and other skin disorders^{[18] [19][20]}

- Zimaad -e -jarb
- Marham- e -kharish jadeed
- Marham -e -Kamila
- Marham- e -gulabi
- Itrifal -e -qinbeel^[23]
- Sufoof -e -hikka

MODERN SCIENTIFIC EVIDENCE:According to Khan et al. (2015) extracts of *M. philippensis* have demonstrated the ability to inhibit pathogenic fungi and both Gram-positive and Gram-negative bacteria, suggesting that they may be useful natural antibacterial agents.^[24]

The use of various parts of the tree for treatment of skin disorders and infections can also be attributed to antibacterial, anti-parasitic, anti-tyrosinase and anti- melanogenic activity of its active constituents like rottlerin, mallotophilippen A and mallotophilippen B.^[25]

There is evidence available for wound healing activity of bark and fruits extracts of this plant. For instance, the ethanolic extract of bark enhanced the mobilization of mesenchymal stem cells towards the wounded areas possibly due to the effects of Cinnamtannin B-1 in a diabetic mouse model Similarly, the bark extracted in aqueous ethanol had the ability to attract mesenchymal stem cells thus effective against tissue injuries . Another study showed that the fruit glandular hair extracts stimulated collagen synthesis, anti-oxidant effects through peroxidase enzymes and inflammatory cytokines in rats Thus, it seems that it has the potential to effectively heal wounds, though specific potent compounds that have not been isolated and developed, yet.

The traditional use of *Mallotus philippensis* is supported by studies demonstrating the antiparasitic and antifungal activities of its phytoconstituents. Compounds such as kamalachalcone E, mallotoate A, mallotoate B, bergenin, 11-O-galloylbergenin, and rottlerin have shown activity against various fungi, parasites, and pathogenic microorganisms. These findings suggest that Kamela possesses broad-spectrum antimicrobial and antiparasitic properties, supporting its potential role in the management of skin infections and providing a basis for future drug development.^[25]

A phytochemical investigation of *Mallotus philippensis* led to the identification of a novel dimeric chalcone, kamalachalcone E, along with three known chalcone derivatives. Kamalachalcone E and one of the identified chalcones exhibited significant antifungal activity against human pathogenic fungi, providing scientific support for the traditional use of Kamela in the treatment of fungal skin infections.^[26]

CONCLUSION: Kamila (*Mallotus philippensis*) has long been recognized in Unani medicine for the treatment of various skin disorders, and the available scientific evidence provides support for many of its traditional applications. The phytochemical constituents of the plant exhibit antifungal, antiparasitic, anti-inflammatory, antioxidant, and wound-healing activities, indicating its potential as a promising therapeutic agent in dermatology. Although the current findings are encouraging, most of the evidence is based on experimental and preclinical studies. Well-designed clinical trials are necessary to establish its clinical effectiveness, safety profile, appropriate dosage, and long-term outcomes. Further research integrating traditional knowledge with modern scientific approaches may help define the therapeutic role of Kamela in the evidence-based management of skin diseases.

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