# Concept and Management of *Bahaq* (Pityriasis Versicolor) in Unani Medicine - A Review

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DOI: https://doi.org/10.52403/ijrr.20220752

#### **ABSTRACT**

Pityriasis versicolor also called Tinea versicolor (Bahaq) is a superficial fungal infection of the skin characterized by hypo or hyperpigmented macules or patches on upper trunk and neck. Most commonly affects adolescents and young adults. According to Unani system, it is humoral disease characterized by alteration in the quality or quantity of phlegm or black bile, resulting in hypo or hyperpigmentation. The treatment of bahaq has been extensively studied in Unani medicine by ancient scholars such as Rabban Tabarī, Zakariya Razi, Ibn Sina, Ajmal Khan and various others have described drugs single as well as compound formulations for its treatment. This review paper is intended to highlight the concept and various treatment methods of Unani in the management of Bahaq.

*Keywords:* Pityriasis versicolor, Tinea Versicolor, *Bahaq*, Unani medicine

## INTRODUCTION

Pityriasis versicolor is a common chronic superficial fungal infection of the skin caused by the hyphal form of Malassezia furfur. It is usually asymptomatic condition with hypo or hyperpigmented macules or patches and rarely, mild pruritis. Usually, patient seeks medical attention only for cosmetic reason. In *Unani system*, term bahaq or cheep is used as synonym to pityriasis. Its incidence and prevalence are

high in tropical regions and summer season due to high temperature and humidity. In conventional medicine, several antifungal drugs as topicals and oral form available, still recurrence is reported because of the colonization of fungus in the follicular structure, which is very hard to remove. <sup>2</sup>

# **Etiopathogenesis**

Malassezia was previously known as pityrosporum, has thirteen different species. Among them, eight are present on human skin. Malassezia globosa, sympodialis and furfur seem to be most common cause of pityriasis versicolor. Certain factors such as skin, corticosteroids, unhygienic conditions, malnutrition, pregnancy, excessive sweating and immune-deficiency can cause conversion of yeast into its mycelial / hyphal form and leads to the development of disease. 1,2,4-7

Malassezia is a lipophilic fungus, that means it need lipid for growth and development. Due to low activity of sebaceous gland in children, leads to low chance of development of this fungus. But after puberty, the activity of sebaceous glands increases due to the sex hormones, releases more lipids on skin surface, which become the medium for the growth of this fungus. As above mentioned, factors predisposed, the fungus converts to its

mycelial form and cause the disease. The fungus contains lipases, upon the action of these lipases on various lipids, convert them into various metabolites, one of among them is azelaic acid. This acid acts on tyrosinase (rate limiting enzyme for melanin formation) and inhibit it. So, there is a formation of hypopigmented macules and patches, whereas, hyperpigmentation is due to thicker stratum corneum, hypertrophic melanocytes and inflammatory infiltrate.<sup>1,2,4-</sup>

In *Unani system*, various factors are responsible for *Bahaq* 

Rabban Tabar (775-890 AD) in Firdous al-Hikmat, stated that the cause of bahaq is Fasād al-Dam (blood impairment) and Burūdat al-dam (coldness of blood). If the blood impairment is caused by Balgham, it produces Bahaq Abyad, in case, if it caused by Sawdā, it appears as Bahaq Aswad. Apart from this, if blood impairment is due to ghalīz Rutūbat (thick humours) and Hiddate dam (abnormal heat in the blood), Khārish (pruritus) develops, and if it is due to Burūdat wa Ghilzate dam (coldness and thickness of blood). Oūbā (dermatophytosis) develops.<sup>8</sup>

Similarly, **Zakariyyā Rāzī** (865-925 AD) in his book *Al Hawi* explained *Bahaq* as a skin disease which does not penetrate deep into the skin, and remains superficial without affecting the growth and colour of hairs and the affected place is of normal in colour with hypopigmentation due to phlegm (*Bahaq Abyad*) and hyperpigmentation due to black bile (*Bahaq Aswad*). He also stated that bahaq frequently occurs in people with obesity and prominent vessels.<sup>9</sup>

According to Avicenna (Ibn Sīnā) and Ahmad Al Hasan Al Jurjānī Bahaq occurred due to weakness in the skin's Quwwat Mughayyira. Under the influence of morbid humours, the Quwwat Mushabbiha (resemblance faculty) weakens, causing incoming nutrients to lose their tendency to convert into the same form and colour of skin, resulting in an accumulation of unaltered nutrients in the affected area,

eventually leading to the onset of disease. 10,11

## **Epidemiology**

Pityriasis versicolor occurs worldwide, but the highest incidence and prevalence is found in tropical regions and summer season due to high temperature and humidity. Most commonly affects adolescents and young adults. But can also occur in children and infants. Both males and females are equally affected. 1,2,5,6,12

#### Clinical features

The lesions are round or oval macules, patches or plaques measures few millimeters to 1-3cm in diameter. These lesions are associated with fine, branny scale only apparent upon scratching. This is called scratching sign or cup d'ongle sign or Besnier's sign or stroke of the nail sign. Commonest site is upper trunk and neck. Other areas that can be affected include antecubital fossae, sub mammary regions and groin (sometimes called as inverse tinea versicolor). Face may be involved in children. 1,2,4-6

In Unani medicine, according to *Akbar Arzani*, *Bahaq Abyad* remains superficial and does not penetrate deep into the skin. After pricking the needle at the site of *Bahaq*, blood always comes out and the growing hairs at the site of lesion never turns white even after the chronicity of disease. According to *Hakeem Ajmal Khan*, *Bahaq* appears in the form of small white yellow spots, which later coalesce to form a depigmented patch, associated with scaling and sometimes itching, mostly on face, neck, chest and arms. 4

# Investigation

Most commonly preferred investigation is 10% KOH mount, which shows a mixture of short, thick hyphae and spore spaghetti and meatball (Banana and grapes) appearance. Others are direct examination of lesions under Woods lamp which show yellow pale fluorescence. 1,2,4-7

## **Diagnosis**

It is based on the following points<sup>1,2,4-7</sup>

- Morphology of lesion
- Distribution of lesion
- KOH mount

#### **Treatment**

Topical medications are considered the first line therapy for pityriasis versicolor. Topical treatments are categorized into nonspecific antifungal agents (sulfur plus salicylic acid, selenium sulfide 2.5%, and zincpyrithione) and specific antifungal agents (Clotrimazole Ketoconazole 1%. Econazole. Isoconazole. Miconazole. Ciclopirox olamine 1% and terbinafine 1%), while in Systemic therapy, Ketoconazole and Itraconazole are very effective with Ketoconazole is usually given in the dosage of 200 mg daily for 5-25 days and itraconazole 200-400 mg daily for 3-7 days. But these topical as well as systemic drugs are associated with recurrences and some side effects such as irritation, rashes, staining, hepatotoxicity and effect androgen metabolism. 1,2,5,6,12

## Usoole 'Ilāj and 'Ilāj:

Three different therapies are used for the management of *Bahaq* i.e*'Ilāj bi'l-Tadbīr* (Regimental therapy) wa *Ilāj bi'l Ghidhā* (Dietotherapy) and *'Ilāj bi'l Dawā* (Pharmacotherapy)

# Usoole 'Ilāj and 'Ilāj of Bahaq Abyaḍ:

- *Tanqiyahe Balgham* (Evacuation of phlegm)
- Topical application of Jālī (Detergent),
  Muḥammir (Rubefacient), Muḥallil
  (Resolvent) and Musakhkhin advia
  (Calorific)
- *Ilāj bi'l Ghidhā* (Dieto-therapy)

*Tanqiyahe Balgham* is done in three steps; Use of *Munzijāte Balgham* (Phlegmatic Concoctives), *Mushilāte Balgham* (Phlegmatic Purgatives) and *Tabreed Badan* (Refrigeration of body) <sup>3,9</sup>

## Munzijāte Balgham:

Maweez munaga (Vitis vinifera Linn) 9 No., Badiyan (Foeniculum vulgare Mill) muqashhar 7gm, Asl-us-Soos (Glycyrrhiza glabra Linn) 5gm, Parsiyaoshan (Adiantum capilusveneris) 7 gm, Anjeer zard (Ficus hispida Linn) 2 No., Gule Surkh (Rosa damascene) 7gm. All drugs are boiled, filtered and mixed with 46gm Gulgand or 23 gm *Sikanjabeen*<sup>15</sup>

*Mushilāte Balgham*: Following compound formulation have been mentioned in classical books such as

- Mixture of *Haleela kabuli* (Terminalia chebula Retz) 7gm, *Turbud* (Operculina turpethum) 10gm and *Shahad* (Honey) with a dose of 10.5gm a day.<sup>3</sup>
- Mixture of *Itrifal sagheer* 7gm, *Turbud* (Operculina turpethum) 3.5gm and *Shahme Hanzal* (Citrullus colocynthis) 1.27gm with once in a week.<sup>3</sup>
- Ayaraj figra (Aloe Barbadensis Mill) 5gm, Gharigoon (Agaricus alba Linn) 4gm, Shahme Hanzal (Citrullus colocynthis) (Zingiber 2gm, Sonth officinalis) Sagmonia 2gm, (Convolvulus scommonia Linn) 1/2 gm. All drugs are mixed with  $\bar{A}be$  karafs (Apium gravelens Linn) to form *Qurs* <sup>16</sup>
- Haleela siyah (Terminalia chebula Retz) 40gm, Sana (Cassia angustifolia Vahl) 12gm, Mastagi (Pistacia lentiscus) 12gm, Aftimoon (Cascuta epithymum Linn) 20gm. Each drug is powdered and mixed with shahad (Honey), and should be taken with a dose of 8gm on empty stomach.<sup>9</sup>

Tabreed Badan is done with the help of Mubarrid (Refrigerant) drugs to neutralize the side effects of Mushilāt on intestines. Commonly used drugs are Loab-e-bahidana (Cydonia vulgaris), Loab-e-Aspaghol (Plantago ovata), Loab-e-resha khatmi (Althaea officinalis Linn), Sheera Unnab (Zizyphus jujube Linn), Sheere badiyan (Foeniculum vulgare Mill), Arq Shahtara (Fumaria parviflora).

**Topical application:** Following formulation have been recommended most frequently in classical books as topical application in *Bahaq* 

- Mixture of *Haldi* (Curcuma longa Linn) and *Sirka* (vinegar) or only *Sirka* (vinegar).<sup>3</sup>
- Mixture of *Sirka* (vinegar) and *Unsul* (Urginea Scilla) on the affected part, then exposed to sun for sometimes, eradicates *Bahaq Abyad*. 9
- Khardil (Brassica nigra), Safsiyah and Gandhak (Sulphur) are mixed with Usara unsul (Urginea Scilla) to form Shiyaf. During application, mix Shiyaf with arq payaz (Urginea Scilla) and massage the affected area in such a way, so, that it become red.<sup>9</sup>
- Applying the mixture of Nilofar (Nymphaea alba Linn) and its root on the affected part, eradicates Bahaq Abvad. 9,17
- Applying the Mixture of *Tukhme khatmi* (Althaea officinalis Linn) in *Sirka* (Vinegar) on affected part, eradicates
  Bahaq Abyad. 9
- Mixture of *Tukhme panwar* (Casia tora linn) 3gm, *Babchi* (Posoralia corylifolia Linn) 3gm, *Tukhme Turb* (Raphanus sativus Linn) 3gm are mixed with water and apply on the affected part.<sup>15</sup>
- Grind Naushadar (Ammonium Chloride) 6gm in Arq payaz (Urginea Scilla) and rub it on the affected area with a cloth.<sup>15</sup>

## 'Ilāj bi'l Ghidhā (Dietotherapy):

Patient are advised to take soft diets / easily digestable foods ( $Lat\bar{\imath}f$   $Ghidh\bar{a}$ ) and to avoid use of foods are of cold and moist in nature ( $miz\bar{a}j$ ) such as fish, fresh vegetables, fruits and fatty diet, as they may increase production of phlegm, and advice to increase intake of hot and dry foods like goat and birds (Chakor and teetar) meat and spices like Darchini (Cinnamomum zeyanicum), Zeera (Cuminum carvi Linn) and Siyah mirch (Piper nigrum).  $^{3,9-11,16-19}$ 

## Usoole 'Ilāj and 'Ilāj of Bahaq Aswad:

- *Tanqiyahe Sawdā* (Evacuation of black bile)
- Topical application of *Jālī* (Detergent) and *Qawī Muḥallil advia* (Resolvent)
- *Ilāj bi'l Ghidhā* (Dieto-therapy)

*Tanqiya Sawdā* is done in four steps. *Faṣd* (Venesection), Use of *Munzijāte Sawdā* (Melancholic Concoctives), *Mushilāte Sawdā* (Melancholic Purgatives) and *Tabreed Badan* (increasing fluids flow in the body).<sup>3,9,17</sup>

*Faṣd* is done by evacuating the morbid matter by incising *Warīd-e-Akhal* (Median Cephalic Vein) <sup>3,9,10,17</sup>

Munzijāte Sawdā are Unaab (Zizyphus jujube Linn) 5 No., Sapistan (Cordia dichotoma) 9 No., Gaozaban (Borago officinalis Linn) 7gm, Badraniboya (Melissa parviflora) 7gm, Asl-us-Soos muqashhar (Glycyrrhiza glabra Linn) 5gm, Badiyan (Foeniculum vulgare Mill) 7gm, Parsiyaoshan (Adiantum capilus-veneris) 7 gm, Utukhuddus (Lavandula stoechas Linn) 7gm, Shahtara (Fumaria parviflora) 7gm. All drugs are soaked in water overnight and in the morning filter it, mixed with Gulgand or *Qand Safaid* (Sugar). 15

*Mushilāte Sawdā*: Following formulations have been recommended to use such as

- Haleela siyah (Terminalia chebula Retz), Amla (Emblica officinalis Gaertn) and Kalonji (Nigella Sativa), all in equal quantity are powdered with 12 gm dose for morning and night.<sup>9-10</sup>
- Mix *Haleela siyah* (Terminalia chebula Retz) and *Aftimoon* (Cascuta epithymum Linn) in *Maweez* (Vitis vinifera Linn) and consume it daily in quantity *of akhrot* (Walnut)<sup>3</sup>
- (Terminalia Haleela siyah chebula Haleela kabuli (Terminalia Retz), chebula Retz), Aftimoon (Cascuta epithymum Linn), each drug is taken in equal quantity, powdered and mixed with maweez (Vitis vinifera Linn) to form Majoon.11

- Aftimoon (Cascuta epithymum Linn), Gharigoon (Agaricus alba Linn), Haleela siyah (Terminalia chebula Retz), Bisfayej (Polypodium vulgaris), Utukhuddus (Lavandula stoechas Linn), Maweez (Vitis vinifera Linn), Anjeer (Ficus hispida Linn), kharbag (Helleborus niger), Hujr-ul- Armani magsool (Boric powder), Hair-ul-Lajward (Lapis lazuli), all drugs are used in the form of decoction.<sup>11</sup>
- Joshande Aftimoon (Decoction of Cascuta epithymum Linn), Joshande Haleela siyah (Decoction of Terminalia chebula Retz) Ma-ul jubn (Whey) 3,10,13,15

Tabreed Badan will be carried out to provide fluids to the body, as Bahaq Aswad causes excess yabusat (dryness) in the body. Hence, patients are advised to take plenty of fluids including water and fresh fruits. Some Unani physicians recommended frequent Hammām (turkish bath) as a measure of tabreed besides, the use of drugs like Loabe-bahidana (Cydonia vulgaris), Loab-e-Aspaghol (Plantago ovata), Loab-e-resha khatmi (Althaea officinalis Linn), Sheera Unnab (Zizyphus jujube Linn).

**Topical application** Following single and compound formulation in the form of *tila* have been recommended to use, such as

- Applying the mixture of Kundush (Centipeda minima) and Tukhme turb (Raphanus sativus Linn) or Ma-ul Kibreet (Sulphur) on the affected part, eradicate bahaq aswad completely 9,10,13
- Mixture of *Samandar jhaag* (Cuttle fish bone), *Karafs* (Apium gravelens Linn) and *Shahad* (Honey).<sup>16</sup>
- Massage the affected part with *Inab-us-Salab* (Solanum nigrum Linn), eliminate it from the root<sup>9</sup>
- Wash the affected part with *Booraq* (Borax), then apply the mixture of *Zareeq* (Arsenic), *Natron* (Potassium carbonate), *Gandhak* (Sulphur) under sun<sup>9,13</sup>

- Mixing the Shitraj (Plumbago zeylancia Linn) 20gm, Post Bekh Kibr (Capparis spinosa) 12gm, Majeeth (Rubia cordifolia Linn) 8gm in the Sirka (Vinegar), apply it on affected part and then wash it next day<sup>9</sup>
- Phitakari (Alum) 6gm, Hartal (Arsenic disulphate) 6gm, Gandhak (Sulphur) 6gm, Kharbaq (Helleborus niger) 6gm, all drugs are powdered, mixed with Sirka (Vinegar) and apply on the affected part. 9,15
- Gandhak (Sulphur) 4gm, Kharbaq (Helleborus niger) 4gm, Shitraj (Plumbago zeylancia Linn) 4gm and Aaqarqarha (Anacyclus pyrethrum DC) 4gm, all drugs are mixed with Sirka (Vinegar) and apply on the affected part.<sup>9</sup>

# 'Ilāj bi'l Ghidhā (Dietotherapy):

Patient are advised to take easily digestable foods ( $Lat\bar{\imath}f$   $Ghidh\bar{a}$ ). They should avoid intake of such food items that lead to the increased production of black bile which is the actual culprits for the genesis of disease and they should increase the uptake of cold and moist food items.  $^{3,9-11,13,16,17}$ 

#### **CONCLUSION**

Bahaq (Pityriasis versicolor) has been extensively discussed in the Unani System of Medicine in terms of its concept, types, causes and treatments. The treatment modalities are effective with little to no adverse effects. Furthermore, the Unani treatment is cost-effective, affordable, and widely acceptable. Therefore, the efficacy and outcomes of different treatment modalities described in text should further be evaluated and validated by randomized clinical trial.

**Acknowledgement:** None

**Conflict of Interest:** None

**Source of Funding: None** 

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How to cite this article: Farzana Akhter, M. A. Quamri, Sabreena Bashir. Concept and management of Bahaq (pityriasis versicolor) in Unani medicine - a review. *International Journal of Research and Review*. 2022; 9(7): 489-494.

DOI: https://doi.org/10.52403/ijrr.20220752

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