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Unani Perspective on Dandruff: Etiology, Prevention and Management

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ABSTRACT:
Dandruff—referred to as Huzāz, Abriyā, or Bafā' in classical Unani literature—is among the most prevalent scalp conditions worldwide, affecting more than half of the global population. This review explores the underlying causes, contributing factors, and clinical presentation of dandruff from both modern biomedical and Unani theoretical perspectives. It also discusses the limitations and potential adverse effects associated with the prolonged use of conventional anti-dandruff therapies.
The primary focus of this article is to present the preventive strategies and therapeutic approaches in Unani Medicine, including important single drugs, compound formulations, and relevant Ilāj bi'l-Tadbīr (regimenal therapies) used in the management of Huzāz. The review concludes that Unani interventions offer a cost-effective, accessible, and safer alternative, with herbal measures that are generally well-tolerated and associated with minimal or no side effects.

KEYWORDS: Dandruff, Bafa,Huzaz, Ilaj bil Tadbeer, Unani Medicine

INTRODUCTION:

Seborrheic dermatitis (SD), commonly presenting as dandruff, is a frequently encountered scalp condition. In Unani literature, particularly according to Majūsī, it corresponds to Iltiḥāb-i-Jild-e-Huzāzī. Although the scalp is the most commonly affected region, other sites such as the ears, face, sternum, axillae, and pubic area may also be involved, but with comparatively lower prevalence. SD is better understood as a chronic skin disorder rather than a distinct disease entity. While dandruff is often described as either dry or greasy, its underlying nature is predominantly oily. A simple way to identify its seborrheic character is by compressing the flakes between two pieces of tissue, which typically leaves behind an oily imprint due to excess sebum[10].
It appears as red, inflamed patches covered with thin,oily scales. In individuals with darker skin tones, the affected areas may look lighter than the surrounding skin. The condition is often accompanied by dandruff,

itching, irritation, and a sensation of dryness or tightness on the scalp. The presence of loosely attached white or grey flakes is a typical feature of dandruff[11].

Dandruff develops due to a combination of three major factors: the presence of scalp fungi, the activity of the sebaceous glands, and a person's individual sensitivity to substances[12].

Epidemiology:

Among Indian adults presenting with scalp dermatoses, about 18.7% of the cases were found to be due to dandruff[7].

Across all age groups, males tend to be affected more often than females. Additionally, seborrheic dermatitis is reported in as many as 85% of individuals living with HIV or AIDS[8,9].

Etiology:

The causes can be grouped into two categories: microbial factors such as fungi and bacteria, and non-microbial factors.

Microbial causes[5,6]:

1. **Bacterial:** An imbalance between the two major bacterial groups on the scalp—Propionibacterium acnes and Staphylococcus epidermidis—is also considered a contributing factor in the development of dandruff.
2. **Fungal:** Malassezia furfur and Malassezia globosa is regarded as the primary organisms responsible for dandruff. This fungus contributes to dandruff through two major pathways:

1. Sebum breakdown mechanism:

Malassezia activates lipase enzymes on the scalp, which then break down sebum triglycerides into saturated and unsaturated fatty acids.The saturated fatty acids are utilized by the fungus for its growth and multiplication.The unsaturated fatty acids, such as oleic and arachidonic acid, irritate the scalp. Oleic acid triggers skin irritation, while arachidonic acid promotes inflammatory reactions.

As a result, irritation, inflammation, and increased fungal proliferation lead to the formation of dry flakes identified as dandruff.

2. Disruption of normal skin shedding:

Under normal conditions, enzymes help separate dead skin cells so they shed individually. Malassezia interferes with this process by inhibiting these enzymes, preventing proper separation of corneocytes.

This causes dead skin cells to clump together and fall off in flakes, producing the characteristic white scales of dandruff.

Non-Microbial Causes:

The non-microbial cause for dandruff is well established. Excessive exposure to sunlight is known to cause desquamation of the scalp[3]. Minimal irritation of scalp due to over shampooing, frequent combing, use of certain cosmetic products, dusts and dirt also, to some extent, cause dandruff. However, there is no sufficient experimental evidence to the above assumptions[1].

Non-microbial factors:-[4]

1. Impairment of the scalp's stratum corneum
2. Personal sensitivity to oleic acid
3. Dryness of the scalp

4. Excessively oily or inflamed skin
5. Build-up of dirt and debris from infrequent hair washing
6. Reactions or sensitivity to hair-care products
7. Coexisting scalp disorders such as psoriasis or eczema

The primary causes of dandruff can be outlined as follows:

a. Microbial factors:

Excessive proliferation of the yeast Malassezia furfur and Malassezia globosa is believed to play a significant role in its development.

b. Genetic tendency:

A hereditary component is suspected, as the condition often appears in multiple family members.

c. Immunodeficiency:

Individuals with weakened immunity—such as those who are HIV-positive—frequently show dandruff as an early sign. In such cases, it tends to be more severe, widespread, persistent, and difficult to manage.

Dandruff composition

Dandruff scale is a cluster of corneocytes, which have retained a large degree of cohesion with one another and detach as such from the surface of the stratum corneum. The size and abundance of scales are heterogeneous from one site to another and over time. Parakeratotic cells often make up part of dandruff. Their numbers are related to the severity of the clinical manifestations, which may also be influenced by seborrhea.[2]

Morphology: Follicular papules with greasy scales several other variants– petaloid, pityriasiform and flexural pattern.

Sites and Distribution:

Dandruff predominantly affects the scalp but may also involve other seborrheic areas of the body. Commonly involved sites include the face—particularly the nasolabial folds, eyebrows, and eyelashes—the retro-auricular region, and the trunk, especially the presternal and interscapular areas. Additional sites such as the umbilicus, natal cleft, and major flexural regions including the axillae, groin, and inframammary folds may also be affected. The condition may remain confined to one or two anatomical locations depending on the clinical pattern, or it may present in a generalized form.

Etiopathogenesis (Unani Perspective):

According to Unani concepts, when morbid matter accumulates excessively and deviates from its normal quantity or quality, it can lead to pathological changes in the scalp, sometimes progressing to ulceration or secondary infection. The morbid matter responsible may include:

1. Phlegmatic vapours arising from abnormal phlegm of sour or saline nature.
2. Impure blood mixed with Sawdā, which circulates to the scalp, disrupts the integrity of the skin, and results in the development of Huzāz.
3. Additionally, excessive dryness of the scalp may independently contribute to the condition, leading to desquamation and flake formation[13].

Differential Diagnosis (Unani Perspective):

In Unani medicine, Huzāz (Seborrheic Dermatitis) should be carefully differentiated from other dermatological disorders that resemble it in clinical appearance. Conditions such as Akla-e-Jild (Atopic Dermatitis), Sadaf (Psoriasis), and Salākh-e-Jild or Taqashshur-e-Rutoobat (Candidal Intertrigo) may present with overlapping signs, including erythema, scaling, and itching. However, these disorders differ in their underlying asbāb (etiological factors), predominance of humours, temperament (mizāj), distribution of lesions, and chronicity. Proper identification is essential for accurate diagnosis and appropriate Unani management.

Comparative Table: Differential Diagnosis of Huzāz (Seborrheic Dermatitis) in Unani Medicine

Condition (Modern Term)	Unani Terminology	Predominant Mizāj / Humor	Key Clinical Features	Distinguishing Points
Seborrheic Dermatitis	Huzāz	Haar–Ratab with dominance of Balgham or Sawdā	Greasy scales, mild erythema, itching, dandruff mainly over scalp and seborrheic areas	Fine, oily scales; involvement of scalp, face, and flexures; recurrent but non-scarring
Atopic Dermatitis	Akla-e-Jild / Su'-e-Mizāj-e-Jild	Cold–Dry or altered temperament	Severe itching, dryness, excoriations, chronic relapsing course	More intense pruritus, marked dryness, often associated with personal or family history of atopy
Psoriasis	Daus Sadaf	Dominance of Sawdā (Cold–Dry)	Thick, silvery white scales, sharply demarcated plaques	Auspitz sign, less greasy scales, commonly affects extensor surfaces
Candidal Intertrigo	Salākh-e-Jild / Taqashshur-e-Rutoobat	Excess Ratūbat (Moisture)	Maceration, erythema, erosions in skin folds	Satellite lesions, foul smell, predominantly affects intertriginous areas

Dandruff in the Unani Concept

In the Unani system of medicine, dandruff is referred to as Huzāz, Abriya, or Bafā. It is characterized by the presence of small, dry, flaky scales on the scalp that shed continuously without associated ulceration. Classical Unani scholars such as Ibn Sīnā and Jālīnūs described that this condition may involve not only the scalp but also other parts of the body, including the eyebrows, sides of the nose, retro-auricular region, sternum, groin, and axillae. These sites are rich in glandular structures; however, the scalp and eyebrows are most commonly affected[14,15,16].

According to Al-Hāwī fī'l-Ṭibb, dandruff (Huzāz) arises due to the presence of Akhlāt-i-Raddiya (morbid or vitiated humours). Several Unani physicians have attributed its pathogenesis to the accumulation of

excessive phlegm (Balgham) at the roots of the hair or to an imbalance of a specific humour, leading to abnormal scaling of the skin[16].

Unani Management:

The Unani system of medicine provides a holistic approach to the management of various diseases through its diverse therapeutic modalities. These include Ilāj-bil-Ghizā (dietotherapy), Ilāj-bil-Dawā (pharmacotherapy), Ilāj-bil-Tadbīr (regimental therapy), and Ilāj-bil-Yad (surgical intervention), which together aim to restore humoral balance, strengthen the body's innate healing capacity, and maintain overall health[17].

Usool e Ilaj (Principle of Treatment):-

- *Musaffiyat-i-Dam* (blood purifier)[18,19]
- *Ishāl* (Purgation of morbid matter)[18,19]
- Fasd (venesection)[18,19]
- Hijāma bi'l Shurt (wet cupping)[18,19]
- Zimad (ointment local application)[18,19]
- Recommendation of healthy diet for overall development and maintenance of body, skin and scalp.
- Cleanliness of head, scalp, and hair.

On the basis of above principles following treatments are recommended by Unani physicians:

Ilāj bi'l Ghidhā (Dietotherapy):

Easily digestible foods are recommended by Unani physicians. Apart from this, Unani System also emphasise on diet restriction such as sweet and sour food and meat[17,18].

***Ilāj Bi'l Tadbīr* (Regimenal Therapy) wa *Ilāj bi'l Dawā (Pharmacotherapy*:**

***Ḍimād* (Paste):**

- Powder of Arad-i-Nakhūd (gram flour), Arad-i-Bāqla (faba bean flour), and Arad-i-Hulba (fenugreek flour) should be taken in equal proportions and mixed with the mucilage of Plantago ovata to form a smooth paste. This paste should be applied locally over the scalp and washed off after 10 minutes[20].
- Another paste prepared by mixing Ushna (Usnea longissima) with water and applied topically in a similar manner has also been found to be effective in the management of dandruff[21].
- Grind Khashkash safaid (white poppy seeds) in the milk of goat and prepare a poultice(zimad) for local application[22].

***Ilāj bi'l Mufradat* (single drugs) :**

1. Sirka (Vinegar)[23]
2. Lemon juice (*Citrus aurantifolia*)[24]
3. Leaves of Heena (*Lawsonia inermis*)[25]
4. *Samagh-i-Arabi (Acacia arabica* gum*)* and Sibr *(Aloe barbadensis* pulp*)*[26,27]
5. Fruit juice and oil of Amla (Emblica officinalis)[28]

***Ilāj bi'l Murakkabat* (Compound Unani formulations)[24,28] :**

1. *Kushta Fawlad* 30mg with *Jawarish Jalinūs* 7g in addition with *Shīra Bādyān* 7 g, *Shīra Mawīz*

2. *Munaqqa* 9 Pieces, *Shīra Tukhm Kashūth* 5g should be given along with *Sharbat-i-Anar* 25ml.
3. Sayyal Fawlad 5 drops with plain water after meals twice daily
4. *Ma al-Lahm* 50ml with Sugar at bedtime

Discussion:

Dandruff, as a common scalp condition, is often regarded as a superficial problem, but its underlying pathophysiology is complex. Modern biomedical research has shown that dandruff is largely driven by the proliferation of Malassezia fungi on the scalp, which exacerbates seborrheic dermatitis. This results in a cycle of inflammation, itching, and scaling. Furthermore, the sebaceous glands play a critical role in this process, as they provide an environment conducive to fungal growth. Non-microbial causes, such as environmental factors, personal hygiene habits, and scalp sensitivity, are also contributing factors.

From a Unani perspective, dandruff (referred to as Huzāz or Bafā) is seen as a consequence of imbalances in the body's humors (akhlaṭ), particularly phlegm (balgham) or black bile (sawdā). In Unani theory, the accumulation of these morbid humors leads to pathological changes in the skin, including the formation of scales. The Unani system emphasizes a holistic approach to treatment, focusing on restoring balance to the body through diet, medicinal herbs, and regimenal therapies (Ilāj bi'l Tadbīr).

When comparing Unani and modern perspectives, the causes of dandruff align in some aspects, particularly the role of excess sebum, but differ in terms of their conceptualization of internal body imbalances. While modern medicine focuses on microbial activity and external factors, Unani medicine emphasizes the restoration of internal harmony, viewing dandruff as a manifestation of deeper bodily disharmony.

The Unani approach to treatment is also multi-faceted, with an emphasis on natural, herbal remedies and regimens such as blood purifiers, dietary changes, and topical applications. Specific herbs like Aloe vera, henna, and vinegar have been used effectively in managing dandruff, offering an accessible and cost-effective alternative to conventional treatments. The potential for adverse effects from prolonged use of pharmaceutical anti-dandruff treatments, such as corticosteroids or chemical shampoos, further supports the value of natural Unani therapies, which are generally well-tolerated and associated with fewer side effects.

However, the challenge lies in the lack of modern clinical trials to substantiate the effectiveness of many of these Unani treatments, which limits their widespread acceptance in contemporary dermatological practice. Research into these therapies could provide a bridge between traditional and modern medicine, allowing for a more integrative approach to managing dandruff.

Conclusion:

In conclusion, dandruff (Huzāz) is a multifactorial condition that can be effectively managed through both modern biomedical and Unani perspectives. While modern medicine attributes dandruff primarily to microbial activity and sebaceous gland dysfunction, Unani medicine views it as a manifestation of humoral imbalance, stressing a holistic approach to treatment. Unani therapies, particularly those involving diet, herbal remedies, and regimenal treatments, offer a promising alternative for individuals seeking natural and cost-effective management options. Despite the potential benefits, more research and clinical trials are needed to validate the efficacy and safety of Unani interventions in the management of dandruff. As the global population increasingly seeks alternative therapies, Unani medicine's emphasis on balance and

natural healing could play an important role in shaping the future of dandruff management, especially in communities where access to conventional treatments may be limited.

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