

## **Clinical Study on the Management of Huzaz/ Abria (Dandruff) with a pharmacopoeal Preparation of a Unani Medicine and its Cosmetic Evaluation**

### **Abstract**

Dandruff called Huzaz/Abria in Unani medicine is a common ailment in the world with easy options of treatment. Most of the treatment options have ignored the cosmetic aspect of hair. Unani medicine has got a vast array of drug formulation to evaluate the efficacy of Unani pharmacopoeal formulation in mild form of seborrhic dermatitis of scalp (dandruff). Its efficacy was compared with standard drug (2% ketakonazole shampoo). Patients were enrolled after ethical clearance and informed consent in the study. 30 patients were treated with Unani formulation and 20 patients with the standard drug. The assessment of various parameters like Itching, Scalp shedding, Erythema, Hair frizz, Hair combing ease, and Hair smoothness was made before and after 30 days. The assessments of the parameters were analyzed and compared using appropriate statistical tests. The study revealed that Unani formulation was equally effective as standard drug and the hair comesis was better than the standard drug as seen clinically, but was not statistically significant ( $p=0.576$ ).

**Key Words:** Dandruff; Hair comesis; Unani Formulation; Hair Frizz; Hair combing ease.

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### **Introduction**

In modern medicine, dandruff the mildest form of seborrhic dermatitis is a chronic condition of skin characterized by scaling and itching with a world-wide distribution present in 15-20% of population. It occurs in both sexes and persons of all races.<sup>1</sup> Huzaz/ Abria, also known as Bafa is a chronic condition of the scalp, characterized by Shedding of small scales.<sup>3,4,5</sup> In Unani system of medicine it is claimed that this condition develops due to Akhlat-e-Radiyah (Morbid matter). It is also said that Balgham-e-Madeh (phelgmatic matter) or Dam-e- soudavi (Black bile in blood) is responsible for it.<sup>4,5</sup> In modern medicine pityrosporum ovale, a lipophilic yeast of the Maasseria genus has been implicated in development of this condition although this P. ovale lives on the scalp of the most healthy adults without causing problem but sometimes it grows out of control feeding on sebum secreted by sebaceous glands and causing irritation that leads to increased cell turnover, which results in large number of dead skin cells. As the cells fall off from scalp, they clump together making them appear white, flay and become all too visible.<sup>6,7</sup> Though it is easily treatable, but wholesome treatment for its care and advantage of hair cosmesis is found in fewer treatment options.<sup>8,9</sup> Besides this, a cost effective and safe drug from the natural sources is needed. Unani system of medicine has got wide varied dosage formulation for topical use to cure dandruff. The need is to evaluate these preparations clinically and validate the claims of

classical texts, so the present study was taken for the clinical evaluation and management of Huzaz (dandruff) by using topical **pharmacopoeal** preparation of Unani system of medicine so that a cost effective, easily available treatment preparation without much technical sophistication may be developed for its use in dandruff.

### **Material and Methods**

A randomized, standard controlled study, approved by the NIUM ethical committee vide number IEC/IV/07/Molejaat, was carried out in patients of dandruff (Huzaz/ Abria) attending OPD/IPD of National Institute of Unani Medicine, hospital, Bangalore between March 2008 to September 2009. The study was initially single blind standard trial, but we could not mask the drugs from patients. So, an open controlled trial was done but parameter assessments were carried out by persons other than investigators.

### **Inclusion criteria**

Patients fulfilling the following criteria were included:

(1) Simple form of seborrhic dermatitis (dandruff). (2) Patients of either sex (3) patients 15 years on wards.

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### Exclusion criteria

Patients having following diseases were excluded:

(1) Psoriasis (2) Cradle cap (3) Tinea capitis (4) Contact dermatitis

Patients were selected on the basis of clinical diagnosis. Any patient, above 15 years of age, giving history of scaling and itching, was selected from Moalajat OPD/ IPD These diagnosed patients, if fulfilled all the terms of inclusion criteria, were selected for the study and allocated into Control and Test group by randomization. Written, voluntary, informed consent was sought from every patient or with their parents in case they were less than 18 years age before inclusion in the study. 50 patients were randomly allocated by using lottery method into two groups comprising 30 patients in Test (Group A) groups and 20 patients in control (Group B) respectively. The treatment period in both Test and Control groups was fixed as 30 days. Group B were treated with standard lotion of 2% ketoconazole (topically twice a week).<sup>10</sup> Group A patients were topically treated with Unani pharmacopoeal formulation consisting of powder of Aard Nakhood (*Cicer arietinum* Linn), Aard Baqla (*Vicia faba* Linn), Aard Turmas (*Lupinus albus* Linn), Aard khatmie (*Althaea officinalis* Linn), loab-e- Hulba (*Trigonella foenum-graecum*) taken in equal amount and topical classical formulation, Rogan-e-Bunafsha (oil of *Viola odorata* Linn).<sup>11,12</sup>

Patients were directed to apply Roghane bunafsha at night on scalp and wash the hair on morning with above mentioned ingredients. The test formulation was administered daily. Patients of two groups were assessed on various parameters (Itching and Scale shedding, Erythema, Hair combing ease, Hair smoothness and Hair frizz) on 0 day, 7<sup>th</sup> day, 14<sup>th</sup> day and on 30<sup>th</sup> day. As these parameters differ in severity from patient to patient, grading of these parameters was improvised for appropriate assessment and statistical analysis to evaluate the efficacy of the Test drugs. Before starting treatment, each parameter was recorded according to their grades at the maiden visit and any worsening or improvement in any of the parameters was noted down at every visit of follow up till the end of the treatment. After 30 days of the treatment, the pre and post treatment values of different parameters were subjected to comparison and statistical analysis to evaluate the efficacy of the treatment as compared with the standard drug.

### Observations and results

The maximum numbers of patients were observed in age group of 21-25 years. The highest incidence of 31 (62%) was observed in male patients while 19 (38%) in female patients in both test and control groups. The highest incidence of 30 (60%) was observed in lower middle class (I11).

**Table 1- Effect of Unani treatment on various parameters of Dandruff**

(Values are median rating with range)

Sign & symptoms	Test		Standard control	
	BT	AT	BT	AT
Itch	2 (1, 3)	0 (0, 1)**	2 (1, 3)	0 (0, 1)**
Erythema	1 (0, 2)	0 (0, 0)**	1 (0, 2)	0 (0, 0)**
Scale shedding	2 (1, 3)	0 (0, 0)**	2 (1, 3)	0 (0, 0)**
Hair frizz	1 (0, 3)	0 (0, 1)**	1 (1, 3)	0.5 (0, 1)*
Hair combing ease	2 (1, 3)	0 (0, 1)**	2 (1, 2)	0 (0, 1)*
Hair smoothness	2 (1, 2)	0 (0, 1)**	2 (1, 2)	0.5 (0, 1)*

Test used: Kruskal-Wallis test with Dunn Pair comparison test,  $p < 0.01$ , \*- $p < 0.05$  with respect to before treatment assessment, \*\*- $p < 0.01$  with respect to before treatment.

BT-assessment before treatment, AT- after Treatment

As depicted in table 1, Itch, Erythema and scale shedding associated with dandruff are highly significantly ( $p < 0.01$ ) reduced when assessment after treatment of both the groups was compared with assessment before treatment. However hair frizz, hair combing ease and hair smoothness was more significantly reduced in the test group than standard control.

When efficacy of the two drugs (test and standard control) were compared for cure, it was found that they were equally effective as there was no significant difference ( $p < 0.05$ ) in the cure rate result is shown in table 2.

**Table 2: Efficacy of Unani Treatment in Dandruff**

	Cured	not cured
Test	24	6
Control	12	8

$p = 0.576, X^2 = 2.48$

**Discussion and conclusion:**

This study evaluated the efficacy of Unani formulation for dandruff as compared to 2% ketakonazole shampoo with minimal conditioning in improving hair condition and cosmetic acceptance. This study also evaluated a frequently overlooked aspect of dandruff treatment, which is hair cosmesis. Excessive removal of sebum results in dry hair and subject to static electricity, predisposing to the frizzy/flyaway appearance of the hair. Frequent shampooing and daily wear and tear also damage the hair cuticle such that the cuticular scales no longer tightly overlap in an orderly fashion. This disruption of the cuticular scales creates hair surface irregularities, which decrease the smoothness of the hair shaft. Decreased smoothness means that less light reflection and decreased hair luster. Patients equate shiny hair with healthy hair, which is actually an assessment of the state of cuticle. Probably the most important aspect of hair cosmesis is combing ease. Increased hair friction snags the hair as the comb is drawn for grooming purposes, resulting in hair breakage. This is the most common cause of significant hair loss in normal patients and patients with dandruff. Comb ability of the hair can be increased by smoothing the cuticle and coating each individual hair shaft with an agent to decrease friction. The results showed that the Unani formulation is equally effective as the standard drug in reducing the symptoms of dandruff like itching, Erythema,

scalp shedding. But the hair cosmesis was achieved well by application of Unani treatment than standard drug, though not statistically significant. Unani formulation contains several ingredients among which *Althaea officinalis* Linn (Khatmi,) is having Demulcent and emollient property, *Cicer arietinum* Linn (Nakhud) having antifungal, *Viola odorata* Linn having anti-inflammatory activity, *Vicia faba* Linn (Baaqlaa) anti-inflammatory and antifungal activity and *Trigonella foenum-graecum* L (Hulbaa/ Methi) having antiseptic and demulcent property.<sup>13,14</sup> Thus, these ingredients have a definite efficacy in the treatment of dandruff when used in combination, since the formulation is used since centuries, so the use is validated by this study. However, it needs larger sample, more protocol duration and other specific groups to evaluate the drug for its safe clinical use at large scale.

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