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Clinical Efficacy of *Safuf-i-Baraṣ*in the Management of *Fasad Al-Lawn* (Hypopigmentation): A Case Study

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ABSTRACT:

This case study inspects the *Unani* management of *Fasad Lawn wa Bashrah* (Hypopigmentation) which can be seen in at least one out of 20 people, through a poly herbal *Unani* formulation *Safūf-i-Baṛs.*A 40 years old male patient with white patches of hypopigmentation over the arm from one year, seeking *Unani* treatment, was treated with *Safūf-i-Bars* in *RRIUM, Srinagar, J and K.* The patient was advised to take *Zulal (Concoction)* of 10gm of *Safūf-i- Bars* orally, and the *Thufl* (sediments of drug) was applied over the affected parts once a day for 30 days. He was also instructed to expose the affected area to sunlight for approximately 10 minutes daily, after applying the medication locally. The intervention aimed to strengthen the *Quwwa-e-Mughayyira* (faculty which helps in the assimilation of food) of the skin, targeted tissue nourishment and to rectify the *Fasad-i-khūn* (Chronic abnormality of blood which affects the nutrition of the skin and produces various changes in it e.g. pigmentation, discolouration, Melasma etc.). Primary and secondary outcome measures were assessed by Photographs and arbitrary scale before and after the treatment, showing significant improvement in hypo pigmented patches of skin and a colour change in patches from white to normal skin colour, indicating the effectiveness of the *Unani* system of Medicine's approach in managing *FasadAl-Lawn wa Bashrah* (Hypopigmentation).

KEYWORDS: *Babchi, Fasad Al-Lawn,* Hypopigmentation, *Safūf-i-Baras, Unani* Medicine.

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INTRODUCTION:

Hypopigmentation is a condition characterized by patches of skin that appear lighter than the surrounding areas due to reduced melanin production by the body.[1] Hypopigmented macules are highly prevalent in both children and adults, affecting at least 1 in 20 individuals. The prevalence of various

hypomelanotic conditions depends on patient demographics (age, sex, race), geography, family history, and exposure to environmental factors.[2] Pigmentation disorders of the skin can either be hypomelanotic orhypermelanotic, or may present with a pattern of mixed hypo- and hypermelanosis.[3] [4]

In the *Unani* system of medicine, *Fasad al-Lawn* refers to an alteration in the skin's original colour. While the natural colour of the skin varies across regions and climates, it is generally observed as brownish in most populations due to the presence of blood. Without this influence, the skin's original colour is white. [5][6] In *Fasad al-Lawn*, this natural colour changes, often accompanied by a loss of the skin's luster and moisture. The altered skin colour may vary depending on factors such as the accumulation of irregular matter beneath the skin, a predominance of non-essential substances in the blood, or systemic issues involving the stomach, intestines, liver, or other organs. Additional contributing factors include emotional stress, malnutrition, and abnormal exposure to extreme heat or cold. [7-9] The skin's colour typically reflects the underlying cause of the disorder. For instance, excessive sun exposure, extreme cold, or other environmental factors may cause darkening. Yellow discolouration may indicate chronic health conditions, while paleness or whitening of the skin may result from gastrointestinal disorders, improper diet, or other systemic issues.[8]

CASE REPORT:

A 40-year-old male patient presented with complaints of white patches measuring approximately 3 × 2 cm and 1 × 3 cm on the left arm, specifically on the medial side of the anterior aspect of the cubital fossa, persisting for the past year. Initially, the lesions were small and discrete but gradually increased in size. The patient reported no associated symptoms such as itching, burning, or loss of sensation in the affected area.

The patient had applied topical hydrocortisone, an allopathic medication, for a duration of six weeks. However, the treatment did not yield significant improvement in the hypopigmented patches. There was no history of prior medical or surgical conditions, autoimmune disorders, nor any family history of genetic or major illnesses. The patient's bowel and bladder habits, as well as sleep and appetite, were normal. However, mild anxiety and fear regarding the potential spread of the hypopigmented patches were noted during the history-taking process.

Local examinations:

1. **Site of the Lesion:** Hypopigmented patches over the medial side and anterior aspect of the cubital fossa of the forearm.
2. **Distribution:** Asymmetrical.
3. **Characteristics of Patches:** White in colour.
4. **Number of Patches:** Two.
5. **Size of the Patches:** 3 × 2 cm and 1 × 3 cm.
6. **Itching:** Absent.
7. **Inflammation:** Absent.
8. **Texture:** dry
9. **Margins:** Spreading.

General examination and *Mizaj* Assessment are mentioned in Table 01.

Investigations:

A series of routine examinations were

conducted before and after the treatment for safety assessment and the results are presented in Table 02.

TREATMENT PROTOCOL:

The patient was treated with Polyherbal *Unani* formulation *Safūf-i-Baras,* whichwas procured from Dispensary of RRIUM Srinagar. *Safūf-i-Baras* is a finest form of powdered drug. The ingredients of *Safūf-i-Baras* are mentioned in Table 03.

METHOD OF APPLICATION:

Ten grams of the powder were soaked in 50 ml of water overnight. The resulting infusion was decanted (*zulal)*and administered orally once in the morning. The sediment (*Thufl of Safūf-i-Baras*) in a sufficient quantity was mixed with *sirka* (vinegar) to form a paste, which was then applied to cover the hypopigmented patches on the forearm once daily for 30 days. Additionally, the patient was advised to expose the affected area to morning sunlight for 10 minutes daily, following the local application of the drug. The patient was followed up every fortnight to assess the signs and symptoms. By the local application of the sediment of *Safūf-i-Baras*, the potential side effects like itching, burning etc were not observed in patient. The Treatment protocol was based on *Taqwiyat Jild*(Strengthening the Skin)*, Islah-e Hazm*(Improvement in Digestion faculty*), Tanqiyae Sawda*(Evacuation of Abnormal Melanchole).[7][8]The comprehensive treatment protocol and timeline are provided in Tables 4.

FOLLOW UPS:

Follow up was done after every two weeks that is on 15th and 30th day.

Table-1: General Examination findings:

Vitals	**Findings**
BP	120/80 mmHg
Pulse	73/min
RR	16/min
Weight	55 Kg
Height	160 cm
BMI	21.48
Mizaj(Temperament)	*Balghami(*phlegmatic) as per assessment chart available in OPD
Nabz	*Nabz Motadilwa Qawi* on the basis of method *(Adilla-e-Nabz)* mentioned by *Unani* Physicians

Table-2: Safety Parameters Cum Investigations

Test Component	**Before Treatment**	**After Treatment**
Complete Blood Count (CBC)		
Hemoglobin (Hb)	11 g/dL	11 g/dl
Hematocrit (Hct)	35%	35%
White Blood Cell Count (WBC)	7000 cells/μL	7300 cells/μL
Platelet Count	150,000 cells/μL	150,000 cells/μL
Blood Chemistry (Basic Panel)		

Glucose	80 mg/dL (fasting)	80 mg/dL (fasting)
Calcium	8.5 mg/dL	8.5 mg/dL
Sodium	133mEq/L	135mEq/L
Potassium	3.4mEq/L	3.4mEq/L
Chloride	97mEq/L	97mEq/L
Lipid Profile		
Total Cholesterol	155 mg/dL	154 mg/dL
LDL Cholesterol	89 mg/dL	89 mg/dL
HDL Cholesterol	47 mg/dL	47 mg/dL
Triglycerides	145 mg/dL	130 mg/dL
LFT		
Sr. Bilirubin	0.80 mg/dL	0.84 mg/dl
SGOT	25 IU/L	24.7 IU/L
SGPT	32 IU/L	31.8 IU/L
ALP	125 IU/L	126.4 IU/L
RFT		
Blood Urea	33.2 mg/dl	25.2 mg/dl
Sr, Creatinine	1.18 mg/dl	1.12 mg/dl

Table-3: Composition of *Safūf-i-Baras*: [9]

Ingredients	Botanical Name	Quantity
Babchi	*Psoralea corylifolia* Linn	1 part
Chaksu	*Cassia absus* Linn	1 part
Tukhm-i-panwar	*Cassia tora* Linn	1 part
AnjeerKhushik	*Ficus carica* Linn	1 part

Table-4: Arbitrary hypopigmentation score scale

Severity	Score	Description
Normal	0	- No discolouration of the skin
		- Skin appears even in colour
Mild	1	- Small, faint pigmented areas
		- Less than 1 cm in diameter
		- Minimal contrast with surrounding skin
Moderate	2	- Patches between 1-3 cm in diameter
		- Clearly noticeable contrast with surrounding skin
		- May have slightly dry or rough texture
Severe	3	- Large patches over 5 cm or multiple patches
		- Strong contrast with surrounding skin
		- Pronounced dryness and scaling

At Baseline **On 15thDay** **On 30th Day**

Fig.01: Photographs showing the effects of *Safūf-i-Bars*on skin patches:

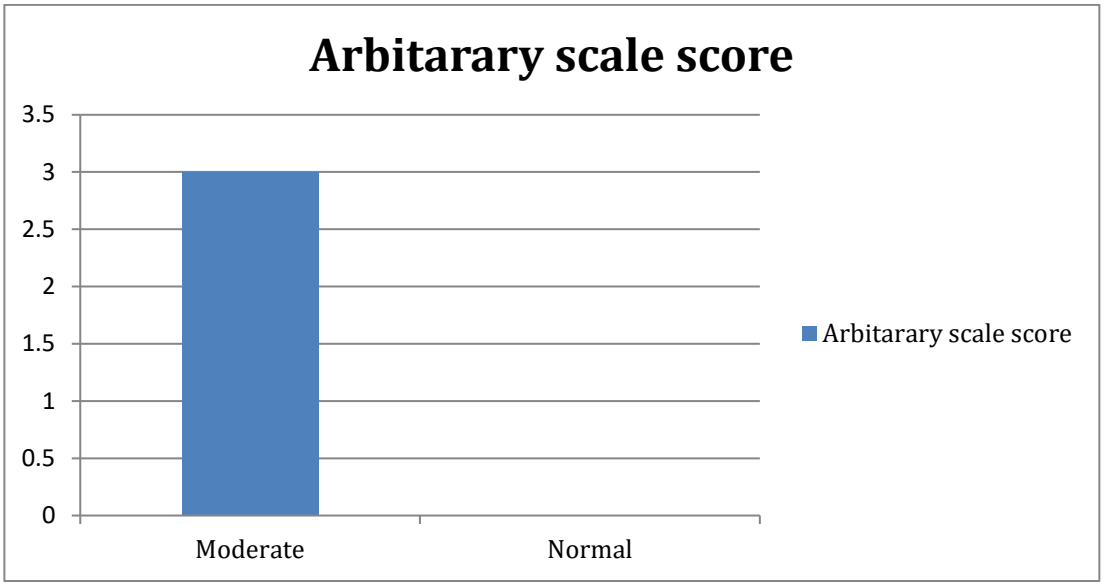

Figure-2: Improvement after intervention in the patient of *Fasad Lawn wa Bashra*: Pre and post assessment of blood profile shows that markers are under normal limit and no adverse effect reported so this formulation is safe and effective.

Efficacy assessment:

The efficacy of the drug and the patient's response to the treatment were evaluated using an arbitrary hypopigmentation score scale at baseline, on the 15th and 30th day of treatment. At baseline, the hypopigmented patches measured approximately 3 × 2 cm and 1 × 3 cm, with a slightly dry texture. The contrast between the affected area and surrounding skin was clearly noticeable, indicating moderate hypopigmentation.Upon the first follow-up i.e., on the 15th day, the hypopigmentation was categorized as mild. On the 30th day, there was no visible discoloration, and the skin appeared even in tone. The arbitrary hypopigmentation score was "Moderate" before treatment but improved to "Normal" after treatment, with no discoloration of the skin and an even skin color.

RESULT:

Regular follow-up and the therapeutic use of *Safūf-i-Baras* in this study led to repigmentation of the white patches within 30 days of treatment, resulting in 100% relief for the patient. The color of the patches transitioned from pinkish to brown, eventually matching the surrounding skin tone. After treatment with this *Unani* formulation, the size of the patches decreased, and the skin color changed from white to a brownish hue (See Fig. 01). The hypopigmentation score was reduced from 2 to 0, indicating a return to normal skin pigmentation (See Fig. 02)

DISCUSSION:

Plant based medicines offer several advantages over synthetic drugs, as they often contain multiple active ingredients and various compounds that can mitigate potential adverse effects. In this study, we used *Safūf-i- Bars* to treat hypopigmentation. The primary ingredient of *Safūf-i- Bars* is *babchi,* which possesses several biological activities, including anticancer, anticoagulant, antibacterial, antifungal, and antileucodermal properties. *Babchi* has been recognized for its antileucodermal properties since ancienttimes[10]. *Unani* scholars have extensively used it to treat hypopigmentation with considerable success. A clinical study by *Habeeba etal* 2022 shows that *Babchi* contains psoralens, which help stimulate melanin production in hypopigmentedareas on exposure to sun light[11].

The other ingredients of *Safūf-i-Bars*are*chaksu* (*Cassia absus*), *Anjeerkhushik (Ficus carica) and Tukhm-i-panwar (Cassia tora). Chaksu* is a blood purifierand*Anjeeri-khushik* produces excellent blood[12]. In this way, they aid in the treatment ofhypopigmentation. *Tukhm-i-panwar* is also a blood purifier and is important valuable plant for skin diseases. It is useful in ringworm, pityriasis, vitiligo and melasma internally as well as externally [13]. In this study, several changes are observed in the lesion, such as a shift from a whitishcolour to brown and decrease in the size of the patches. Therapeutic application of the medicine leads to the repigimentation of white patches within one month. One study by Yen GC etal (2000) demonstrated that both methanolic and aqueous extracts of *Tukhm e Panwar* seeds (Cassia tora Linn)exhibited antioxidant effects on the peroxidation of linoleic acid.[14] This confirms their antioxidant activity, which may help reduce reactive oxygen species in patients having hypopigmentation.

CONCLUSION:

In the *Unani* system of medicine, this condition is correlated with *Fasad al-Lawn*, in which the natural colour of the body becomes variable. As a result, the body's natural luster and moisture are lost, and the skin may take on different colours depending on various causes. *Unani* physicians have mentioned that there are numerous drugs used for the treatment of hypopigmentation. The current study aims to highlight the use of *Safūf-i-Baras* to combat hypopigmentation. A research study with a large sample size is needed for further validation, as well as an assessment of safety and efficacy.

Patient consent declaration:

The authors confirm that they have obtained the necessary patient consent forms. In these forms, the patient has agreed to the use of their images and other clinical information for publication in the journal. The patient is aware that their name and initials will not be disclosed, and all efforts will be

made to protect their identity. However, complete anonymity cannot be guaranteed.

Limitation of study:
This clinical case study has several limitations such as small sample size, single arm and no standard control.

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Abbreviations:

RRIUM	Regional Research Institute of *Unani* Medicine
LDL	Low Density Lipoprotein
HDL	High Density Liporotein
Kg	Kilogram
Cm	Centimeter
µL	Microlitre
mg/dL	Milligram per Decilitre
mEq/L	Milliequivalent per Litre
IU/L	International Units per Litre
CBC	Complete Blood Count
Hb	Hemoglobin
Hct	Hematocrit
SGOT	Serum glutamic oxaloacetic transaminase
SGPT	Serum glutamate pyruvate transaminase
ALP	Alkaline phosphatase

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