



## Historical Evidence of Treating *Vitiligo* in Medieval Persia

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### Abstract

Vitiligo is an acquired chronic skin disorder characterized by progressive loss of melanocytes from epidermis resulting in depigmented areas. Although various therapies for vitiligo, including topical and systemic corticosteroids, topical immunomodulators, phototherapy plus chemotherapy, tissue grafting techniques and depigmentation of normally pigmented skin are practiced, these modern methods are not always satisfactory. Vitiligo has been introduced in medieval manuscripts of Persia under two categories of *Bahaq* and *Baras*. Besides the diagnostic differences between these two disorders, a variety of formulations have been suggested by Iranian scholars for treatment or covering white patches. Extracting the ideas of our ancestors could both revive forgotten medicinal knowledge and also depict the contribution of one nation in progress of medicine and pharmacy.

**Keywords:** Vitiligo, *Baras*, *Bahaq*, Traditional Persian Medicine, *Qutb al-Din- Shirazi*

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## Introduction

Vitiligo is an acquired chronic skin disorder characterized by progressive loss of melanocytes from epidermis resulting in depigmented areas. According to recent studies, three main hypotheses have been introduced for pathogenesis of vitiligo: biochemical/cytotoxic, neural and autoimmune, but the latter is supported by stronger data [1]. Although various therapies for vitiligo including topical and systemic corticosteroids, topical immunomodulators, phototherapy plus chemotherapy, tissue grafting techniques and depigmentation of normally pigmented skin are practiced, these modern methods are not always satisfactory, hence white patches need to be covered with coloring agents [2].

The earliest written report of vitiligo in Persia dates back to ancient religious text of *Avesta*. However, Persian term of '*paēsa*' meaning white patches was often confused with disorders, such as leprosy throughout the ages. Stigmatization of such patients caused them to be sent out of town and to live in isolation with other sufferers. Some blessings such as ritual beverages like *hume* served by *Zarathustra* worshipers were cut off for them [3]. Vitiligo has also been mentioned in the tomes of major religions [4]. For instance, healing the incurable vitiligo patient (*abras*) was one of the Prophet Jesus' miracles [5]. Extracting the ideas of our ancestors could both revive forgotten medicinal knowledge and also depict the contribution of one nation in progress of medicine and pharmacy. Current work deals with historical written evidence about vitiligo in medieval Persia and

introduces a unique manuscript by *Qutb al-Din-Shirazi* allocated to *Baras*.

## Methods

Medieval textbooks of medicine and pharmacy were searched in order to find out Persian scholars' ideas about etiology, prognosis, categorization, and treatment of vitiligo. Among medicinal books, *Hidayat al mutaallimin fi-al-ttib*, *Ferdos al-hikmat*, *Mansoori fi-al-ttib*, *Canon of Medicine*, *Kholasat-al-tajarob*, *Tibb-e- Akbari*, *Exir-e Azam*, and *Gharabadin-e-Salehi* were selected to find out how *baras* and *bahaq* were treated, and also what multi-ingredient products have been suggested. Sample mono-ingredient formulations were chosen from *Tohfah-ol-momenin*. The original manuscript of *Risale fi-al-Baras* by *Qutb al-Din-Shirazi* (13th century AD) which is kept in National Library of Rasht was also studied. This treatise is specifically written about different aspects of vitiligo.

## Results

Based on Traditional Persian Medicine (TPM), dominance of wetness and/or coldness in body resulting in temperament imbalance besides the weakness of metabolic (*moqaiere*) power was thought the main reason for vitiligo. Under these conditions, the food fails to produce normal blood transforming into natural body parts. Scars, cauterization and cupping sites were reported highly vulnerable to hypopigmentation [6-8]. Involvement of organs close to gastrointestinal duct such as abdomen was interpreted as good prognosis, but farther organs like feet were reported to have poor prognosis [8]. If

the color of hypopigmented patches was close to normal skin and they were not increasing in size or number, they would be more likely to cure [9]. Generally, two types of depigmentation disorder have been mentioned in medieval Persian works, so-called *Bahaq* and *Baras*.

There have been some indicating factors which enabled physicians to easily differentiate them (Table 1).

**Table 1.** Hypopigmentation disorders and their differences according to TPM [8-10]

Indicating Factors	Bahaq	Baras
Color of lesions	Pale	Shiny and extremely white
Color of lesions after rubbing them	Red	White
Depth of lesions	Superficial	Deep (flesh, bone)
Exodus after pricking the skin	Blood	White moisture
Hair color at depigmented lesions	Black or reddish brown	White
Heredity	No familial incidence	Familial incidence
Prognosis	Good (curable using topical agent)	Poor
Surface of skin	Even (no change)	Dished and softer than normal skin

According to manuscripts of TPM, nutrition had a vital role in both causing and preventing vitiligo. It was considered that certain foods like dairy products, especially milk, and yogurt, (salted) fish, aubergine, and beef could potentially lead to vitiligo, and also they accelerate its progress. Wet weather and excessive bathing with extremely cold water were supposed as other underlying factors [8,9]. The treatment strategy included seven stages whose order should be correctly implemented: 1. Maturation of phlegm (*Enzaj*) 2. Emesis of phlegm (*Eshal*) 3. Bringing up the phlegm (*Ghai*) 4. Moderation of temperament (*Taadil*) 5. Usage of topical agents (*Tela*) having hot temperament and blood absorbent properties 6. Systemic therapy and exposure to sunlight for definite period of time 7. Coloring agents (*Sabiq*) for covering

white patches. It was suggested that the lesions be washed with vinegar or be exposed to water steam before using topical agents [11,12]. Cauterization was practiced for small lesions. Medications were either mono-ingredient formulations or multi-ingredient ones. Three sources, including herbal, mineral and animal were used for drug preparation (Table 2) [12-14].

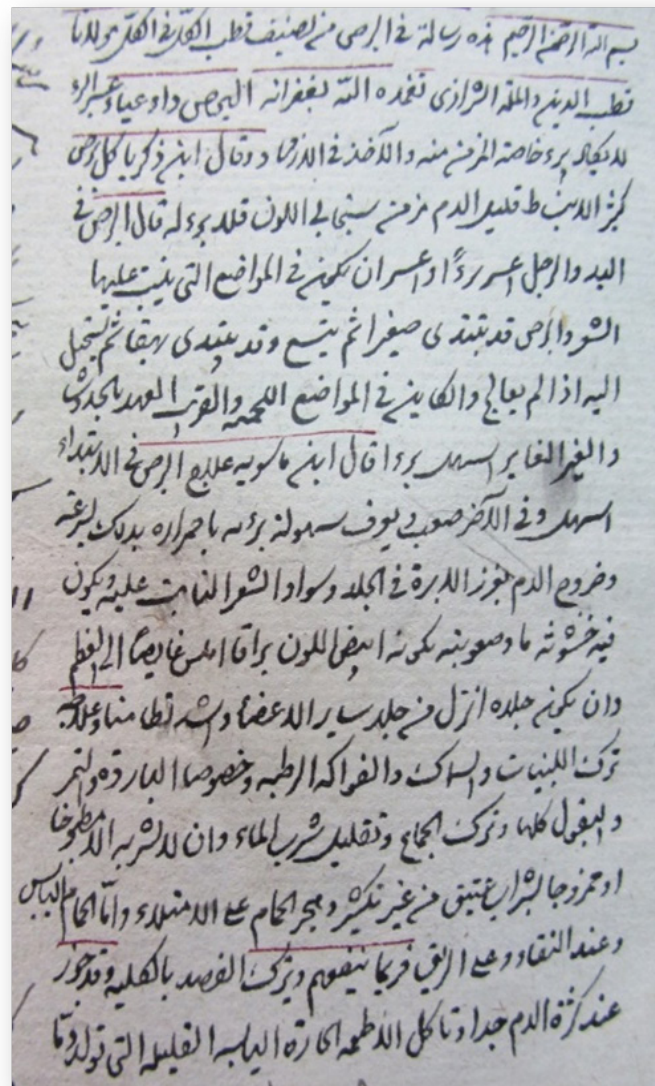
**Table 2.** Samples of herbal and mineral multi-ingredient formulations suggested for vitiligo based on TPM

ingredients of sample formulations		Indication(s)
1	malachitis vinegar	<i>Bahaq</i> <i>Baras</i>
2	<i>Andropogon schoenanthus</i> (flower) olive/sesame oil	<i>Baras</i>
3	<i>Raphanus</i> spp. (seed extract) sesame oil	
4	<i>Solanum melongena</i> (extract) <i>Lepidium latifolium</i> <i>Anemone</i> spp. <i>Rubia tinctorum</i> <i>Anacyclus pyrethrum</i> <i>Brassica nigra</i> <i>Helleborus niger</i>	a temporary coloring agent for <i>Baras</i> * ready to use after being put under sunlight for two months * its usage for a long time results in constant coloring of white patches
5	<i>Inula helenium</i> vinegar sugar honey	an oxymel for <i>Bahaq</i>
6	<i>Pistacia lentiscus</i> arsenic trisulphide sulphur asphaltum honey vinegar	a multi-ingredient mineral and herbal formulation prescribed for nail hypopigmentation
7	<i>Pinctada margaritifera</i> Vinegar	<i>Bahaq</i>

*Risale fi-al-Baras* by *Qutb al-Din- Shirazi*

In all medieval manuscripts of medicine, one chapter is allocated to vitiligo, but there is a unique treatise named *Risale fi-al-Baras* which has reflected viewpoints of *Qutb al-Din- Shirazi* (1236-1311 AD), an Iranian scholar, about diagnosis and treatment of vitiligo (Fig. 1) [15]. Writing a single manuscript relating to vitiligo

depicts the importance of this poor-prognostic disease in medieval Persia. Introducing some therapeutical methods applied by other scholars, *Qutb al-Din* has briefly stated the differentiation between *Bahaq* and *Baras*, and he suggested a profitable lifestyle and the most highly-practiced medications for vitiligo.



**Figure 1.** The opening page of *Risale fi-al-Baras* (Treatise on Vitiligo) introduces the author (*Qutb al-Din- Shirazi*) and presents a brief description and prognosis of *Baras*, advisable diet and lifestyle. Related viewpoints of other scholars have also been addressed. The original manuscript is kept in National Library of Rasht, Iran.

## Discussion

Vitiligo was introduced in medieval manuscripts of Persia under two categories of *Bahaq* and *Baras*. Besides the diagnostic differences between these two disorders, a variety of formulations have been suggested by Iranian scholars for treatment or covering white patch-

es. After being tested for safety, many formulations are suitable choices for efficacy evaluation throughout clinical trials. For instance, the effect of one covering formulation so-called *sabgh* has been compared with that of a modern marketed camouflage cosmeceutical in vit-

iligo patients. The result of this trial revealed a significant improvement in patients' quality of life [16]. Similar studies can be carried out to evaluate the efficacy of traditional formulations resulting in revival of ancient treatments.

## Conflict of Interest

None.

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