



## Etiology, Clinical Manifestation and Natural Treatments of Psoriasis from the Perspective of Persian Medicine

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### Abstract

Psoriasis is an inflammatory and autoimmune disease with unknown etiology. This is a chronic, recurrent, distressing and costly disease, which has a great impact on the quality of life of individuals. Its treatment varies from topical to systemic medication and sometimes with a great deal of side effects. Probably, changing nutritional habits, life style modification and applying preventive measures may reduce the high amount use of chemical drugs and the costs of the disease. This study investigates etiology, clinical manifestation and natural treatments of psoriasis from the perspective of Persian Medicine by which prevention and nutritional recommendations and some treatments can be introduced. Searching selected sources of Persian Medicine including the Canon of Medicine, Zakhirah -E- Kharazm Shahi, Kamel alsanaat, Sharh al-asbab va al-alamat, Tebbe-Akbari, Moalejate Aghili, Exir-e-Azam, three diseases named "Ghooba", "Barase Asvad" and "Saafe-Yabes" were found to be similar to psoriasis in their manifestations. Therefore, study of their specific treatments in the levels of lifestyle management more importantly nutrition and herbal therapy could be noteworthy for the future studies.

**Keywords:** Psoriasis; Ghooba; Barase Asvad; Saafe-Yabes

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## Introduction

Psoriasis is an inflammatory and autoimmune disease with unknown etiology, which occurs in 1 to 3% of the community. Psoriasis prevalence in adults varies from 0.5% in Asia to 8.5% in Norway. Familial history may be positive [1,2]. It seems that the prevalence of this disease is higher in the individuals who live in the regions farther from the equator. The most common manifestations are red lesions, which can be separated from the surrounding healthy skin [3]. Psoriasis as a chronic, recurrent, distressing and costly disease, has a great impact on the quality of life of individuals [4]. Patients spend years of life with this disease and its disabilities [5]. The type of treatment may vary depending on the location and severity of the disease ranging from topical with corticosteroids (in limited disease) to systemic treatment using phototherapy or methotrexate (in severe types of disease). In addition, other medications such as vitamin D analogs like calcipotriol are also used in treatment. Taking expensive and full supply medications are one of the dilemmas for the patients with this disease [6]. It seems that changing nutritional habits, life style modification and applying preventive measures will reduce the high amount use of chemical drugs and the costs of the disease.

Today, the use of complementary medicine is increasing in the world [7]. Also, about 80% of people in some Asian and African countries, as well as 70 to 80% of people in many developed countries use traditional and complementary therapies [8]. Meanwhile, a family physician is used to establish justice in access to health ser-

vices, which has a significant role in reducing healthcare costs. Traditional medicine can play this function well in the healthcare system with its important role in the lifestyle, preventing and maintaining health as well as nutritional recommendations [9].

Persian Medicine (PM) is regarded as a rich traditional reference in the medical history with emphasis on prevention. Throughout the history of medicine, Persian medical books have been the source of medical training for European universities, and therefore, can barely be ignored [10]. Several recommendations offered in PM about diseases can be a valuable experience to prevent disease, control complications, and reduce taking chemical medications with high side effects. It can be accomplished by the application of experienced recommendations on nutrition, lifestyle, and medicinal herbs [11]. It appears that many of the existing descriptions in PM have a high similarity to modern medicine where descriptions on the main complaint of the disease and definition of the diseases, engaged area, exacerbation, and relieving factors can be mentioned [12].

Thus, the aim of this article is to describe the etiology, clinical manifestation, and natural treatments of psoriasis from the perspective of PM.

## Methods

This study was performed in the following steps: At first, PM source books were selected. The selected sources of Persian Medicine for this study were those written by writers and scholars in Persian or Arabic in their time. Sources

were chosen based on the writers' reputation [13] and the teaching history of them in Europe [14]. The following books were investigated in this study: The Canon of Medicine (Avicenna, 11 M), Zakhirah -E- Kharazm Shahi (Gorgani, 12 M), Kamel alsanaat (Al-Majusi Ahwazi, 10 M), Sharh al-asbab va al-alamat (Ivaz Kirmani, 15 M), Tebbe-Akbari (Hakim Arzani, 18 M), Moalejate Aghili (Aghili, 17 M), Exir-e-Azam (Nazem Jahan, 19 M). First, the investigations began with the book "Canon of Medicine". This book is one of the most valid available medical books, has been translated into Latin in the 12th century [15], and had been taught as the reference in medical universities for 500 years until the 16th century [16].

In the second step, terms equivalent to psoriasis were found in PM source books are listed below: Ghooba is a skin disorder with red, crusty plaque which is covered by silvery scales or black flakes. Pruritus might be found in some kind of Ghooba's versions. Barase Asvad is a skin disorder with coarse and black flakes which is very similar to Ghooba derived from black bile called "Ghoobaye sodavi". Saafe-Yabes is a skin condition which causes dry, crusty plaque with scales. It can spread all over body surface. Avicenna believes that Saafe-Yabes is very similar to Ghoobaye moteghasher or "flaky Ghooba".

Therefore, based on PM experts' point of view, these three diseases were more similar to psoriasis. Whereas Avicenna, Gorgani, Al-Majusi Ahwazi, Ivaz Kirmani, Hakim Arzani, Aghili, Nazem Jahan in their famous books described that main clinical manifestations like dry, crusty

and flaky plaque with scales are common for all above mentioned disease. We searched the key selected terms using software called Noor. It is a comprehensive library searching tool. The software involves most of the Persian medical sources.

The third step of this study was comparing the definitions and recommendations of PM and conventional medicine.

## Results and Discussion

Psoriasis is a skin disorder which causes red, crusty plaque with silvery scales. In the opinion of PM "Ghooba", "Barase Asvad" and "Saafe-Yabes" are known with dry and crusty plaque spread all over body surface. In addition to this, Avicenna and other scholars have mentioned that diseases named "Barase Asvad" and "Saafe-Yabes", have the same clinical manifestations to "Ghooba" and also their treatments approaches are very similar to it.

All three above mentioned diseases were extracted in the review of Persian medicinal sources and were introduced in Tables below.

Different aspects of "Ghooba" are shown in Table 2. Different aspects of "Saafe - Yabes" and "Barase Asvad" such as clinical manifestations, exacerbating and reliving factors are reported in Table 3 and 4 respectively.

"Saafe - Yabes" is a common disease, which causes skin desquamation, crust and wound. It is accompanied by erythema and dandruff-like skin desquamation. The prevalence of "Saafe - Yabes" has been mentioned more among children in the book "Moalejate Aghili". In the book "Exir-e-Azam", it is stated that the dis-

ease is more frequent in old age, childhood, dry temperament, and people living in cities with dry weather. In the consensus among traditional Persian scholars, “Barase Asvad” is in fact, generalized “Ghooba” with skin desquamation which is diagnosed with severe dryness, skin itching and flaking like a fish scale where the main cause of the disease, is inflammatory black bile, too. The young ages have a higher prevalence rate where dryness of weather makes the symptoms of the disease worse. Based on this

study, it seems that psoriasis has plenty similarities to the keywords, especially “Ghooba” followed by two other diseases of “Saafe -Yabes” and “Barase Asvad”. Definition of the disease is the same in both fields of traditional and conventional medicine [4].

According to Persian scholars, the cause of psoriasis is divided into two types of external and internal factors. The external factors are related to the lifestyle, known as essential schemes or *Setteh e Zarurieah*. Regulating these essential

**Table 1:** The frequency of appearance of three diseases “Ghooba”, “Saafe -Yabes” and “Barase Asvad” in PM

Repetition of the keywords in the book	“Ghooba”	“Saafe-Yabes”	“Barase Asvad”
Canon of medicine	45	35	3
<i>Tebbe-Akbari</i> (Akbari’s Medicine)	13	16	3
<i>Zakhirah-E-Kharazm Shahi</i> (The Storehouse of Medicaments)	40	1	5
<i>Kamel alsanaat</i>	8	1	0
<i>Sharh al-asbab va al-alamat</i>	4	1	1
<i>Moalejate Aghili</i> (Aghili’s treatment)	3	1	1
<i>Exir-e-Azam</i> (The Grand Elixir)	102	10	7

**Table 2:** Clinical manifestations, exacerbating and reliving factors of “Ghooba” from perspective of PM sources

Name of PM text	Engaged area	Signs/ Symptoms	Exacerbating Factors	Reliving factors
Canon	Head	Itching, skin desquamation	Autumn	Humid environment of bathroom
Tebbe-Akbari	Head, limbs	Skin roughness, itching, skin desquamation in red or black color	-	Bathroom
Exir-e-Azam	Head	Skin roughness, itching, skin desquamation in red or black color, edge thickness of lesions, round plaque, pain	-	Warm environment
<i>Zakhirah-E-Kharazm Shahi</i>	Nose	Skin desquamation	Autumn	-

Moalejate Aghili	Nose	Skin roughness, skin desquamation, itching, transudate secretions	-	-
Kamel alsanaat	All skin surface	-	-	-
Sharh al-asbab va al-alamat	All skin surface	Skin desquamation in red or black color, circular lesions, exudative lesions, secondary infection, appearance of lesions in the lower part of the body	-	-

**Table 3:** Clinical manifestations, exacerbating and reliving factors of “Saafe – Yabes” from perspective of PM sources

Name of PM text	Engaged areas	Signs/ Symptoms	Exacerbating Factors	Reliving factors
Canon	All skin surface	Skin rash	Winter	Moderate humidity
Tebbe-Akbari	Head and face, periorificial area, hair, eyelid	Firm small separated papules, dandruff like skin desquamation	-	Bathroom
Exir-e-Azam	Head, breast, hands, eyelid	Tiny white skin desquamation, crust	Cold environment	Moderate heat, bathroom, anointment
Zakhirah-E-Kharazm Shahi	All skin surface, face, eyelid	Painful red papules burning sensation, dandruff, salty like skin desquamation	-	Bathroom
Moalejate Aghili	Head, face, hairs	White, dry and tiny skin desquamation	-	Hot water
Kamel alsanaat	All skin surface, head	Wound, white and dry skin desquamation	-	-
Sharh al-asbab va al-alamat	All skin surface, head	Dry skin, dandruff like skin desquamation	-	Bathroom

**Table 4:** Clinical manifestations, exacerbating and reliving factors of “Barase Asvad” from the perspective of PM sources

Name of PM text	Engaged areas	Signs/ Symptoms	Exacerbating Factors	Reliving factors
Canon	All skin surface	Skin desquamation, skin roughness, itching, dry skin	-	Copulation Much bathing Much wetting of the body

Tebbe-Akbari	All skin surface	Skin desquamation	-	Much wetting of the body with bathroom
Exir-e-Azam	All skin surface	-	-	Copulation Bathroom Wearing silk clothes
Zakhirah-E-Kharazm Shahi	All skin surface Nail	Big itchy rash, skin desquamation, nail involvement	-	Bathroom
Moalejate Aghili	All skin surface	Itching, severe roughness, skin darkening, skin desquamation	-	Bathroom
Kamel alsanaat	All skin surface Nail	-	-	-
Sharh al-asbab va al-alamat	All skin surface Nail	Skin desquamation, nail involvement, itching, skin dryness	-	-

schemes is important for maintaining health and preventing diseases. Six essential schemes include weather, nutrition and drink, repose and movement, sleep and wakefulness, retention and release, sensual and mental state [17]. Nutrition and ambient air are important external causes of psoriasis. Foods generating black bile such as eggplant, lentil, salted and spicy foods such as salted fish and milk are nutritional causes of psoriasis. Inappropriate dry and polluted air is another important external cause of psoriasis. Internal causes that lead to dystemperament and generating unhealthy humors of black bile, blood, and phlegm are related to the disorders of the three important internal organs including stomach, liver, and spleen. Temperament and humor are the fundamental concepts of PM. Each creature has its own temperament based on its humoral constitution, way of life and environmental factors. Temperament is categorized into moderate and non-moderate (eight types covering four singular and four combined types). The four humors of blood, phlegm, yellow bile and black bile have their own temperament and quality as well. Therefore, any Chang-

es in the humor's quality or quantity result in dystemperament which considers as a cause of disease in PM [18].

Itching, severe dryness, skin roughness and desquamation are common clinical symptoms in the three disease mentioned above which have been stated in all PM sources. There is a consensus on the etiology of the disease among the authors of these books. Black bile is the most important cause of this diseases [19-22]. The pathophysiology proposed for psoriasis is hyper-proliferation of keratinocytes and dysregulation of the immune system, which causes leukocyte proliferation, and skin inflammation, which is the characteristic of psoriasis [23]. From the perspective of both Persian and conventional medicine, inflammation, redness [24], and increase in skin desquamation which is considered to be due to hyperproliferation of keratinocytes and infiltration of leukocytes [25] play a major role in development of the disease. Concerning the diseases associated with psoriasis [26], traditional Persian scholars believe that internal organ malfunctions [27,28] such as gastritis, hepatobiliary disease [29] and spleen



disorders [30] are the main cause of psoriasis. In conventional medicine, recent studies have also introduced that metabolic syndrome [21], obesity [20] as well as cardiovascular and peripheral vascular diseases [22] to be associated with psoriasis. According to PM, treatment of gastrointestinal and hepatobiliary plus spleen diseases have a major role in the treatment of psoriasis where perfect treatment of psoriasis will not be possible without improving the function of these internal organs. From the perspective of conventional medicine, this disease is an internal systematic inflammatory disease [10]. Based on PM, it seems that psoriasis is a dermal manifestation of internal organ's disorders and the consequence of the lack of excretion of waste substances of the body through natural ways of excretion such as feces, urine, milk, semen, menstrual bleeding, sweat, dermal evaporation, and pus. In PM, three principles of treatment of any disease cover lifestyle modification, systematic herbal medicine, and manual intervention. In the field of lifestyle modification, observing six essential schemes of maintaining health is important [31]. In this regard, control of nutritional habits and mental states of individuals is important in preventing the recurrence of the disease. From the perspective of both medicines, nutrition has also a role in worsening or improving the symptoms of the disease [32]. Based on PM, long-term consumption of some foods such as beef, spicy foods, eggplant, and *Solanum Melongena* will increase the probability of some types of psoriasis. In PM, reducing stress is very important in preventing the flareups of the disease. This is

also a common advice for managing psoriasis in conventional medicine [11].

In the area of herbal medicine, it seems that psoriasis is a systematic disease with a strong association with metabolic syndrome [33]. Thus, both oral and topical medication should be considered for treatment. In PM, the aim of oral medicines is treating disorders of major internal organs such as gastrointestinal and hepatobiliary system plus spleen in order to generate healthy humor in the body and the aim of topical treatment of psoriasis is to avoid skin hyperkeratosis as well as strengthening the skin, Moisturizing, and reducing local inflammation.

Anise or *Pimpinella anisum* affects the gastrointestinal and hepatobiliary system and is effective in controlling blood glucose and lipid profile [34]. It is also one of the oral medicines in the treatment of psoriasis from the perspective of PM whose mechanism of action is due to the effect on internal organs. *Fumaria* (*Fumaria officinalis*) is another medicinal herb proposed in PM, which has beneficial effects on the gastrointestinal and hepatobiliary systems [35]. The direct effect of fumaric acid esters (FAE) on psoriasis has also been proven in recent conventional studies [31]. Jujube fruit (*Ziziphus jujube*) is also one of the oral treatments for psoriasis in PM as there are proven effects of this plant in conventional medicine such as hepatoprotective, plus hypo-glycemic and gastrointestinal-protective effects which indicate the regulating influence of this fruit on gastrointestinal and hepatobiliary systems [25]. Other studies have shown the regulatory effects of the juice of Jujube fruit on inflammatory cy-

tokines of interleukin (IL)-1 $\beta$ , IL-6(9). It seems that two plants of Fumaria and Jujube fruit are both effective in regulating the internal system of the body. They are also effective on the gastrointestinal and hepatobiliary systems as well as accelerating treatment of psoriasis with their anti-inflammatory effects.

Topical agents are used to moisturize and reduce local inflammation and fortify the skin. Extracts of rose (*Rosa damascena*), wheat oil (*Triticum monococcum*), *Terminalia chebula* Retz, and plum gum extract (*Prunus domestica*) have been suggested for topical treatment of psoriasis from the perspective of PM where the anti-inflammatory and protective effects of rose flower and *Terminalia chebula* have been proved in conventional medicine. The third area, which is manual intervention and leech therapy, can also be effective. Currently, there are proven effects of anti-inflammatory, anti-bacterial, and antiplatelet activity in the saliva of leeches in conventional medicine [13]. PM, also considers the leech therapy useful in the engaged areas of skin.

## Conclusion

According to the notable similarities between the descriptions of psoriasis in traditional and conventional medicine, it seems that the advices of PM can be used as the hypotheses for future researchs. Thus, it is possible to benefit from rich sources of PM in the treatment of psoriasis. The aim of future studies can be considered organizing clinical studies on psoriasis based on recommended treatments in PM.

## Study limitation

Considering the limited source selection, the view point of the authors of this manuscript and accuracy of interpretation should be confirmed by further studies.

## Conflict of Interest

None.

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## References

- [1] Habif T. Clinical Dermatology: A color guide to diagnosis and therapy. 6th ed. Saunders. USA 2015.
- [2] Rachakonda TD, Schupp CW, Armstrong AW. Psoriasis prevalence among adults in the United States. *J Am Acad Dermatol* 2014;70:512-516.
- [3] Parisi R, Symmons DP, Griffiths CE, Ashcroft DM, Joid. Global epidemiology of psoriasis: a systematic review of incidence and prevalence. *J Invest Dermatol* 2013;133:377-385.
- [4] Oliveira MF, Rocha BO, Duarte GV. Psoriasis: classical and emerging comorbidities. *An Bras Dermatol* 2015;90:9-20.
- [5] Armstrong AW, Robertson AD, Wu J, Schupp C, Leibold MGJ. Undertreatment, treatment trends, and treatment dissatisfaction among patients with psoriasis and psoriatic arthritis in the United States: findings from the National Psoriasis Foundation surveys, 2003-2011. *JAMA Dermatol* 2013;149:1180-1185.
- [6] Bailey J, Whitehair B. Topical treatments for chronic plaque psoriasis. *Am Fam Physician* 2010;81:596.
- [7] Landis ET, Davis SA, Feldman SR, Taylor S. Complementary and alternative medicine use in dermatology in the United States. *J Altern Complement Med* 2014;20:392-398.
- [8] Bodeker G, Ong CK. WHO global atlas of traditional, complementary and alternative medicine: World Health Organization. 2005.
- [9] Chen J, et al. The standardized extract of *Ziziphus jujuba* fruit (jujube) regulates pro-inflammatory cytokine expression in cultured murine macrophages: suppression of lipopolysaccharide-stimulated NF- $\kappa$ B activity. *Phytother Res* 2014;28:1527-1532.
- [10] Zargaran A, Mehdizadeh A, Zarshenas MM, Mohagheghzadeh A. *Avicenna* (980–1037 AD). *J Neurol* 2012;259:389-390.



- [11] Rezaeizadeh H, Alizadeh M, Naseri M, Shams AM. The traditional Iranian medicine point of view on health and disease. *Iran J Public Health* 2009;38:169-172.
- [12] Aciduman A, Uygur E, Belen D. Peripheral nerve disorders and treatment strategies according to Avicenna in his medical treatise, Canon of medicine. *Neurosurgery* 2009;64:172-178.
- [13] Mahboubi M. Rosa damascena as holy ancient herb with novel applications. *J Tradit Complement Med* 2016;6:10-16.
- [14] Yakaew S, Itsarasook K, Ngoenkam J, Jessadayannamaetha A, Viyoch J, Ungsurungsie M. Ethanol extract of Terminalia chebula fruit protects against UVB-induced skin damage. *Pharm Biol* 2016;54:2701-2707.
- [15] Shoja MM, Tubbs RS, Loukas M, Khalili M, Alakbarli F, Cohen-Gadol AA. Vasovagal syncope in the Canon of Avicenna: the first mention of carotid artery hypersensitivity. *Int J Cardiol* 2009;134:297-301.
- [16] Ji X, Peng Q, Yuan Y, Shen J, Xie X, Wang MJ. Isolation, structures and bioactivities of the polysaccharides from jujube fruit (*Ziziphus jujuba* Mill.): A review. *Food Chem* 2017;227:349-357.
- [17] Siahpoosh MB. Six essential principles of Iranian traditional medicine for maintaining health from the Quran's point of view. *Quran and Medicine* 2016;1:101-107.
- [18] Shirbeigi L, Zarei A, Naghizadeh A, Alizadeh Vaghasloo M. The concept of temperaments in traditional Persian medicine. *Trad Integr Med* 2017;2:143-56.
- [19] Madland TM, Apalset EM, Johannessen AE, Rossebø B, Brun JG. Prevalence, disease manifestations, and treatment of psoriatic arthritis in Western Norway. *Rheumatol* 2005;32:1918-1922.
- [20] Armstrong A, Harskamp C, Armstrong EJ. The association between psoriasis and obesity: a systematic review and meta-analysis of observational studies. *Nutr Diabetes* 2012;2:e54-e57.
- [21] Armstrong AW, Harskamp CT, Armstrong EJ. Psoriasis and metabolic syndrome: a systematic review and meta-analysis of observational studies. *J Am Acad Dermatol* 2013;68:654-662.
- [22] Armstrong AW, Harskamp CT, Armstrong EJ. The association between psoriasis and hypertension: a systematic review and meta-analysis of observational studies. *Hypertens* 2013;31:433-443.
- [23] Braun-Falco O, Burg G. Inflammatory infiltrate in psoriasis vulgaris. A cytochemical study. 1970;236:297-314.
- [24] Bos J, Hulsebosch H, Krieg S, Bakker P, Cormane RJAodr. Immunocompetent cells in psoriasis. *Dermatol Online J* 1983;275:181-189.
- [25] Nestle F, Kaplan D, Schon MJ, Barker J. Psoriasis. *N Engl J Med* 2009;361:496-509.
- [26] Farley E, Menter A. Societa italiana di dermatologia e sifilografia. Psoriasis: comorbidities and associations. *G Ital Dermatol Venereol* 2011;146:9-15.
- [27] Nazem Jahan. Exir-e Azam. Tehran 2008.
- [28] Ahwazi Arjani AA. Kamel al-Sanaah al-Tibbiyah. 1973.
- [29] Jorjani E. Zakhireye Kharazm Shahi. Iranian Medical Academy. Tehran 2001.
- [30] Ibn Sina. Al-Qanun fi'l-tibb (Canon of medicine). Beirut 2005; pp 370-85.
- [31] Harries M, Chalmers R, Griffiths CJ. Fumaric acid esters for severe psoriasis: a retrospective review of 58 cases. 2005;153:549-551.
- [32] Murzaku EC, Bronsnick T, Rao BK. Diet in dermatology: Part II. Melanoma, chronic urticaria, and psoriasis. *J Am Acad Dermatol* 2014;71:e1-e16.
- [33] Singh S, Young P, Armstrong AW, Societa italiana di dermatologia e sifilografia. Relationship between psoriasis and metabolic syndrome: a systematic review. *Edizioni Minerva Medica* 2016;151:663-677.
- [34] Abdollahi Fard MJ, Shojaii A,. Review of pharmacological properties and chemical constituents of Pimpinella anisum. *Cogent Biol* 2012;11:3-6.
- [35] Hentschel C, Dressler S, Hahn EJ. Fumaria officinalis (Fumitory)--clinical applications. *Fortschr Med* 1995;113:291-292.