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

<table>
<thead>
<tr>
<th>Name of PM text</th>
<th>Engaged area</th>
<th>Signs/ Symptoms</th>
<th>Exacerbating Factors</th>
<th>Reliving factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canon</td>
<td>Head</td>
<td>Itching, skin desquamation</td>
<td>Autumn</td>
<td>Humid environment of bathroom</td>
</tr>
<tr>
<td>Tebbe-Akbari</td>
<td>Head, limbs</td>
<td>Skin roughness, itching, skin desquamation in red or black color</td>
<td>-</td>
<td>Bathroom</td>
</tr>
<tr>
<td>Exir-e-Azam</td>
<td>Head</td>
<td>Skin roughness, itching, skin desquamation in red or black color, edge thickness of lesions, round plaque, pain</td>
<td>-</td>
<td>Warm environment</td>
</tr>
<tr>
<td>Zakhirah-E-Kharazm Shahi</td>
<td>Nose</td>
<td>Skin desquamation</td>
<td>Autumn</td>
<td>-</td>
</tr>
</tbody>
</table>
### Table 3: Clinical manifestations, exacerbating and reliving factors of “Saafe – Yabes” from perspective of PM sources

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

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

<table>
<thead>
<tr>
<th>Name of PM text</th>
<th>Engaged areas</th>
<th>Signs/ Symptoms</th>
<th>Exacerbating Factors</th>
<th>Reliving factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canon</td>
<td>All skin surface</td>
<td>Skin desquamation, skin roughness, itching, dry skin</td>
<td>-</td>
<td>Copulation, Much bathing, Much wetting of the body</td>
</tr>
</tbody>
</table>
Itching, sever 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)-1β, 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

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