

Nutritional Advice for Patients with Melasma in Iranian Traditional Medicine

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Abstract

Background: Melasma (called Kalaf in Iranian traditional medicine) is a common acquired hypermelanosis that affects sun-exposed areas of skin. Several factors including exposure to sunlight, pregnancy, and endocrine diseases increase the risk for Melasma. In traditional medicine, antecedent philosophers and physicians have tried to understand the nature and mechanisms of different systems of the human body for the diagnosis and management of Melasma; they have offered different solutions for it. This study is important since Melasma is a disease causing mental side effects in patients, due to darkness and opacity of the skin; therefore, the treatment of Melasma in terms of its psychological complications is of particular importance. In addition, texts of Iranian traditional medicine contain a wealth of nutritional advice for patients with Melasma. These texts have, until now, not yet been reviewed. The present study has considered the most important references of Iranian traditional medicine texts.

Objectives: The objective of this study was to extract and categorize the nutritional advice of Iranian traditional medicine texts for the treatment of Melasma.

Results: Dietary recommendations, not only for treatment but also for prevention of diseases and staying healthy, are very efficient.

Conclusions: Based on the traditional medicine texts, it is helpful to avoid Soda-producing food as well as to identify appropriate food in order to eliminate the accumulation of Soda or black bile from the blood. This study offers a set of analytical and clinical research on food, which in traditional medicine is called Soda-producing as well as Soda reducing.

Keywords: Melasma, Kalaf, Iranian Medicine, Traditional Medicine, Nutrition, Soda, Mizaj, Temper

1. Background

Melasma is an acquired hypermelanotic disease commonly seen in women as light brown macules in areas of skin exposed to sunlight. Most commonly affected areas include the forehead, upper lip, nose, and cheeks. The disease is often seen in women, however men are also likely to get it, too (1). Melasma usually appears among Asian women, who form almost one-third of all the women worldwide, and is more prevalent in Asian compared to Mediterranean women (2). In a study conducted by Moein et al. the prevalence of Melasma among Iranian women was reported as 15.8% (3). Melasma is usually seen in three forms: centrofacial, malar, and mandibular (4). The onset of Melasma is often between 30 and 55 years of age (5). As Melasma is seen in exposed areas of the skin, particularly the face, it affects the quality of life as well as the self-confidence of the patients (6). By studying Iranian traditional medicine books, it has been shown that "Kalaf", in which parts of the skin on the face darkens, is known as Melasma in contemporary medicine (7). Each therapeutic approach has a partial limitation of its application due to its side effects; so introducing nutritional advice of Iranian traditional medicine may be useful to decrease these side effects.

This study is important since Melasma is a disease causing mental side effects in patients, due to the darkness and opacity of the skin; therefore, the treatment of Melasma in terms of its psychological complications is of particular importance. In addition, texts of Iranian traditional medicine contain a wealth of nutritional advice for patients with Melasma. These texts have, until now, not yet been reviewed. The present study has considered the most important references of Iranian traditional medicine texts.

2. Objectives

The objective of this study was to extract and categorize the nutritional advice of Iranian traditional medicine texts for the treatment of Melasma. The available literature and traditional medicine texts, such as Zakhireye-Khwarazm-Shah, Ghanoone-ebne-sina, Kamelossenaet, and Sharhal-asbab were reviewed, and related information about Melasma (Kalaf) and nutritional advice was gathered and finally categorized.

3. Methods

The present study is a review article. In this study, some valid and available references of Iranian traditional medicine including Zakhireye- Khwarazm- Shah, Ghanoone-ebne-sina, Kamelossenaet, and Sharhal-asbab were reviewed, and related information about Melasma (Kalaf) and nutritional advice was gathered and finally categorized.

4. Results

All organs in the body are made up of a combination of four temperaments and if a temperament is not fine, healthy, and righteous, that organ will be unhealthy. The four temperaments of the body include Dam (Blood), Balgham (Phlegm), Safra (Yellow bile), Soda (Black bile). Safra is like fire with a warm and dry nature; Balgham is like water with a cold and wet nature; Dam is like blood with a warm and wet nature, and Soda has a cold and dry nature. Based on references of Iranian traditional medicine, the ratio of Soda to other temperaments is similar to the ratio of the soil and other elements. The concentration of the natural Soda is more than blood and it has a black color. The temperament of natural Soda is cold and dry. Natural Soda is produced in the liver by the Soda-producing food. The proper function of Soda occurs when a part of the Soda flows alongside with blood while another part goes to the spleen. Soda which flows in blood has some nutritional use in organs as the spleen, bones, cartilage, tendons and also strengthens the stomach entrance as well as appetizing and regulating the blood concentration.

Part of the Soda that flows towards the spleen is useless and this organ cleans up the body from this extra Soda. Without this function, this Soda harms the whole body causing various diseases. Based on Iranian traditional medicine texts, it can be pointed out that each food consists of the four elements and the cold and dry element is used to produce Soda in the liver. It should also be noted that the production of natural Soda in the liver is not limited to only Soda Khilt and any type of Khilt with blood produced in this organ. In Persian traditional medicine, health is believed to be the result of a balance in Akhlat (Akhlat is the plural of Khilt) and the imbalance in their ratios will result in diseases that are due to an increase in the quantity or the bad quality of that Khilt in the body.

The causes of Kalaf in Iranian traditional medicine have been categorized as follows:

1. The outflow of blood from subcutaneous superficial vessels after a vessel is cut due to strike or congestion.

2. Subcutaneous accumulation of black bile Khilt or black Soda or congestion of Soda steams which can cause darkness of skin.

The reasons for subcutaneous accumulation of Khilt can be internal or external. The internal reasons include pregnancy, retention of menstruation, stomach, liver and spleen diseases, and prolonged high fever.

During pregnancy, the menstrual periods cease and blood does not have the possibility to exit the body, as well as at the age of menopause, the waste accumulates causing the Soda steams that emerges Soda flow towards the face; therefore, dark spots will start to appear in different areas of the face. In addition, the internal organs including the stomach, liver, and spleen need to be healthy so that the body can deliver the food to the organs and running the waste material to the outside of the body. When any of these organs in this route does not work properly, the waste material including dark temper and black Soda are produced. This accumulates in the body and its intelligent nature will direct it towards the skin, which is a weak excretory organ, in order for the body to get rid of it. When having fever, blood undergoes combustion due to the heat and its vapors will move towards the skin which causes darkness in this area (8-10).

The external causes of subcutaneous accumulation of the Soda are:

- Incorrect nutrition and eating strong Soda-producing food (7-15).

- Severe coldness in the environment (14).

Soda is also a Khilt whose increase in the body leads to various diseases. Skin can be the first place for the accumulation of the waste as it is the biggest defense line according to traditional medical scholars. In other words, extra Soda produced in the body due to various factors is gathered under the skin causing a variety of skin disorders such as eczema, dry skin, and dark spots as well as Melasma (10).

In a severely cold environment, the natural heat of the body moves to deeper parts to escape from the cold and a type of heat, called Nari heat, appears in the external part of the body which, as a result, makes the skin dark. Additionally, freezing of the blood under the skin due to the denseness of skin darkens the skin as well (14).

As mentioned above, one main reason for Soda accumulation in the body is consumption of Soda-producing food. Individuals who are prone to accumulation of these substances should avoid such food. The 'forbidden food' for patients with Melasma in Iranian traditional medicine include: cabbage, lentils, high salt, salted and smoked fish, mushrooms, salty cheese, beef, veal, eggplant, vinegar, curd, and stale meat (7-15).

Furthermore, from the view of traditional Medicine, some food and plants, which have been shown in the Ta-

ble 1, make the body excrete extra Soda through excretory ways (15-18).

Table 1. Advised Food for Patients with Melasma (Kalaf)

Melon	Quince	Cantaloupe	Apple	Wheat
Berry	Almonds	Currant		Figs
Sweet plums	Coconut	Grape	Honey	Yolk
Parsley	Lamb meat	Tarragon and savory	Basil	Spearmint
Citron honey jam	Bread with butter	Acanthus	Celery	Torre
Figs	Raisins	Berry		Hazelnut
Grape juice	Water peas	Almond porridge	Cinnamon	Cardamom

5. Discussion

There are a number of factors in classic medicine which are triggers or worsening factors for Melasma. The most important of them include genetic, race, sunlight, endocrine diseases, pregnancy, and oral contraceptives.

Currently, Melasma therapy includes opaque anti- UVA and anti-UVB sunscreen such as zinc oxide, a variety of bleach gels, cream (3-11), Hydroquinone compounds, low-density steroids, kojic acid, Arbotin, azelaic acid, AHA, and retinoid (4-19). Administration of topical tretinoin gel is often required, too.

In recent years, the safety of some chemicals like hydroquinone, kojic acid, and azelaic acid was the biggest concern for their selection (9). Administration of ointments containing hydroquinone is often accompanied with other side effects including skin irritation, rashes, and an itchy and burning skin (8, 9, 20). Due to its side effects such as vitiligo and exogenous ochronosis, hydroquinone has been removed from European cosmetic products since January 2001 (9). Topical steroids cause depigmentation which leads to decreased production and release of melanin in melanocytes; however, they must be utilized more carefully under the control of a physician because of their side effects such as skin atrophy, acne, and telangiectasia (9). Not only does laser therapy not result in a noticeable improvement, patients often do find it costly, too (8, 9, 20).

According to investigations, Melasma and what has been called as "Kalaf" in Iranian traditional medicine have almost similar clinical symptoms (14-21). A comparing the characteristics of Melasma and Kalaf in terms of signs, symptoms, affected areas, mechanism, and the risk factors has been displayed below (Table 2).

From the view of Iranian traditional medicine, appropriate nutritional programs based on the temperament can cure this disease or ameliorate the situation. Hence, the consumption of some kinds of food such

Table 2. Comparison of the Characteristics of Melasma and Kalaf

Kalaf	Melasma	
Change of skin color to black	Brown skin hyperpigmentation	Rash
The affected area of the skin is smooth	-	Condition of skin
No	No	Itching
Cheek and where is not a covered by hair	Face in areas of the cheeks, forehead, upper lip	Affected areas
Women	Women	Prevalence
1. Pregnancy	1. Pregnancy	Causes
2. Menopause	2. Disorders of sexual hormones	
3. Diseases of the stomach, liver and spleen	3. Oral contraceptives	
4. Severe fever	4. Estrogen or progesterone	
5. Inappropriate nutrition and dense food creating Soda.	5. Endocrine disorders	
6. Coitus during menstruation or in the postpartum period	6. Inherited	
7. Extreme cold environment	7. Ultraviolet radiation	
	8. Antiepileptic drugs	

as water peas, grape juice, rice milk, almond porridge, lamb meat as well as Soda-extracting herbal medicines such as Curainia Sophia, Fumitory, Polypodium vulgare, Aftimon, and Terminalia Chebula can reduce Melisma. Avoiding Soda-producing food including eggplant, date over-consumption, cow's meat, salted food, and fast food (cured meat in traditional medicine) can help in decreasing Melasma and lightening the skin or cure the hyperpigmented areas (7-15).

5.1. Conclusions

The study of Kalaf (Melasma) in Iranian traditional medicine reveals the deep understanding and knowledge of the late Persian physicians about this disease. They have described many signs and symptoms for this disease, which have a lot of similarity to what has been described in modern medicine. Iranian traditional medicine has included nutrition advice for Melasma treatment, which seems to be the result of different evidences throughout many years of observation of the disease. Developing analytical research as well as advising Soda-reducing food or substances through clinical trials will develop further knowledge and hypotheses in this area.

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References

1. Grimes PE. Melasma. Etiologic and therapeutic considerations. *Arch Dermatol.* 1995;**131**(12):1453-7. [PubMed: 7492140].
2. Sivayathorn A. Melasma in Orientals. *Clin Drug Investigat.* 1995;**10**(Supplement 2):34-40. doi: 10.2165/00044011-199500102-00006.
3. Moin A, Jabery Z, Fallah N. Prevalence and awareness of melasma during pregnancy. *Int J Dermatol.* 2006;**45**(3):285-8. doi: 10.1111/j.1365-4632.2004.02470.x. [PubMed: 16533230].
4. Sanchez NP, Pathak MA, Sato S, Fitzpatrick TB, Sanchez JL, Mihm MJ. Melasma: a clinical, light microscopic, ultrastructural, and immunofluorescence study. *J Am Acad Dermatol.* 1981;**4**(6):698-710. [PubMed: 6787100].
5. Piamphongsant T. Treatment of melasma: a review with personal experience. *Int J Dermatol.* 1998;**37**(12):897-903. [PubMed: 9888328].
6. Balkrishnan R, McMichael AJ, Hu JY, Camacho FT, Shew KR, Boulloc A, et al. Correlates of health-related quality of life in women with severe facial blemishes. *Int J Dermatol.* 2006;**45**(2):111-5. doi: 10.1111/j.1365-4632.2004.02371.x. [PubMed: 16445498].
7. Ibsina AA. Shams eddin Ibrahim. ALqanun fi Altb. Beirut: Institute limtbvat alalm; 2005.
8. Arzani MA. Mofarreh al gholoub. Publishers Lahore. Bit; 2015. pp. 196-4.
9. Jarjani SI. Treasure of the Khwarazm Shah. Photo printing. Tehran: Iranian Cultural Foundation; 1975.
10. Cheshti MA. Exir Azam. Tehran: Islamic and Complementary Medicine Institute of Medical History; 2003. pp. 2991-86.
11. Amelie SAD, Muhammad IM. Description Amelie law. Parliament manuscript. No. 6060; 2010.
12. Norbakhsh SBADIS, Qasim ISMH. Kholaseh al tajarob. 9th century. Tehran: Institute for Medical History Studies, Islamic and Complementary Medicine Iran University of Medical Sciences; 2002. pp. 12-6.
13. Gilani A. Gilani described the law. Manuscripts Parliament. No. 6062. ; 2010.
14. Shirbeygi L, Minaei B, Saghebi R, Nazem A, Shah karami A. Kalaf investigate the causes and symptoms of skin disease on the basis of Iranian traditional medicine and comparing it with Melasma disease. *J Islamic Iran trad Med.* 2011;**3**(4):394-89.
15. Ibn Sina HIA. Qanun fi al-Teb. 4th and 5th Century. Research: Shams al-Din, Ibrahim. Beirut: Institute Al elmi Al matboat; 1425.
16. Aghili Khorasani MH. Makhzan-ol-Advieh". Tehran: Publication of perfection in collaboration with University of Medical Sciences; 2008.
17. Tonekaboni SM. Tohfah _Al Momenyn. Publication of the town, Traditional Medicine and Materia Medica Research Center Shahid Beheshti University of Medical Sciences,; 2006.
18. Ibn B. Al jame Lel mofradat Al Advie and Al Aghziye. Beirut: Dar Al Ketab Al Imiyeh; 2001.
19. Mansour IM. Kafayeh mojahediyeh". Parliament manuscript. No. 6269. ; 2010. pp. 11-9.
20. Kirmani NIA, Burhani AD. Sharh Al mojez (sharh Nafisi). Ninth century. Publication Number: 79 second period, solo numbers: 129, first printing. Tehran: Institute for Medical History Studies, Islamic and Complementary Medicine Iran University of Medical Sciences; 2007. pp. 160-59.
21. Victor FC, Gelber J, Rao B. Melasma: a review. *J Cutan Med Surg.* 2004;**8**(2):97-102. doi: 10.1007/s10227-004-0158-9. [PubMed: 15685388].