



"Vascular Etiology of Melasma" the Idea Which Was First Presented by Avicenna and Rhazes

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According to Traditional Persian Medicine, skin is one of the important organs which could reflect any problem inside the body. Skin discoloration has been considered as an important internal disorder which can be treated completely at the early onset of disease.

Review of Iranian Traditional Medicinal books shows that *Kalaf* is a kind of skin discoloration which its clinical manifestations are very similar to melasma. It is a kind of skin darkness (brown to black) that usually occurs on the women's face [1-4].

This disease starts with the appearance of dark small spots on cheek, chin, upper lip and forehead; and then spots integrate together and spread all over the face at second stage. Also Iranian scientists believe that *Kalaf* involves areas with no hair growth. Both sexes could be affected by disease but women are more susceptible than men for this problem.

Etiologies of *Kalaf* are also very similar to the melasma and it could be assumed that the *Kalaf* in Traditional Persian Medicine is comparable with melasma in conventional medicine.

Although melasma/ *kalaf* is not a life threatening disease but it has a negative impact on the quality of life in affected individuals [5].

On histological examination of melasma, there is increased production of melanin in the epidermis and/or an increased number of melanosomes in the dermis, with a normal number of highly melanized and dendritic melanocytes [6].

The pathogenesis of the melasma is not completely understood, but genetic and

hormonal factors and UV radiation play very important role in this disease [7].

Also *Kalaf* has the same pathogenesis like melasma [1-3]. However, considering the opinion of our famous ancient scientists such as Avicenna and Rhazes, there are more predisposing factors such as gastric and hepatic malfunctions, uterus and splenic disorders and even nutritional habits which can cause this problem. It means that when skin discoloration occurs, the function of all above mentioned organs should be noted completely.

In addition to these factors Avicenna and Rhazes announced that *Kalaf* /melasma could be the result of another important pathologic mechanism which is called "Vascularization". They described that vascularization in the upper layer of dermis has the major role in hyper pigmentation of the skin. This theory is mentioned in conventional medicine in new research as well [8-10]. Nowadays, scientists are planning to use anti-angiogenic drug to avoid this troublesome vascularization.

Avicenna and Rhazes were the pioneers of this hypothesis. They described that skin darkness is the result of revascularization under the upper layer of skin.

They also believed that abnormal vascular diameter increase occurs in the affected area and it may lead to vascular rupture which makes the problem more complicated.

According to this pathophysiology the best treatment for melasma/ *Kalaf* is, to remove or start depigmentation of the affected area at early onset of disease in order to avoid or prevent

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spreading the darkness to other areas. Rhazes believed that if treatment begins at the early stages, (when very small and semi dark spots appear on the face), disease could be cured completely. They also recommended very simple and practical remedies for its treatment. In further articles we would like to discuss more about these approaches that may reveal clues for treatment *Melasma/Kalaf*

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