



Treatment of Chronic Acne by Persian Medicine (Temperament Modification plus Leech Therapy): A Case Report

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Abstract

Acne is a multifactorial disease which causes many harmful physical and psychological effects for patients. Several therapies are used in conventional medicine for acne, but most of these methods are not stable and cause side effects. Therefore, it is considered to use complementary medicine alongside conventional therapies to achieve better results. In this article, a patient with chronic and severe acne is presented which is treated by a combination of temperament modification and leech therapy based on Persian medicine.

Keywords: Acne; Temperament; Leech therapy; Persian medicine; Conventional medicine

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Introduction

Acne pathogenesis is multifactorial that occurs at the level of the pilosebaceous unit [1]. In most cases, acne is a chronic disease [2] that affects the physical and psychological state of patients, resulting in impaired psychosocial development, reduced self-esteem and emotional distress [3]. Its etiologies are increased sebum production, altered keratinization, inflammation, and bacterial colonization [4]. In conventional medicine, various acne treatments are used, including topical benzoyl peroxide, topi-

cal retinoid, topical antibiotics, oral antibiotics, hormonal therapy, isotretinoin, and procedural therapies, such as light and laser therapies [5]. Although each of which causes some adverse effects. Topical treatments may cause local irritation [5]. The most common adverse effects of isotretinoin are lip dryness, xerosis, facial erythema, psychiatric symptoms, eye lesions [6], liver function abnormalities and teratogenic side effects [5]. Therefore, searching for treatments that have longer durability and fewer side effects are needed.

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Persian Medicine consists of all the knowledge and practices used in diagnosis, prevention and elimination of diseases in Persia from ancient times to present. Persian scholars have expressed their experiences based on the theory of temperaments (*Mizaj*) and humors which is definitely different from conventional medicine. Temperaments have several types: hot, cold, dry, wet, hot and dry, hot and wet, cold and dry and cold and wet. Each of these temperaments, if get out of its natural state, causes the disease. So, in Persian medicine theory, temperament modification and removal of waste materials and humors from the body form the basis of treatment [7-8]. In the Persian medicine, it is believed that acne could be the result of internal organs dysfunction producing waste materials which are then drawn to the skin and discharged from it, so treatment strategies should manage internal organs. Acne treatment principles in Persian medicine include diet-therapy, medicinal plants and physical manipulations such as leech therapy [3].

In this article, a patient with chronic and severe acne is presented which is treated by a combination of temperament modification and leech therapy based on Persian medicine.

Case Report

The patient was a 25-year-old woman who had acne over 3 years ago. Over the past 3 years, she had frequently referred to dermatologists who prescribed many local and oral medicines, including benzoyl peroxide, doxycycline, and isotretinoin (Roaccutane). The patient had a relative recovery until taking these medications, but shortly after discontinuation of the medication, acne was relapsed. Meanwhile, during the taking of these medications, skin dryness and irritation hurt her. These complications, as well as lack of stability of response to treatment, led the patient to refer to Persian medical center. In the first visit, the skin of the patient's face was

inflamed and red, with severe acne (Picture 1). Acne was not present in other parts of the body. In general observation, the patient was thin and had dry and tawny skin. The patient did not mention any Underlying disease and menstruation was regular and normal. She stated that she cannot tolerate hot air and feels better in cold weather. Defecation was done 2-3 days a week.



Picture 1: before treatment

At the first visit, the followings were prescribed:

- Regular and adequate sleep
- Doing enough exercise
- Avoiding stress and anxiety
- Modifying eating habits such as:
 - Avoid fried and sweet Foods
 - Avoid high amounts of sweets and chocolates (especially industrial sweets and snacks)
 - Eating barley soup daily
 - Adding plums and pomegranates to the diet
- Drug therapy:

Drinking a decoction of jujube (15 pcs) + 2 teaspoons of thyme, 3 times a day

In the second visit, which took place one month later, signs of inflammation were reduced and

rashes were decreased. There was no itching and dry skin was greatly resolved. Defecation was done regularly and daily. The patient was advised to continue the medications for 2 months.

In the third visit, the rash and inflammation of the face had significantly disappeared but a small part of face skin (about 5*10mm) on the right cheek remained inflamed and red. it seemed that the accumulation of rashes was locally remained and was not disappeared (Picture 2).



Picture 2: during treatment

Therefore, one session of leech therapy was prescribed for the patient during which 2 small medicinal leeches were placed at the back of the right ear on the mastoid angle. After the completion of the session, the patient was advised to refer for a further visit one week later. In the 4th visit, the skin was clear, without inflammation and rash, and the rashes of the mentioned area were disappeared (Picture 3).



Picture 3: after treatment

The patient was advised to continue the precautions and measures and gradually discontinue drinking the decoction. Currently, 20 months have passed from the patient's last visit, and she has no complaint of acne.

Discussion

In Persian medicine, there is a topic called “*Oram and Busoor*”, that relates to the body’s swellings and rashes. Persian medical experts believed that the disease that we call “acne” in conventional medicine, is due to impairment of the function of internal organs, including the stomach and the liver; resulting accumulation of waste materials in the body. Therefore, treatment should be against the dis-temperament caused by the disease and based on the improvement of the function of internal organs and the removal of waste materials [3].

In this patient, as mentioned, there were signs of inflammation and redness of the skin, slimming and heat intolerance, all of which indicate the dominance of heat and dryness. So treatment should be based on cooling the body and moisturizing it. Therefore, in the first visit, along with lifestyle modification – called “*setteh zarrorieh*” in Persian medicine- the patient was recommended to avoid consuming sweets, fatty and fried foods. From the perspective of Persian medicine, these foods interfere with digestion and function of the liver and stomach, produce waste materials, and exacerbates the heat and drought in the patient [3,9,10]. Of course, conventional medicine also prohibits using these foods in acne patients [3].

In addition, eating cold-tempered foods such as plums (*Prunus domestica*), pomegranates (*Punica granatum*) and barley (*Hordeum vulgare*) was advised to reduce the inflammation and drought caused by the disease.

In terms of Persian medicine, the plum is laxative and moisturizer; eliminates inflammation and irritation, improves defecation and evacu-

ates wastes from the gastrointestinal tract. Being laxative, Pomegranate is one of the best liver cleansers. It is also anti-inflammatory and produces high quality humors. Barley is also anti-inflammatory and suppresses the excessive heat of the body [11].

From the perspective of conventional medicine, plums, pomegranates, and barely have anti-inflammatory and antioxidant properties, so various articles have shown their ameliorative effects on acne [3, 12-13].

The drug considered for the patient was a decoction of jujube (*Zizyphus vulgaris*) and thyme (*Thymus vulgaris*). From the perspective of Persian medicine, drinking this decoction plays a very important role in purifying the body from waste materials [11]. The antimicrobial properties of thyme are also described in conventional medicine articles [14].

As mentioned, with the above treatments, the gastrointestinal function of the patient was corrected. The body was moisturized and the defecation which was not performed well due to dryness became normal. The liver function was also corrected and the skin inflammation of the patient was suppressed. But after 3 months of treatment, despite the recovery of most of the skin, rashes still remained aggregated in a small area of the face. From the perspective of Persian medicine, there was waste retention in that small area, and internal cleansing of the body did not sublimate the accumulated waste from that part. In such cases, one of the local treatments in Persian medicine is leech therapy. Persian medical scholars argued that medicinal leech's strong suction removes waste materials that are accumulated topically on the skin which cannot be eliminated by other methods. Of course, internal cleansing of the body should be done before leech therapy [9-10,15-17]. In conventional medicine, leech therapy is also used in various diseases, including skin diseases [16-19]. However, there are no studies about the

effect of leech therapy on acne.

From the perspective of conventional medicine, as proved by various research studies, the leech's saliva contains about 100 pharmacologically active biological substances including anticoagulants like hirudin, calin, inhibitors of kallikrein, hyaluronidase, histamine-like vasodilators, collagenase, and anesthetic and analgesic compounds. Histamine-like substances have a dilating effect on the blood vessels and so cause the blood to stream to the bite site. Hyaluronidase acts to clear the path for the active and healing substances to penetrate. Leech's anticoagulant substances allow blood to flow from the bite after the leech is detached, so the remained wastes are sublimated. Furthermore, some of these substances have anti-inflammatory [17] and antimicrobial effects [16]. Scientists argued that the purified extract obtained from any part of the leech body, especially salivary glands, showed an antimicrobial activity against many Gram-negative/positive pathogens. For example, a protein named destabilase with a lysozyme-like activity have been isolated from the medicinal leech extract. It is reported to have antibacterial activity against some bacterial strains, destroying their cellular components [16]. So, leech promotes the improvement of blood circulation in the organ, renders antimicrobial, anti-inflammatory and immuno-stimulant action [17]. Leech therapy, also has contra-indications, which has been emphasized in both Persian and conventional medicine [9, 15-17].

In this patient, due to the mechanisms mentioned, leech therapy led to the evacuation of the accumulated waste from the local face skin, and finally, acne completely recovered.

Since Persian medicine approach to acne treatment is based on lifestyle and temperament modification and leech therapy, along with these methods, helps to cleanse the body from waste materials, it is hoped that studies on the ther-

apeutic methods of Persian medicine for acne will be expanded in order to properly utilize this capacity along with conventional therapies.

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Disclosure of Interest

The authors report no conflicts of interest.

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