TRADITIONAL AND INTEGRATIVE MEDICINE

Trad Integr Med, Volume 3, Issue 1, Winter 2018

Case Report

# Treatment of Acquired Nasolacrimal Duct Obstruction in a 27-year-old Male Patient based on Iranian Traditional Medicine in Bojnurd

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**Received:** 17 Dec 2017 **Accepted:** 15 Jan 2018

## Abstract

Treatment methods for infection and obstruction of the lacrimal duct and selection of therapeutic methods for its elimination are usually controversial. The purpose of this report is to present the clinical experience of Iranian Traditional Medicine that has the highest therapeutic effect in the shortest time. The patient is a 27-year-old man who was treated with antibiotics for two months due to severe infection, swelling and redness, and severe pain in the lacrimal and tear duct. Due to the widespread nature of the infection, the doctor was unable to treat dacryocystorhinostomy and dacryptocystoplasty. Anti-inflammatory drugs, including chamomile flowers, mallow, and spring flowers were boiled and three glasses were given to the patient per day, which continued for up to two weeks. Laxative medications such as flixweed and honey were prescribed to relieve the patient easily. Every morning, a glass of syrup sekanjabin was recommended. Full back cupping was recommended every two days because it works to strengthen the body while increasing the blood flow of the patient. On this patient, local healing with two leeches was started at the first session and two other sessions were repeated. Inflammation decreased within 48 h, gradually recovering from the patient's sessions after two weeks, and the tear duct opened. Considering the patient's recovery process, it seems that the combination of modern medicine and traditional medicine in Iran can solve many common diseases, which require extensive assessments based on the teachings of the school of medicine.

**Keywords:** Acquired Lacrimal Duct Obstruction, Lacrimal Sac Infection, Iranian Traditional Medicine, Iranian Leech Therapy

**Citation:** Hajtalebi H, Khani Iurigh H, Hajtalebi HR. **Treatment of Acquired Nasolacrimal Duct Obstruction in a 27-year-old Male Patient based on Iranian Traditional Medicine in Bojnurd.** Trad Integr Med 2018; 3(1): 23-29.

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## Introduction

Initial or idiopathic or acquired obstruction of the nasolacrimal duct is an unexplained syndrome and is the most common cause of this obstruction. This leads to inflammation due to unknown cause of fibrosis in the duct and ultimately obstruction [1]. The main cause of infection and fibrosis in the lacrimal sac is the accumulation of cellular and inflammatory debris in it [2]. Although the most common cause of nasolacrimal duct obstruction in the large population is its primary form of acquisition; it must always include secondary inflammatory causes, especially in cases where there is a systemic disease, such as sarcoidosis, lymphoma, and leukemia. It was also thought to be involved in tear sacs [3]. Teardrop is one of the most common complaints of patients referred to the ophthalmic clinic, which can be very annoying for the patient. Therefore, considering the patient's age, severity and quality of disease, and also in one-way or two-way, it has different etiologies and considers certain treatments according to their cause [4]. This obstruction not only causes tearing of the eye, but also complications such as visual impairment, discharges, and skin problems in the inner corner of the eye [5]. Apart from factors that increase tear secretion, the acquired and primary obstruction of the teeth is the main cause of tearing in adults. It seems that lacrimal duct fibrosis is the cause of this obstruction due to unknown inflammatory causes. Dacryocystorhinostomy is usually performed to resolve this difficult recommendation. However, currently, selective treatment of lacrimal duct obstruction in adults is by dacryocystorhinostomy; it is relatively invasive and associated with complications with surgery and anesthesia, especially in older ages [6]. Newer methods with laser or endoscope, although with similar success rate, but require expensive equipment and experienced people to use the endoscope or laser, this limits the use of old methods. The use of mitomycin or the placement of silicone tubes has also not had a significant effect on the improvement of the outcome [7]. Finally, it can be said that dacryocystorhinostomy and dacryocystoplasty are performed using a balloon, a silicon tube or polyurethane tube in the lacrimal duct and probe to treat the disease. Except for probing, most of the above procedures require general anesthesia and special devices. Probing, in addition to not requiring special facilities, has the benefits of being comfortable and quick, safe, being able to do without local anesthesia, cost-effectiveness, the need for patient's admission and not having an effect on the outcome of subsequent surgery [8]. Probing or walking is the preferred treatment for lacrimal duct obstruction in children younger than 4 years of age, which is likely to be very successful. According to medical literature, the probability of failure due to prognosis increases with age and doubles by about six months. Probing is not common in older ages and few studies are available in this area. Some authors have advised that to increase the success rate of probing in adults, the simultaneous placement of silicone tubes in the lacrimal duct and the use of balloon mitomycin to dilate the nasolacrimal canal, is somewhat effective in improving the outcome, but with complications such as delayed fibrosis [8-9]. On the other hand,

lacrimal duct infections often occur as a result of several organisms and need to cover several types of pathogens. Also, many pathogens are resistant to antibiotics, so the use of non-biotic treatments can be effective in preventing resistance to antibiotics and could be more accepted by the patient. It will also cost less. According to the above documentation, several therapeutic methods have been proposed for the treatment of duct infections and obstruction. On the other hand, given that proper, rapid and effective treatment of this disease is necessary, with all this, effective treatment of lacrimal duct infections in cases of resistance to treatment remains a dilemma and to achieve the desired therapeutic response while having low side effects is one of the major dangers of lacrimal dysfunction [7-18]. Therefore, it is necessary to evaluate and make a scientific report based on a combination of modern and Iranian Traditional Medicine (ITM) with new consolidated methods and medications that had the most therapeutic effect in the shortest period of time.

## Case Presentation

*Medical History and Examination according to Modern Medicine*

The patient is a 27-year-old man who was treated with antibiotics and various painkillers due to severe infection, swelling, redness, and severe pain in the lacrimal sac and lacrimal duct for about 11 months. Due to the widespread nature of the infection, the doctor has not been able to treat dacryocystorhinostomy and dacryptocystoplasty. With a history of systemic and eye diseases, a history of facial or nasal injuries, sinus surgery, nose or duct, and drug use, and other causes of tearing with complete eye examinations were rejected. Figure 1 shows the picture before treatment of the site of the lacrimal duct infection in November 2014. The patient was healthy and has no history of any underlying illness. The patient suffered from mild depression and severe anxiety due to these lesions. The patient was referred to the Haj-Taleb traditional medicine center with the advice of one of the relatives in order to receive treatment.

*Medical History and Examinations according to Iranian Traditional Medicine*

The patient did not use proper nutrition in the prevention and sanitation context; in other words, the patient failed to comply with the recommendations of doctors in the field of non-compliance with hygiene principles. The patient's temperament was warmer and more consistent with ITM; he was extremely anxious due to his lack of response to the modern treatments that he had received for several months and was very angry with the swelling, inflammation, and pains. There was no problem with the patient's physical strength and the principles of hygiene in ITM.

*Treatment*

*Measures to Protect Health and Nutrition*

The patient's medical treatment began on 16/11/2014. Given that the patient had undergone several months of unsuccessful treatment with modern medicine and had no acceptable

healing outcome, he was depressed and disappointed. For this reason, in the first session, attempts were made to treat the patient with hope and relief. A full description of the treatment process was given to the patient. Patients were advised to treat the patient with a depressive illness in the orders of sensory symptoms. In the next step, measures were taken with nutritional recommendations and recommended advice. A CD containing nutritional guidelines was provided to patients to help them understand the principles of nutrition in traditional medicine. In refining nutrition, the patient was advised to avoid hot foods and take more fruits and vegetables. Advice was given to observe six principles of health in traditional medicine.

*Pharmaceutical Measures*

In this patient, due to the nature and condition of the disease, medicinal herbs and a combination of drugs were used. Anti-inflammatory drugs, including chamomile flowers, mallow, and spring flowers were boiled and three glasses were given to the patient per day, which continued for up to two weeks. Laxative medications such as flixweed and honey were prescribed to relieve the patient easily. Every morning, a glass of syrups sekanjabin was recommended.

*Manual Measures*

1- Cupping Therapy: Cupping: Full back cupping was recommended every two days because it works to strengthen the body while increasing the blood flow of the patient.

2- Leech therapy: On this patient, local healing with two leeches was started at the first session and two other sessions were repeated. Figure 2 shows the image of the site during the treatment of the lacrimal duct infection in November 2014.

*Treatment Results*

At the first treatment, there was an immediate noticeable reduction in pain and the patient stated the following in an interview during the first session: “I have no pain”. Inflammation decreased within 48 hours, while gradually recovering from the patient’s sessions after two weeks, and the tear duct opened. Figure 3 shows the image after treatment of the site of lacrimal duct infection in December 2014.

## Discussion

In some patients with lacrimal duct obstruction following dacryocystitis or drug therapy, the symptoms of lacrimal duct obstruction are resolved spontaneously or after washing the upper lacrimal duct. Despite lacrimal passage at the time of washing, the patient delayed the fluid in the throat and symptoms of tear fall in the patient [1-3]. The existence of this case suggests that the acquired idiopathic obstruction in adults is not always due to age variations in the lacrimal duct and complete anatomical obstruction but is due to the formation of fibrosis and probably due to the accumulation of debris related to the eyelid and lining of the eyelid or mucous discharge of the sac. The lacrimal duct is removed by washing the duct and the symptoms of the patient ceased [4-5]. However, in cases of severe infections of the lacrimal duct, it is chronic and resistant to infection. The cur-

rent treatment of lacrimal duct obstruction is currently through an external dacryocystorinostomy, a surgery with a high success rate, but accompanied with possible complications. Surgeons have considered alternative methods with less complications and injuries that are internal dacryocystorinostomy with endoscopes or lasers. The most important variable to consider in the choice of therapies for treatment of lacrimal duct obstruction is to reduce complications and to reverse obstruction [6-7]. Various therapeutic approaches have been proposed for this obstruction. In this patient, anti-inflammatory drugs were boiled; due to the severity and condition of the disease, three glasses were administered each day and continued for up to two weeks. Laxative medications were prescribed to relieve the patient easily. Each fasting morning, a glass of syrups sekanjabin was recommended. In choosing therapeutic methods in ITM, the most effective ingredient is important and temperament should also be considered in the next step. Namely, we choose plants that are strong in terms of effective anti-inflammatory and anti-microbial agents and then consistent with the patient's temperament. In the method of effective medicine, we do not prescribe diligence and judgment in the way that we have been told in traditional medicine, but we simply eliminated the simple malformation and help with the drugs that are needed with the active ingredient, and if needed, the reformist will be able to treat material maladaptation. It is believed that in most patients, it is easy to misconceive, or in other words, if simple abnormalities are resolved and medicinal herbs or herbal medicines are administered with the required active ingredient, they will recover and there will be no need to plow the patient's condition. This patient received the same treatment. In other words, firstly, the soda and bile ducts, while considering the effective ingredient, are prescribed later, along with the laxative, and did not prolong the time of the laxative. Various studies have shown that lifestyle modification towards a healthy lifestyle including the use of healthy food, proper nutrition, exer*Cis*e, non-smoking, and good mental health can increase health indicators even in one person, and risk factors can be significantly reduced [13-17]. In this study, nutritional recommendations and essential recommendations were made in the form of a CD containing the nutritional guidelines, so that they can help with the familiarity with the principles of nutrition in traditional medicine. Unfortunately, there is no study on leech therapy in Iran. However, based on the experience gained in the treatment of chronic ulcers by leech [18], along with other treatments, leech therapy was also carried out, with satisfactory results. In conclusion, with regard to the course of medicine, during the last century, one cannot say that there is no complete school of medicine in the world of medicine; therefore, medical schools such as modern medicine, traditional medicine of Iran, Ayurveda in India, Chinese medicine, etc., are each to help preserve the health and human health, which is the true purpose of medicine, while performing the medical services worthy of attention, but because of their complete and comprehensive nature, they have many weaknesses and strengths.

**Figure 1**: The patient before treatment in November 2014

**Figure 2**: The patient during treatment in November 2014

**Figure 3:** The patient after treatment in December 2014

## Conclusion

The results of this report in the treatment of infections and severe obstruction of the lacrimal duct for the treatment of tears, swelling, and pain in the eyes of the patient showed that this method has a relatively high degree of security and effectiveness; in addition, it is an inexpensive and available method and it can be used before surgery. It is recommended that extensive control studies be carried out with a high sample size and a long follow-up in this area and with the aid of graphic cytology, the degree of blockage should be more accurately assessed.

## List of Abbreviations

ITM: Iranian Traditional Medicine

## Competing Interests

The authors have no conflict of interest in publication of this article.

## Contributing Authors

This article is the outcome of treatment measures by Dr. Hassan Hajtalebi. Dr. Hassan Khani and Hamid Hajtalebi cooperated in documenting and writing the article.

## Acknowledgments

The authors appreciate the patient and his family's cooperation to participate and complete all treatment and healthcare processes, and all nurses in Haj-Taleb medical center of traditional and modern medicine to perform treatment processes for the patient.

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