

Therapeutic Efficacy of a Dietary Formulation in Chronic Tonsillitis: A Case Study

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Abstract

In this paper an attempt has been made to construct a hypothesis on the basis of author's personal experience treating tonsillitis that occurs mainly due to allergy mostly in winter season, and its management with local application of a preparation containing few common dietary objects. Initially both the allopathic and Unani medicines were used separately to ameliorate the disease. However, since the recurrence of disease is very common and frequent use of antibiotics is not advisable, therefore, based on Unani concept of *Ilaj-bil-Ghiza* author used a combination of pop gram, mixed with salt and turmeric powder at bed time after cleaning the mouth with brush and toothpaste or *Neem Miswak*. The symptoms of tonsillitis improved after few days of application. A review of literature was conducted to explore the effect of the test combination and its likely mechanism of action so as to develop a valid hypothesis for future clinical studies.

Keywords: *Cicer arietinum* Linn., Salt, Turmeric, Tonsillitis, Sore throat, Temperament, *Ilaj-bil-Ghiza*.

Introduction

Present work is based on author's personal experience of management of tonsillitis and prevention of its recurrence with the help of *Ilaj-bil-Ghiza* (dietotherapy). According to the principles described in Unani System of Medicine (USM), the methodology of treatment of a disease is based on the following four fundamental therapeutic principles:

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| (i) <i>Ilaj-bil-Ghiza</i> | (Dietotherapy) |
| (ii) <i>Ilaj-bil-Tadbeer</i> | (Regimenal therapy) |
| (iii) <i>Ilaj-bil-Dawa</i> | (Drug therapy) |
| (iv) <i>Ilaj-bil-Yad</i> | (Surgical intervention/therapy) |

Dietotherapy/Dietary therapy is practiced as a first line treatment in the management/control of diseases. It is considered an essential part of natural therapy to provide health to the individuals. Since diet (*Makool wa Mashroob*) is one of the six essential factors responsible for maintaining the health, therefore, its deficiency may prove to be a causative factor for the diseases. The diet may also play a role in the management of some of the diseases as Ibn Sina (1932) described that illness is treated with diet and drugs attributed to have opposite temperament to that of the temperament of a disease. For example, *Yarqan* (hepatitis) is considered a disease of hot temperament, hence, it has been named

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as *warm-e-kabid har*. It is treated with the medicines having cold temperament such as '*Tamar Hindi*' (*Tamarindus indica*), '*Mako*' (*Solanum nigrum*) and '*Kasani*' (*Cichorium intybus*) etc. As a dietary therapy, patient is also advised to have low protein diet and a lot of citrus fruits including boiled rice, vegetables, salad and the juices of pomegranate, orange etc. These above mentioned foods, vegetables and fruits are considered to have cold temperament and thereby are able to interfere with the hot temperament of the disease. Sometimes, the dietary therapy is applied as a second line of treatment to help the primary treatment in which drugs are prescribed mainly to ameliorate the disease (Gruner, 1930; Ibn Rushd, 1980). Similarly, there is also a concept of abstinence (*parhez*) or avoiding some of the foods in different diseases. Since a combination of certain dietary supplement was used to manage the chronic tonsillitis, therefore, a brief review of tonsillitis and the drugs used in the case study to improve was also undertaken.

Tonsillitis

Tonsils are the part of the immune system. They are believed to produce antibodies that protect the body from infection. They are located at both sides of throat and act as a filter to all the germs, bacteria, virus and other organisms which may enter inside the body. In the process, they get inflamed occasionally and injured due to infection and allergy but they continue to guard the body effectively. However, sometimes causative factors dominate over the defence mechanism causing tonsillitis (*Warm-e-Louztain*) both in children and adults and giving rise to specific symptoms.

Etiology

Tonsillitis commonly occurs in younger people under the influence of cold. Polluted air (*Kaseef Hawa*) is believed to cause tonsillitis (*Warm-e-Louztain*). Use of too cold food and beverages mainly in extremely cold and hot season frequently cause the disease. The cold items may cause local vasoconstriction causing a compromised state of local immunity and allowing the bacteria and other organisms to cause infection. Sometimes, the disease occurs in patients afflicted with diphtheria, rheumatic fever and epidemic diseases (Samarqandi, ynm). According to Maqbool (1994) it may occur as a primary infection of tonsil itself, but may occur secondarily as a result of upper respiratory tract infection following the viral infection. Poor oral hygiene, poor nourishment and congested surroundings are important predisposing factors for this disease.

Signs and Symptoms

Red, swollen tonsils, white or yellow coating or patches on the tonsils, sore throat, painful blister or ulcer in the throat, difficult or painful swallowing, fever, enlarged,

tender glands (lymph nodes) in the neck, a scratchy, muffled or throaty voice and bad breath are considered to be important signs and symptoms of tonsillitis. Acute tonsillitis is very common which is mostly treated successfully or subsides by its own. However, in many patients it transforms into chronic form; such patients experience recurrence of the symptoms (Dhingra, 2007).

Case Presentation

The author used to get affected frequently with tonsillitis especially in cold season for many years. Use of the antibiotics was effective to the extent of temporary relief as after sometimes there had been the recurrence of tonsillitis and related symptoms. Since frequent use of antibiotics is not advisable, therefore, he decided to take some home remedies based on the principles of Unani medicine. As the tonsillitis is characterized by inflammation, pain and infection of tonsils, therefore, it was decided to try the medicaments prepared from commonly used dietary objects that have the opposite temperament of tonsillitis. He initially started gargle with luke warm water mixed with turmeric powder and salt, and there was a relief. However, it was realized later that the use of gargle was a bit inconvenient, therefore, author switched to use solid dosage form with a view to generalize the therapy, if found effective, and started to use popped gram mixed with salt and turmeric powder at bed time after cleaning the mouth with brush and tooth paste or *neem miswak*. The combination was chewed well and swallowed. Water was not used because the dietary constituents that stuck to throat to induce local effect will be washed out with water. There was tremendous response. Now the author takes this combination at the start of winter season for one week as a preventive measure. Tonsillitis usually does not appear thereafter. However, in case of its occurrence author repeats it for one more week. The experience suggests that this combination of dietary supplement may be used for therapeutic purposes especially in the management of tonsillitis and sore throat. In view of the above mentioned experience a review of Unani and ethnobotanical literature was also conducted so as to explore the medicinal properties of the ingredients of the combination and their correlation with tonsillitis, with special reference to the likely mechanism of action.

Management with the dietary combination

To avoid regular use of antibiotic or surgical removal of the tonsils the dietary formulation was used. It included parched/pop gram sprinkled and mixed with turmeric and sodium chloride. Application of dietary therapy is considered a natural way of management of any disease. Chronic tonsillitis requires long period of time to be treated, apart from providing relief to the patient from tonsillitis and sore throat its therapeutic regimen also aims at enhancing the immunity so that

the burden of tonsils may be reduced. The main properties and actions of the ingredients of the dietary formulation are described below:

- (i) Sodium chloride (Salt): Being hot & dry in second degree of temperament and possessing antiseptic, anti-inflammatory and diuretic activity the gargle with saline water in the diseases of throat has been described to be very useful (Kabiruddin, 2007; Nadkarni, 2000).
- (ii) Turmeric: Haldi (*Curcuma longa* Linn): acts as analgesic and anti-inflammatory agent and used in a number of diseases. Externally, it is used as anti-inflammatory, analgesic and wound healer to relieve swelling, sprain, stretch, ulcer, toothache and sore throat etc. It is also used as general tonic and to provide a glow to the skin (Anonymous, 1950). Its fomentation has been described to relieve the pain (Hakim, 2002).
- (iii) Gram (*Cicer arietinum* Linn): It is called *Hums* in Unani Medicine but commonly known as Chana. It is hot and dry in 1st degree of temperament. In bronchial catarrh the seeds in a parched condition are given at night followed by a cup of warm milk; it gives tremendous relief (Nadkarni, 2000). It is also used in ulcer due to its astringent and antiseptic properties. It is laxative in nature, increases *Hararat-e-Ghariza* (innate heat), gives strength to the lungs and produces blood of good quality. Liquid obtained from macerating the seeds works as a tonic; its gargle also gives relief in toothache and produce anti-inflammatory effect. It is harmful, however, to drink water after having it.

Likely Mechanism of Action of the formulation

The preparation was taken at bed time after cleaning the mouth with brush and tooth paste or using the *Neem Miswak*. Since these cleansing agents are basic or alkaline in nature which neutralizes the acidic medium of the mouth produced by bacteria; therefore, apart from washing out the bacteria they also minimized the chances of bacterial growth because of the adverse medium. Since, sodium chloride is basic in nature and also possesses antiseptic and osmotic properties, therefore, it helps in neutralizing the acidic nature of mouth which causes irritation and infection to the tonsils. Its strong alkaline nature actually does not allow bacteria to grow. Moreover, because of having osmotic property it absorbs intracellular fluid causing relief to tonsils and nearby tissues by inducing anti-inflammatory effect. Curcumin isolated from turmeric is considered to get absorbed into the affected organ and provides immunity and strength to the organ that helps improve its inflammatory condition. Curcumin is absorbed through the mucus membrane of tonsils and surrounding tissues which in turn reduces the

inflammatory condition. Besides, it keeps the organ protected from allergy because it changes the cold temperament to the hot one. Gram due to its astringent (Qabiz), antiseptic and obstruent properties reduces the production of fluid. It also absorbs extra fluid and helps in cleaning the allergens present in throat and its surroundings area.

Discussion

The food supplements are used as dietotherapy (*Ghiza-e-Dawai*) in many diseases including hepatitis, hypertension, diabetes, nephritis and many metabolic diseases etc. However, in most of the cases these are used orally to ameliorate the diseases or act as an adjuvant with certain drugs which are used specifically for a particular disease. In the present case efficacy of a combination of three dietary supplements was determined after its local application. The parched gram (*Cicer arietinum* Linn) flavoured with turmeric and sodium chloride is the part of our dietary habit and has been in use as a diet from the ages in India. However, its use in a specific mode may be useful in the management tonsillitis and sore throat. It should be properly prepared as described above and packed in such a manner so that the cracking quality and adequate quantity of turmeric and sodium chloride remains intact with it. For getting maximum advantage it must be taken after getting the buccal cavity cleaned because the mode of application and its timings are considered to be important for its optimal effect. Water is not used after taking the combination. The constituents of the combination especially curcumin of turmeric and sodium chloride thus find enough time to be absorbed into tissues of tonsils and its surrounding tissues to render maximum local effect. Apart from this it also changes the local cold temperament to the hot one and allows sodium chloride to extract water from intercellular space through osmotic process thus reducing the swelling. Besides, it neutralizes the acidic medium of the mouth produced by bacteria which in turn inhibit the growth of bacteria and the influence of the allergens. The local anti-inflammatory and analgesic activity also helps in relieving the symptoms and improving the pathological condition. Thus, the said combination of dietary supplements helps to improve the tonsillitis and relieves other symptoms of throat and buccal cavity.

Conclusion

The findings suggested that the dietary combination is effective in chronic tonsillitis. It helps in improving the symptoms and prevents the recurrence of tonsillitis. However, it warrants further investigation and larger clinical study to ascertain and generalize its efficacy.

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