TRADITIONAL AND INTEGRATIVE MEDICINE
Trad Integr Med, Volume 1, Issue 2, Spring 2016

Short Communication

Determination of the Scientific Name of *Zoufa*: A Traditional Persian Medicinal Plant

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Received: 6 Jul 2015 **Revised:**10 Aug 2015 **Accepted:** 24 Aug 2015

Abstract

Zoufa is one of the most consumed herbs in the Iranian traditional medicine (ITM) that has been used to treat many diseases including bronchitis, chronic cough, asthma and colic [1], [2]. The botanical description of these medicinal plants exists in some ITM literatures; however in the herbal market of Iran, two different plants have been sold as *Zoufa*, one is *Hyssopus officinalis* and another is *Nepeta bracteata*. The aim of the present study is to determine the exact scientific name of *Zoufa* according to its botanical description in ITM literatures. For this purpose, major traditional Iranian herbal literatures were searched to find information about the habitat, appearance, and botanical characteristics as well as pharmacological activities and indications of "*Zoufa*." The modern botanical books were also searched for the mentioned items about *H. officinalis* and *N. bracteata*. The results obtained from TIM literatures were compared with the findings from modern resources. The comparison of botanical description, habitat and pharmacological activity of *H. officinalis* and *N. bracteata* with those of *Zoufa* in ITM showed that *Zoufa* in ITM is approximately equivalent to *H. officinalis*; however, the most of samples sold as *Zoufa* in herbal shops of Iran is *N. bracteata*.

Keywords: *Hyssopus officinalis*, Iranian Traditional Medicine, *Zoufa*, *Nepeta bracteata*, Scientific Name

Citation: Hamedi Sh. **Determination of the Scientific Name of *Zoufa*: A Traditional Persian Medicinal Plant.** Trad Integr Med 2016; 1(2): 79-81.

1. INTRODUCTION

A close relationship between man and plants has existed from the ancient times and plants have been one of the first and most available resources for treating illnesses. One of the evidence for the use of plants as therapeutic agents by human beings is traditional medicinal literatures. In these literatures the identity and botanical description of medicinal plants have been explained but their scientific name has not

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been signified because of lack of definition of scientific names before the 18th century. Hence, it exist a lot of confusion regarding the exact botanical identity.

Zoufa is one of the most consumed herbs in the Iranian traditional medicine (ITM) that has been used to treat many diseases including bronchitis, chronic cough, asthma and colic [1], [2]. The botanical description of these medicinal plants exists in some ITM literatures; however, in the herbal market of Iran, two different plants have been sold as *Zoufa*, one is *Hyssopus officinalis,* and another is *Nepeta bracteata*. The aim of the present study is to determine the exact scientific name of *Zoufa* according to its botanical description in ITM literatures.

2. METHODS

The major traditional Iranian herbal literatures [1], [2], [3] were searched to find information about the habitat, appearance and botanical characteristics, and pharmacological activities and indications of "*Zoufa*." The modern botanical books were also searched for habitat, appearance, botanical characteristics, and pharmacological activities and indications of *H. officinalis* and *N. bracteata*. The results obtained from TIM literatures were compared with the findings from modern resources.

3. RESULTS

3.1 Botanical Description

Based on explanations in ITM literatures, "*Zoufa*" is lying on the ground and foliage like thyme and marjoram with odor, the branches are full of nodes and each node has yellow flower with bitter taste [1], [2], [3], [4]. Its leaves were similar to maiden hair [5], [6] and henna [2] and its height was about 104 cm [2], [3], [4]. Its smell is very pleasant, and taste is spicy with astringency and a bitter end [3]. About its habitat, *Zoufa* has grown in ancient Rome [5], Jerusalem and Cairo and Iran [2], [3]. There have been two types: one type grows in the mountain areas with low water, and other type grows in the plains [2], [3].

Based on modern herbal literatures, hyssop or "*H. officinalis*" is bush form, persistent, fragrant, with 60-70 cm height [7], [8]. Stems are woody and abundant to the top, they changes to grass. Leaves are linear, long and narrow, a little sharp, shiny, very aromatic, bitter taste. In the shape, leaves are mutual and at the bottom of the stem have petioles and at the tip of stem are without petioles. Flowers are blue to violet, length 7-15 mm, it has an ovary with 4 parts, fruits with 4 nutlets and ovoid. Roots are thick and have branches with short and fibrous rhizome [7], [8], [9]. It grows in central, eastern and southern Europe, especially the Mediterranean region, North Africa, Anatolia, West Asia, Russia, and perhaps Iran [8].

Based on modern herbal literatures, "*N. bracteata*" is a small herbaceous plant. The leaves are ovate-obtuse, flowers are pink blue and more rarely white and fragrant, flowers are in oblong spikes. Flowers are bisexual, zygomorphic and bracteolate. These bracteas are round and sharp and green purple. This plant grows in Afghanistan, Iran, Kyrgyzstan, and Pakistan [10].

3.2 Pharmacological Activities

About the pharmacological activities and indications from the view of TIM, *Zoufa* aids to improve eye redness and irritation and has been used to reduce tinnitus [11]. It has been used for treatment of respiratory disorders including bronchitis, chronic cough, asthma, postnasal discharge and dyspnea [2], [6], [11], [12] as well as gastrointestinal diseases including colic, intestinal spasms, abdominal cramps and enteritis and constipation [1], [2], [3], [6], [11], [12]. It has been claimed to be effective for dental pain [1], [2], [3], [11], [12]. Another indication of *Zoufa* in ITM is for dermatological disorders such as skin blemishes [11], bruising around the eyes [12] and alopecia [1], [2]. Among other activities of *Zoufa* it could be implied to emmenagogue, diuretic [12] and anti-epileptic [11].

In modern phytotherapy, *H. officinalis* has antitussive, anti-asthma and expectorant activities and is used to cure upper respiratory diseases, bronchitis, pertussis, flu, common colds. It also has emmenagogue, tranquilizers,

anti-parasitic and anti-viral effects. It is also effective in improving petit mal epilepsy, flatulence, and colic, inflammation of the urinary and biliary tracts and hysteria. It's also digestive, diuretic and diaphoretic [7], [8], [9], [13], [14], [15]. The oily extract increases the alertness. It has anti-inflammatory and antispasmodic properties when it is used topically [16].

Based on modern phytotherapy, *N. bracteata* has antioxidant, cytotxic [17], antimicrobial [18], and anticonvulsant activity [14].

4. Discussion

The comparison of botanical description, habitat and pharmacological activity of *H. officinalis* and *N. bracteata* with those of *Zoufa* in ITM showed that *Zoufa* in ITM is approximately equivalent to *H. officinalis*. Some properties documented for this plant in ITM have been confirmed by usage in new phytotherapy. The morphology of this plant was recorded in traditional texts and details about habitat and therapeutic activity that matches those of new studies about geographic distribution and usage. On the other hand, description of the plant in ITM is not sufficient to identify the scientific name, but because of the content that found in herbal traditional books about the appearance of the plant, including stems and leaves and flowers and it's similarity to other plants from the family Lamiaceae (thyme and marjoram), *Zoufa* in traditional documents definitely belongs to Lamiaceae family. Based on the similarity of today's proven pharmacological effects with traditional medicinal use and also resemblance of habitat, physical characteristics such as color of flowers and size of plant, it seems that *Zoufa* in ITM and *H. officinalis* L. are the same; however, most of the samples sold as *Zoufa* in herbal shops of Iran is *N. bracteata*.

6. Conflict of Interests

Authors have no conflict of interests.

7. Acknowledgments

I would like to thank Dr. Golamreza Amin, Professor of the Department of Pharmacognosy, School of Pharmacy, Tehran University of Medical Sciences, Tehran, Iran, for his assistance in this study.

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