



Review Article

Complementary Otorhinolaryngology: A Review on Supplements

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Rec date: May 30, 2014 Acc date: Aug 1, 2014 Pub date: Aug 4, 2014

Abstract

Otolaryngology disorders are important aspect of medicine and affect the quality of life of patients and resulted in impairments of daily activity. Traditional and complementary medicine is considered as adjuvant therapy as well as modern methods of treatments in control of diseases. Therefore in this review article we examined some of traditional and alternative therapies in different part of the world particularly Iranian traditional medicine. Discussion about alternative medicine includes nutrients, botanicals and procedures. These sources of agents provided a wide range of agents for patients to achieve their goals in management of their problems.

Keywords: Iranian traditional medicine; ENT; Otolaryngology; Complementary; Alternative

Introduction

Based on the National Health Interview Survey of 1996, chronic rhinosinusitis (CRS) was the second chronic disease in USA imposing 12.5% of the united states population or nearly 31 million subjects annually [1,2]. In this regard, according to 2008 National Health Interview Survey information, rhinosinusitis imposed 1 in 7 adults [3]. Since CRS was established on symptomatic criteria, this prevalence was probably overestimated in these studies. Due to coexisting inflammation of the nasal and sinus mucosa the present terminology is "rhinosinusitis" [4,5].

If the clinical symptoms of this inflammation exist for at least 12 weeks with no complete resolution, we call it chronic [5]. Rhinology disorders impose the daily function and quality of life of adults and children [6]. It has been noted with increase in world population, infections are the main causes of disease and in this relation the upper respiratory tract infections causing hearing loss and learning disability [7].

There different therapies for diseases in traditional medicine [8,9]. There is a long and prolific history for study of medicine in Persia. The Iranian academic centers such as Jundishapur University (3rd century AD) were a breeding ground for the union among researchers from various nations.

The most common ENT conditions needing traditional methods for therapy include: common cold, cough, tonsillitis, otitis-media, chest pains and asthma. In a study by Grace N Njoroge et al. [10] the results showed that 67 species belonging to 36 plant families were utilized in treatment. These plants were of varying habits; herbs (37.3%), shrubs (34.4%), trees (25.4%) as well as some grasses and sedges (3%). The traditional preparations were reported to be made chiefly from leaves (49%), roots (20.5%) and barks (12.5%). In this review we examined the diversity of Phytotherapeutic, naturopathic adjuvant therapies and traditional medicine in treatment of otorhinolaryngology disorders mainly including acute and chronic rhinosinusitis and otitis.

Materials and Methods

The information gathered from Pubmed central, Google scholar, ethno pharmacologists, herbal-drug sellers and rural native-healers. All data collected from 1956 to 2012 were summarized for every species.

Discussion

Nose inhalations with Emser brine or chamomile flower solutions are commonly the basal therapy (remedy) in banal or allergic rhinitis. It was shown that Essential oils of eucalyptus leaf and branches (*Eucalyptus globulus*, *E. polybractea* or *E. smithii*, Myrtaceae), mugo pine (*Pinus mugo*, Pinaceae), peppermint leaf (*Mentha piperita*, Lamiaceae) to have secretolytic and antimicrobial impacts, but one of its main complication is of laryngo- or bronchospasm in infants, so, should be avoided in infants (Kratschmer reflex) [11].

Systemic prescription of phytopharmaceuticals containing essential oils like GeloMyrtol[®] gastro-resistant capsules (standardized to contain not less than 30 mg limonene, 30 mg cineol and 8 mg alpha-pinene, produced by G. Pohl-Boskamp GmbH & Co KG, Hohenlockstadt, Germany) have noted to increase the mucociliary secretion and transport velocity by 28% and of the secretolysis by 30% [12]. GeloMyrtol[®] is prescribed in acute and chronic rhinosinusitis and after paranasal sinuses surgery [13]. The combination herbal medicine Sinupret[®] contains powdered herbal extracts of European elder flower (*Sambucus nigra*, Caprifoliaceae), garden sorrel herb (*Rumex acetosa*, Polygonaceae), cowslip flower (*Primula veris*, Primulaceae), European vervain herb (*Verbena officinalis*, Verbenaceae), gentian root (*Gentiana lutea*, Gentianaceae) and liquefies the nasal mucous and secretions and acts antiphlogistic as well. A meta-analysis has shown that alternate application of GeloMyrtol[®] and Sinupret[®] which contains powdered herbal extracts of European elder flower (*Sambucus nigra*, Caprifoliaceae), garden sorrel herb (*Rumex acetosa*, Polygonaceae), cowslip flower (*Primula veris*, Primulaceae), European vervain herb (*Verbena officinalis*, Verbenaceae), gentian root (*Gentiana lutea*, Gentianaceae) are useful in treatment of acute and chronic rhinosinusitis, acute and chronic bronchitis, and even pregnancy [14-16]. Studies reported that the efficacy of Sinupret[®] is superior to ambroxol and *n*-acetylcysteine [17-19].

A hot chamber that can be simple made by hot washcloth and a bathing cap is effective in reducing the pain. The American Academy of Otolaryngology-Head and Neck Surgery guidelines suggested topical medications as the first line of therapy for ear pain in the absence of systemic infection or serious underlying disease. Some

studies showed that in the management of ear pain topical combination herbal medicines (e.g. Otikon otic solution containing extracts of garlic bulb, mullein flower, calendula flower and St. John's wort herb in olive oil, produced by Healthy-On Ltd., Petach-Tikva, Israel) are as useful as oral amoxicillin and topical anaesthetics [20,21]. Another traditional treatment of allergies is *Urtica dioica*, known as stinging nettle. Nettle includes histamine and serotonin [22], beside acetylcholine in the plant's stinging hairs [23,24]. A randomized, double-blind clinical trial study examined freeze-dried *Urtica dioica* (300 mg twice daily) for the treatment of allergic rhinitis. All of the study population (n=69) reported improvement in global assessments, with 58 % noting symptom abatement and 48% showing equivalent or increased response with *Urtica dioica* compared to previous therapy [25].

Guo R et al. [26] showed in a systematic review that there was encouraging evidence that Sinupret and bromelain may be effective adjunctive treatments in acute rhinosinusitis.

Karkos PD et al. [27] concluded that there were positive effects of spirulina in allergic rhinitis and of Vertigoheel in vertigo. Guo R et al. [28] reported there is encouraging evidences which recommending that *P. hybridus* may be an effective herbal therapy for seasonal (intermittent) allergic rhinitis. There were also promising data generated for other herbal products, specially *Aller-7*, *Tinospora cordifolia*, *Perilla frutescens*, and several Chinese herbal medicines.

Viola Tricolor L:

Wild pansy is named *banafsheh* in Persian, which means a violet flower. Parsa tells violet flowers are regarded in Iran and the Punjab as a remarkable therapy. The drug is astringent, demulcent, and diaphoretic, and mixed with lime juice and sugar, is prescribed as an infusion for fever and headache [29]. Pansy oil is useful for rhinosinusitis, headache, xeromycteria (dryness of the nasal passage), anti-inflammatory and analgesic, and also is considerable for rheumatoid arthritis [30].

Coriandrum Sativum L:

Coriander or cillender is named *geshniz* in Persian. The coriander plant is cultivated around Iran, Afghanistan and India. The globular fruits are famous spice and flavoring substance. People use it for salads and curries, and an infusion of the leaves is believed to decrease headache [30].

Mentha Piperta L:

Peppermint, Lamb-mint and black mint is named *na'na* in Persian. Peppermint oil is used for migraine headache, common cold symptoms, disinfectant, and decongestant [30].

Conclusion

Due to importance of ear, nose and throat diseases and their treatment, traditional and complementary therapies are suggested. Ethobotanically-derived phytochemicals have higher activity and we recommend the use of such agents for controlling the underlying conditions of diseases may have remarkable outcomes.

Acknowledgments

The authors are grateful to Seyed Hamed Hashemi for his assistance.

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