

## Review Article

# Complementary and alternative therapy for nasal conditions

U. RAGHAVAN, N. S. JONES

### Abstract

Over two-thirds of patients have tried a complementary therapy before seeking conventional medical help. In view of this it is important that doctors keep abreast of developments in this area and of the range of therapies which are now being offered. The interaction between drugs and herbal remedies is one example where this is of particular importance. This review assesses the current evidence base for complementary therapies in nasal disease. Contemporary medicine can learn much from the patient-centred approach that is central to many complementary therapies. There is, as yet, little evidence to support the effect of complementary therapy over those of the placebo effect, cognitive dissonance and the natural resolution of many disease processes.

**Key words:** Alternative Medicine; Nose; Paranasal Sinuses

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### Introduction

People are increasingly turning to complementary and alternative therapies as a supplement or substitute for medical care. The term 'complementary' usually includes practices that are not used in main stream conventional western medical treatments. This definition is not wholly accurate, since the dividing line between conventional medicine and complementary medicine is, in some areas, indistinct. The term 'alternative therapy' would include those practices that are used outside the main body of practising medical practitioners. This term, though popular, is a misnomer and gives the impression of being antagonistic or a last resort and implies that one system is superior to another. The word 'complementary' is preferred to the word 'alternative' since all systems of medicine may contribute to maintain or restore health. Complementary therapy includes Homeopathy, Herbalism, Acupuncture, Aromatherapy, Chiropractic and Osteopathy.<sup>1</sup>

Several studies have shown that as many as 70 per cent of patients have tried complementary therapy before seeking conventional help<sup>2,3</sup> and many take their complementary therapy in conjunction with their medical treatment.<sup>4</sup> For this reason we should keep abreast of developments in these fields. In the USA the National Institute for Health set up the Office of Alternative Medicine in 1992, to become

the National Centre for Complementary and Alternative Medicine. It is now being recognized that there are potential interactions with herbal remedies (Table I). Immigrants from China have different health seeking behaviours and knowledge of complementary therapies may help in their management.<sup>5</sup> Although many complementary medicines may have no discernible effect, other than the placebo effect, when analysed by conventional objective medical techniques, some double-blind controlled studies do suggest that a meaningful benefit can be obtained with acupuncture and homeopathic management.<sup>6,7</sup> Patients often cite the amount of time available for consultation as a reason for choosing complementary medicine. Complementary practitioners often base their treatment on the way patients experience and manifest the disease, including their psychology and response to illness. Patients also cite the increased chance for active participation in the treatment as a reason for choosing complementary medicine. Giving patients greater control in the decision-making process and a more pro-active role in deciding the management has been found to increase beliefs in the benefit of surgery.<sup>8,9</sup> Complementary practitioners do not need a conventional diagnosis to start treatment and this helps people with ill-defined illnesses such as chronic fatigue, functional back pain, headache, nasal

TABLE I  
CLINICALLY IMPORTANT INTERACTIONS OF ST JOHN'S WORT

Drug	Effect of interaction on drug
HIV protease inhibitors (indinavir, nelfinavir, ritonavir, saquinavir)	Reduced blood levels with possible loss of HIV suppression
HIV non-nucleoside reverse transcriptase inhibitors (efavirenz, nevirapine)	Reduced blood levels with possible loss of HIV suppression
Warfarin	Reduced anticoagulant effect and need for increased warfarin dose
Cyclosporin	Reduced blood levels with risk of transplant rejection
Oral contraceptives	Reduced blood levels with risk of unintended pregnancy and breakthrough bleeding
Anticonvulsants (carbamazepine, phenobarbitone, phenytoin)	Reduced blood levels with risk of seizures
Digoxin	Reduced blood levels and loss of control of heart rhythm, or heart failure
Theophylline	Reduced blood levels and loss of control of asthma, or chronic airflow limitation
Triptans (sumatriptan, naratriptan, rizatriptan, zolatriptan)	Increased serotonergic effects with increased incidence of adverse reactions
SSRIs (citalopram, fluoxetine, fluvoxamine, paroxetine, sertraline)	Increased serotonergic effects with increased incidence of adverse reactions

HIV = human immunodeficiency virus; SSRI = selective serotonin reuptake inhibitor.

congestion or irritable bowel syndrome. A large percentage of patients who use these treatments do not inform their doctor.<sup>10</sup> Even when surgeons are told by the patient about the complementary medicines used by them, most have little knowledge about these treatment methods. Although complementary medicines are considered harmless, potential harm from some of them needs recognition<sup>11</sup> as do issues which relate to quality and identification.<sup>12</sup> Therefore, clinicians need to become better informed about complementary therapies to ensure that they can be integrated safely into care.

## Types of complementary therapy

### Homeopathy

The word homeopathy is derived from the Greek word 'homoios' and 'pathos'. It was begun by Christian Samuel Hahnemann. It is a therapy based on the principle of like curing like, or paradoxical opposite action at low dose. Remedies are prepared from repeatedly diluted and succussed extracts of minerals, plants and some animal secretions. The process of serial dilution and succussion is called potentiation and is considered to increase the potency of a remedy's therapeutic action. It has been reported that individuals with certain physical and mental constitutions reacted in a predictable way when prescribed a particular medicine, whereas others with similar symptoms but with a different physical and mental make-up responded differently.<sup>13</sup> This has led to an emphasis on the individual during a consultation to evaluate their temperament, family history, likes and dislikes, whether they are active or lethargic, fond of outdoors, sea or country, sulky, robust, sickly etc., thus building up an image of the patient. This information is vital in helping the homeopath identify the factors associated with each patient's problem and in choosing the correct remedy. He/she may also give advice about lifestyle and diet along with the appropriate homeopathic remedy. Homeopathic treatments have been advocated in treating sinusitis with an improvement in symptoms in over 80 per cent<sup>14</sup> although the

definitions used to define sinusitis were loose. A bacterial lysate has been found to be more effective than a placebo in a controlled double-blind study of purulent sinusitis in adults.<sup>15</sup> However, another controlled study of sinus-related symptoms in a primary care setting showed a similar rate of improvement in patients given either a combination homeopathic preparation or a placebo.<sup>16</sup>

Weiser<sup>17</sup> compared the benefit obtained for hay fever sufferers from a homeopathic nasal spray of *Luffa* compounds with disodium cromoglycate, one of the least efficacious conventional therapies, and found the *Luffa* compound to be better using a validated questionnaire. In a double-blind controlled study of the effect of a homeopathic preparation of mixed grasses against placebo on 144 patients with hay fever the homeopathic group showed a significant reduction in patient and doctor assessed symptom scores.<sup>18</sup>

A controlled double-blind study of the common cold compared a homeopathic combination preparation with aspirin and found there was no difference.<sup>19</sup> Their use has also been advocated in children<sup>20</sup> on the basis of uncontrolled studies, and as nasal symptoms are known to resolve spontaneously in a large proportion of affected children,<sup>21</sup> randomized controlled studies are needed.

### Herbalism

Herbal medicine is the use of plant remedies in the treatment of disease. Modern herbalism is the accumulation of centuries of wisdom. It is a science based on knowledge that has been tried out on more people over the years than many modern orthodox medicines. In pharmacological medicine, many drugs are based on active plant constituents, that are extracted, synthesized, and then manufactured in bulk. Herbalists use the whole plant, the leaves, roots and berries because they believe that the delicate chemical balance of the living plant contains optimum conditions for a number of elements to work in synergy. This means that two preparations of the same herb may contain different proportions of

the ingredients.<sup>22</sup> Herbs are prescribed to improve the functioning of the body's systems and to encourage the restoration of harmony and balance. Herbalists aim to treat the underlying cause of the problem first and foremost and see the resolution of symptoms as a consequence. A detailed history is required which includes medical, lifestyle, family background and occupation to build up a picture of the whole person. Many herbal medicines contain substances with known pharmaceutical effects and interactions.<sup>23,24</sup> One double-blind placebo controlled study of a fixed combination phytomedicine showed it to be effective in reducing the symptoms of a common cold.<sup>25</sup> An extensive review on the use of herbal interventions in asthma and allergy<sup>26</sup> does not present any convincing evidence of any herbal medicine being efficacious in the management of allergic rhinitis. *Ecballium elaterium*, the squirting cucumber, has been advocated in the treatment of sinusitis following non-controlled trials.<sup>27</sup> Toxic side-effects have been reported from this substance, including death.<sup>28</sup> Further research is needed into the effects of many herbal medicines.<sup>29</sup> However, it should be recognized that contemporary conventional medicine is not without its morbidity in terms of side-effects and interactions.<sup>30</sup> One example is the inappropriate prescription of antibiotics for viral upper respiratory tract infections which is all too common,<sup>31,32</sup> as is the consequent development of resistant organisms.<sup>33</sup>

### Acupuncture

The word acupuncture literally means to puncture with needles. Its origin lies in traditional Chinese medicine. In simple terms, it is based on the correct flow of vital energy around the body. Fine needles are inserted into specific points in the body, that stimulate one part of the body's surface. This has an effect on the physiological functioning of the whole body or specific parts. A scientific interpretation is that the acupuncture points correspond to nerve pathways and that their stimulation with the insertion of needles leads to the production of natural opiates, which act as an endogenous analgesic.

The method of diagnosis involves observing patient's appearance and general demeanour as well as a detailed health history. Close attention is paid to the feel of the pulses in the wrist and the condition of the tongue that is believed to provide an image of what is happening throughout the body. Treatment involves the insertion of fine needles into specific points on the surface of the body depending on the diagnosis.

The WHO has compiled a provisional list of conditions that can be helped by acupuncture. These include respiratory problems, mouth and throat, eye, gastrointestinal, neurological and musculo-skeletal disorders. Acupuncture at the site of agger nasi cells has been advocated to treat allergic rhinitis<sup>34</sup> with 60 per cent having a significant improvement after two to 15 treatments at a three year follow-up. Other

workers have reported a 50 per cent improvement<sup>35</sup> and Charri<sup>6</sup> compared its effects with antihistamines and found a significant improvement in both groups.

Studies on acupuncture face unusual methodological problems as in painless conditions the control group should have a sham acupuncture given at an inappropriate acupuncture point.<sup>36</sup> Wolkenstein<sup>37</sup> compared specific acupuncture therapy points with non-specific acupuncture therapy in subjects with allergic rhinitis and showed no objective benefit in both groups when provoked with allergen. A pilot study has recently been carried out on the use of acupuncture in nonallergic rhinitis using both rhinomanometry and acoustic rhinometry as part of the objective evaluation of these patients.<sup>38</sup> The numbers were small and whilst it was a controlled study and nine of 13 patients had an improvement in their nasal airway resistance, it was not statistically significant.

Acupuncture has been combined with the use of extracts of antigen to desensitize patients with allergic rhinitis<sup>39</sup> but it is unclear whether the use of acupuncture confers any additional benefit to orthodox desensitization.<sup>40</sup>

Acupuncture in conjunction with electric impulses,<sup>38,41</sup> or surgery,<sup>42</sup> has been tried but none have reached a level of evidence-based medicine above level 4.<sup>43</sup> Techniques that administer low frequency electric impulses through acupuncture needles have been described for use in sialosis and frontal sinusitis but these have not gained acceptance.

### Aromatherapy

Distillation of plant oils for medicinal purposes were used as far back as 3000 BC in the Indus Valley, now part of Pakistan. Aromatherapy is the use of volatile and odiferous complexes to create a state of balance. Essential oils – oils that are volatile and oils that have been extracted from plants, usually by distillation – are used in the treatment of minor medical condition, or as relaxing or stimulating agents.

It has been proved that some substances applied to the skin or inhaled can be absorbed. Essential plant oils are complex chemicals and it is postulated that once they have entered the body their chemical and pharmaceutical properties change. The routes of administration in aromatherapy are varied and can be by massage, olfaction or inhalation.

### Chiropractic

The word means treatment by manipulation. Chiropractic treatment involves spinal manipulation, without the use of drugs or surgery. It is postulated that the partially misaligned and dysfunctional vertebrae and joints may cause nerves and their impulses to be impaired. This prevents the proper release of natural analgesics such as beta-endorphins. According to chiropractors, the spine affects the whole body's general health by interrupting neurohormonal functions. Diagnosis involves looking at the patients posture, lifestyle, nutrition, stress, hereditary problems and traumas. Treatment involves the

manipulation of joints. The primary use of this method is for spine-related disorders. However, it can be used for migraines and headaches<sup>44</sup> and in asthma.

### *Osteopathy*

Osteopathy is based on the theory that many of the body's health problems are due to mechanical disorders, which hinder the body's own self-healing process. The patient's life style, environment and nutrition are considered before starting the treatment. There are many techniques that the osteopath may use, including manipulating the joints, soft tissue techniques similar to massage or passive movements of the joints to restore mobility. Although mainly used for backache and other musculoskeletal system disorders it has been advocated for treating allergies, headaches and breathing difficulties.

### *Bioresonance*

This therapy is based on the idea that each individual has their own matter and energy. Biophysical variations within the patient are measured with a computer-aided device and fed back in a modified form. The individual's individual pattern is affected by allergies, vaccinations and environmental toxins. It has been said that 'feeding back' a 'pathological' electromagnetic wave to the subject in an inverted form can negate the unhealthy activity.<sup>45</sup> The same principle is used in treating allergies. The solutions are dissolved in 0.5 per cent phenol, yet this is still said to cause a specific reaction. It is hypothesized that this works in spite of the fact that there is much more electromagnetic interference from other sources.

### **Discussion**

Contemporary medicine is based on analysing evidence based on scientific principles to examine its effectiveness, the mechanism of action, and possible side-effects. Evidence-based practice of medicine is as much an issue for conventional medicine as it is for complementary medicine.<sup>46</sup> Lack of accessible and accepted research and information remains a principal stumbling block to the evaluation of complementary therapies.<sup>47</sup> To date, research into complementary therapies has been based on case studies with few randomized-controlled trials. Some double-blind studies do suggest that a meaningful benefit can be obtained with acupuncture and homeopathic management in asthma.<sup>7</sup> A randomized, double-blind, placebo controlled, multicentre study has shown a herbal remedy to be effective, safe and beneficial for the rapid relief of symptoms of cold.<sup>10</sup> Another similar study on the effectiveness of homeopathic medicine for sinusitis concluded that the results from homeopathic treatment were comparable with results from antibiotic treatment<sup>16</sup> although the entry criteria can be criticised. Walach<sup>48</sup> felt that homeopathy has not been properly investigated. For most interventions, randomized controlled trials can be carried out after

careful planning. An alternative research strategy is to have individuals in a cross-over trial.<sup>49,50</sup> Research into the effectiveness of complementary medicine is still at an evolutionary stage. Much still needs to be done to ensure that trials of good quality are devised to test the efficacy of these types of intervention.<sup>47</sup>

In surveys of users of complementary medicine, about 80 per cent are satisfied with the treatment they received. Interestingly, this is not always dependent on an improvement in their presenting complaint. This is akin to the effects of placebo and cognitive dissonance. The attraction for complementary medicine may include the relationship with their practitioner, the way in which illness is explained and the environment in which they receive their treatment. When these augment the therapeutic outcome of the treatment, they contribute to what is called 'the placebo effect'.<sup>51</sup>

When assessing the results of treatment in the absence of objective parameters, it is important to take into account the possible effects of cognitive dissonance on apparent self reported symptom improvement. Cognitive dissonance was first described by Festinger who reasoned that much of human behaviour could be explained by a basic need for consistency (or 'consonance') between stated attitudes or beliefs. If one belief (e.g. 'I am a truthful person') is challenged by another or by experience (e.g. 'I have just told a lie'), an unpleasant state of arousal occurs due to the dissonance between the two cognitive elements. This is reduced by changing one, in this case by not believing that one has told a lie. Exercising free choice and taking responsibility is known to strongly influence dissonance. The more active role the patient has in his treatment, the more likely he is to be subject to cognitive dissonance, because he himself is investing personal commitment and is exercising control in the treatment by taking an active role. This effect of cognitive dissonance can be expected to diminish with time.<sup>52</sup>

Cognitive dissonance is an important component of the placebo effect. The placebo effect can be defined as 'any effect attributable to a pill, potion, or procedure, but not to its pharmacodynamic, or specific properties'. This can be due to three phenomena:

- (1) Cognitive dissonance.
- (2) Regression to the mean. This is illustrated by diseases that often have a natural history of resolution or improvement in time e.g. Ménière's syndrome or benign positional paroxysmal vertigo.<sup>53</sup>
- (3) A real improvement due to an unknown mechanism whereby there is an objective or real improvement in symptoms. This includes pharmacophysiological mechanisms, neurobiological mechanisms and psychosomatic effects.<sup>9,54</sup>

Many of the symptoms associated with rhinosinusitis are self-limiting due to the natural resolution of a large proportion of these conditions.<sup>21</sup> The claims by various authors about the effectiveness of complementary therapy in rhinosinusitis and other

nasal conditions may often be due to the self-limiting nature of the disease and this needs to be considered when interpreting claims about the efficiency of treatment.

Contemporary medicine can learn much from the holistic approach that forms an integral part of many complementary therapies. However, as yet there is little scientific evidence to support their effectiveness over and above the benefits obtained through the placebo effect, cognitive dissonance and the natural resolution of disease.

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Address for correspondence:  
Professor N.S. Jones,  
Department of Otolaryngology – NHS,  
Queen’s Medical Centre,  
University Hospital,  
Nottingham NG7 2UH, UK.

E-mail: nick.jones@nottingham.ac.uk

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