



Allergic rhinitis:

is acupuncture an effective treatment?

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Acupuncture and ear acupressure may provide some relief for patients with allergic rhinitis but more trials are needed to provide the evidence needed to support this treatment.

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In Australia, allergic rhinitis or 'hay fever' is a common long-term condition among the old and young. Its prevalence in the adult population increased from 13.9% in 1995 to 16.1% in 2004 to 2005.¹ Allergic rhinitis impacts on patients' quality of life, work and school performance and on their productivity.² Therefore, allergic rhinitis represents a significant economic burden to individuals and the community.³ Moreover, it is associated with several comorbidities, including asthma, sinusitis and conjunctivitis.^{4,5}

Patients with allergic rhinitis frequently self-medicate and may use a range of over-the-counter products and herbal medicines,⁶ as well as having acupuncture performed. In Australia, acupuncture is one of the most commonly used forms of complementary therapies.⁷ In 2005, about one in 10 (9.2%) adult Australians had acupuncture performed and more than 10.2 million acupuncture consultations were conducted by medical and nonmedical practitioners.⁸ Nationwide, Medicare provided more than \$83 million in acupuncture rebates between 2006 and 2010.⁹

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EFFICACY: SYSTEMATIC REVIEWS ON CLINICAL EVIDENCE

Mixed results were reported in two systematic reviews of randomised controlled trials (RCTs) on acupuncture use for patients with allergic rhinitis. Roberts and colleagues (2008) included in their review seven RCTs published between 1996 and 2004.¹⁰ Each RCT used needle acupuncture on the body but there was considerable variation between trials in the acupuncture points selected, the form of stimulation used and the nature of the control intervention. A meta-analysis of symptom severity scores found a nonsignificant trend towards favouring the treatment group but the small size of the studies, methodological issues and heterogeneity in the meta-analysis precluded any firm conclusions being made.

A subsequent systematic review included 12 RCTs, of which acupuncture was used in two to prevent seasonal allergic rhinitis, in three to treat patients with seasonal allergic rhinitis and in six to treat patients with perennial allergic rhinitis, and one did not specify the type of allergic rhinitis treated.¹¹ In the 10 RCTs for treatment of patients with allergic rhinitis, variant sham interventions were used as controls in seven of the studies; in the other three, two used antihistamines and one used routine care as the comparators. The meta-analyses for seasonal allergic rhinitis found no benefit of acupuncture for the prevention or treatment of allergic rhinitis. However, for perennial allergic rhinitis the meta-analysis found a significant benefit for acupuncture compared with sham intervention for the improvement of total nasal symptoms. This was based on pooling data for two of the better quality studies.^{12,13}

Overall, the two systematic reviews indicate that, although there have been a number of good quality RCTs of acupuncture for allergic rhinitis, they tended to be small and heterogeneous in design. Acupuncture is a relatively safe treatment, but larger rigorously designed efficacy studies are still needed.^{14,15}

EFFECTIVENESS AND COST EFFECTIVENESS IN GENERAL PRACTICE

In addition to the efficacy studies, a large multicentre study of the effectiveness and cost effectiveness of acupuncture in general practice has been conducted in Germany. This pragmatic trial aimed to investigate the 'real world' use of acupuncture in addition to usual care versus usual care alone. The use of acupuncture treatment was at the physician's discretion, and could be varied according to patient response and combined with conventional treatments as required. After three months, a significant improvement was found in the rhinitis quality of life questionnaire score in the acupuncture group and there was lower usage of additional prescription medications for allergic rhinitis in this group.¹⁶

The cost of treatment in the acupuncture group was higher



Figure. Patients having ear acupressure performed have small pellets taped to the acupuncture points. They are taught to press these pellets regularly to stimulate the points.

but when adjusted for the quality of life gain, the addition of acupuncture to routine care was found to be relatively cost effective. However, due to its design, this study could not determine whether this effect was due to the acupuncture or to the addition of an extra therapy.^{15,17}

EAR ACUPUNCTURE AND EAR ACUPRESSURE

Whereas the above studies focussed on body acupuncture, acupuncture in the ear and its noninvasive form ear acupressure are also commonly used in clinical practice to treat patients with allergic rhinitis. A recent systematic review of RCTs located five studies of ear acupressure.¹⁸ Ear acupressure is a technique in which small pellets are taped on the acupuncture points instead of using needles (Figure). Patients are taught to press these pellets regularly to stimulate the points. Usually the pellets are replaced weekly and alternate ears are used on each visit. The main contraindications of its use are existing infections of the ear, an allergy to adhesive dressings and hearing aid use (depending on the location of points used).

The five studies in the review used a diverse range of active and potentially active interventions in the control arm and none used a sham control. Moreover, there was variation in the actual acupuncture points used and methodological weaknesses were evident in each of the studies. This precludes any firm conclusions being drawn but each study found a positive

effect for ear acupressure, although this was not necessarily superior to the control.¹⁸

Subsequently, a single-blind, randomised trial of ear acupressure versus sham intervention was conducted in patients with persistent allergic rhinitis (n=63) during the spring and early summer of 2008 in Melbourne. This pilot study found that real ear acupressure, conducted once a week for eight weeks, significantly improved total nasal symptom scores, sneezing, global nasal and nonnasal symptoms and improved 'regular activities at home and work' measured using the rhinitis quality of life questionnaire.¹⁹ Both the real and sham ear acupressure interventions were well tolerated by participants, with no serious adverse events reported from either group. Currently, a larger multicentre Australian study has finished its subject recruitment stage.

To the best of our knowledge, no cost-effectiveness analysis has been performed for ear acupressure. Compared with acupuncture using needles, ear acupressure has the advantages of no skin penetration and low use of the practitioner's time because once the pellets have been taped to the ear, the patient can leave the surgery. Consequently, should ear acupressure prove to be efficacious, it is also likely to be a cost-effective intervention.

CONCLUSIONS

Based on the results of controlled clinical trials, acupuncture and ear acupressure are relatively safe interventions and there is some evidence of their efficacy.^{10,11,18,20} Several well-designed trials have shown benefits for symptom relief, with the best available evidence being for acupuncture for perennial allergic rhinitis.¹¹ However, trials tend to be small and reliant on self-reported outcome measures. As an adjunct to usual care in general practice in Germany, acupuncture was found to be cost effective but whether these results could be translated into the Australian context will need a pragmatic study with rigorous trial design.

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