



Guest Editorial

Acupuncture for seasonal allergic rhinitis: is it ready for prime time?

Allergic rhinitis refers to an IgE-mediated process in which exposure to allergenic proteins triggers an inflammatory cascade resulting in nasal and ocular itching, sneezing, nasal congestion, and rhinorrhea. Symptoms can have a profound effect on quality of life (QoL) and are a significant health care burden. Allergic triggers can be perennial allergens, such as pet dander, cockroach, and house dust mites, or seasonal allergens, such as pollens from grasses, trees, and weeds. Conventional pharmacologic treatment of allergic rhinitis symptoms consists of the use of antihistamines, leukotriene modifiers, nasal glucocorticoids, decongestants, and in some cases allergen immunotherapy and supportive therapies, such as saline irrigation and allergen avoidance. The use of complementary and alternative medicine (CAM) as an adjunct or alternative to conventional Western medicine has increased in recent years, with approximately 26% of allergy sufferers endorsing trying CAM.¹ Reasons cited include lack of adequate response to conventional medicine (66.3%), belief in fewer side effects (78.3%), and a desire to pursue all treatment options (71.7%).¹ Approximately 17% of patients using CAM therapies for their allergies endorse the use of acupuncture.¹

In their study published in this month's *Annals*, Xue et al² examined the effectiveness of acupuncture on relief of seasonal allergic rhinitis (SAR) symptoms in 175 subjects from Melbourne, Australia using a parallel, randomized, single-blinded, sham-controlled study design. Subjects were randomly selected to receive real acupuncture (RA; n = 88) or sham acupuncture (SA; n = 87) 3 times per week over a 4-week period during peak rye grass season with an additional 4-week follow-up period. Participants were allowed to use standardized relief medications, including an oral antihistamine or nasal decongestant spray, for refractory symptoms. In addition to assessing the primary outcome of nasal and non-nasal symptoms, 2 separate screening questionnaires were used to assess QoL and an overall global assessment of change was measured. Similar to their 2002 study, Xue et al³ found that the RA group had statistically decreased sneezing and itching of the ears and palate at the end of the treatment compared with the SA group and improvement in several QoL scores at the end of the treatment and during follow-up. Despite showing an improvement in isolated nasal and non-nasal symptom scores, Xue et al² found no significant differences among the other 6 symptom scores in their primary outcome or in the assessment of "global change" between the RA

and SA groups at the end of the treatment and follow-up phases. As with previous acupuncture studies, the treatment was safe, with no significant adverse events.²

In recently updated clinical practice guidelines for allergic rhinitis published by the American Academy of Otolaryngology–Head and Neck Surgery, acupuncture is listed as a treatment option for clinicians based on "a preponderance of benefit over harm," although they cited a low level of confidence in the evidence.⁴ A systematic review performed in 2009 by Lee et al⁵ examined 5 trials assessing the use of acupuncture in the management of SAR and found that the results "fail to show specific effects of acupuncture" compared with SA. The results of this current study are similar to the results of Williamson et al⁶ and the 2002 study by Xue et al.³ A more recent randomized, single-blinded, crossover study by Brinkhaus et al⁷ in 2013 examined QoL and RM scores in 422 patients with SAR who received RA, SA, or RM alone and found a statistically significant improvement in QoL and antihistamine use in RA. However, owing to study limitations, the investigators admitted that such findings might not have clinical significance. Most studies to date have not compared acupuncture with the routine use of traditional pharmacologic methods but rather with relief medications ranging from as-needed antihistamines to nasal decongestant sprays to oral corticosteroids.^{2,3,6}

The use of randomized, double-blinded, placebo-controlled trials has long been considered the gold standard in assessing the effect of intervention vs placebo. Such study designs are difficult to perform when examining the effect of acupuncture owing to the physical nature of the intervention. A 2003 review examining the use of SA demonstrated significant heterogeneity in the intervention used, including the use of remote needling sites, shorter needles, shorter depth of insertion, or lack of manipulation in attempt to avoid *de chi* sensation triggered by needling.⁸ No single intervention was found to have a clear association between the type of sham and the results of the clinical trial, thus making it difficult to truly assess the potential effect of the placebo compared with the intervention.⁸ In their current study, Xue et al² attempted to minimize any impact of the sham by using alternate needle insertion sites, shorter needles, shallower depth of insertion, and inactive manipulation. Although participants were aware of the use of a sham intervention, no significant difference was found between the groups when they were asked which group they believed they were allocated to.²

The current study by Xue et al² clearly addresses some of the limitations of previous studies in the examination of the effects of acupuncture on the management of SAR. Although their results demonstrate statistically significant improvement in isolated symptom scores for sneezing and itchiness of the ears and palate,

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the lack of significant change in many other primary and secondary measurements brings the clinical significance into question. It is evident that patients are interested in the use of CAM therapies for a variety of reasons, and given the overall safety, acupuncture can be considered a treatment option for those patients. However, more studies are needed that compare the effects and costs of acupuncture with those of traditional pharmacologic therapy to help the practicing allergist in advising patients on options for treatment.

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References

- [1] Schäfer T, Riehle A, Wichmann HE, Ring J. Alternative medicines in allergies—prevalence, patterns of use, and costs. *Allergy*. 2002;57:694–700.
- [2] Xue CC, Zhang AL, Zhang CS, et al. Acupuncture for seasonal allergic rhinitis: a randomized controlled trial. *Ann Allergy Asthma Immunol*. 2015.
- [3] Xue CC, English R, Zhang JJ, Da Costa C, Li CG. Effect of acupuncture in the treatment of seasonal allergic rhinitis: a randomized controlled clinical trial. *Am J Chin Med*. 2002;30:1–11.
- [4] Seidman MD, Gurgel RK, Lin SY, et al. Clinical practice guideline: allergic rhinitis. *Otolaryngol Head Neck Surg*. 2015;152(suppl):S1–S43.
- [5] Lee MS, Pittler MH, Shin BC, Kim JJ, Ernst E. Acupuncture for allergic rhinitis: a systematic review. *Ann Allergy Asthma Immunol*. 2009;102:269–279.
- [6] Williamson L, Yudkin P, Livingstone R, Prasad K, Fuller A, Lawrence M. Hay fever treatment in general practice: a randomized controlled trial comparing standardized western acupuncture with sham acupuncture. *Acupunct Med*. 1996;14:6–10.
- [7] Brinkhaus B, Ortiz M, Witt CM, et al. Acupuncture in patients with seasonal allergic rhinitis: a randomized trial. *Ann Intern Med*. 2013;158:225–234.
- [8] Dincer F, Linde K. Sham interventions in randomized clinical trials of acupuncture—a review. *Complement Ther Med*. 2003;11:235–242.