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Is Acupuncture Effective in Reducing Overall Symptomatology in Chronic Rhinosinusitis?

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BACKGROUND

Chronic rhinosinusitis (CRS) is associated with high economic burden and poor quality of life and affects up to 15% of the population worldwide. Saline irrigation, intranasal corticosteroids (INCS), and endoscopic sinus surgery have been established as the mainstays of treatment. Due to the chronic nature of the disease, many CRS patients will resort to trying complementary and alternative medicine to manage their symptoms. Acupuncture is a key component of traditional Chinese medicine (TCM) that is theorized to affect the nervous system and autonomic regulation. It is used for various medical conditions, including migraine and arthritis. The effectiveness and the role of acupuncture in the clinical management of CRS remains unclear. This review summarizes the current literature surrounding the use of acupuncture in CRS.

LITERATURE REVIEW

A literature review of PubMed was executed using the terms “acupuncture” and “sinusitis.” Titles and abstracts were screened, and articles that best addressed the question were selected and critically appraised.

In 2006, Pletcher et al. reported on a survey of 331 regional licensed acupuncturists regarding the effectiveness of TCM acupuncture in treating CRS and nasal symptoms.\(^1\) They had a 22% response rate. The mean score for perceived overall efficacy of acupuncture in treatment of sinus and nasal symptoms was 4.2 on a Likert scale, with 5 being the most effective. However, the diagnostic criteria of CRS was not standardized, and only 28% of practitioners admitted to using imaging studies to help establish the diagnosis. The authors concluded that acupuncturists who treat CRS patients perceive good efficacy, but no objective data from the patients themselves was collected.

A prospective cohort study in 2012 by Suh et al. investigated the effectiveness of integrative East-West medicine (IEWM) among 11 patients with CRS who have undergone maximal medical therapy (defined as a 4- to 6-week course of antibiotics, intranasal corticosteroid, nasal saline irrigation, decongestants, and mucolytics).\(^2\) These patients were diagnosed with CRS using standardized criteria. Acupuncture, acupressure, and dietary modifications were used as adjuncts to medical therapies. All participants completed two quality-of-life (QOL) questionnaires before and after the 8-week treatments: the 36-item Short Form Questionnaire (SF-36) and the 20-item Sino-Nasal Outcome Test (SNOT-20). They found combined treatment improved select domains of the SF-36: physical role (\(P = 0.01\)), vitality (\(P = 0.04\)), and social function (\(P = 0.01\)). The mean change in SNOT-20 was not significant. The authors conclude that an integrated approach is safe and may lead to some improvements in quality of life; they suggest that further studies are needed to clarify the role of IEWM in CRS. With no control group, however, it is difficult to isolate the benefits attributable to acupuncture in these patients.

Published in 2005, a single-blind randomized controlled trial (RCT) by Rössberg et al. compared QOL in three groups of CRS patients: 25 patients were treated with 10 sessions of TCM acupuncture, 19 with sham/control acupuncture, and 21 with conventional medical therapies (xylometazoline, oral corticosteroids, nasal saline spray, and antibiotics).\(^3\) Curiously, patients were not treated with an INCS in the conventional group. Patients with pansinusitis or polyps were excluded. Over 12 weeks, authors assessed soft tissue swelling, CRS symptoms, and QOL. They found that the computed tomography (CT) scans showed a significant reduction in sinus soft tissue swelling only in the conventional medicine group.
In both VAS and NAF, TCM acupuncture led to greater improvements in both VAS \( (P = 0.0004) \) and NAF \( (P = 0.0041) \) compared to the control, suggesting a superior decongestant efficacy of TCM acupuncture. This study supported the use of TCM acupuncture for nasal congestion but regrettably does not specify the number of CRS-associated cases or its diagnostic criteria. Therefore, the generalizability of this study to the CRS population is extremely poor.

**BEST PRACTICE**

Although acupuncture is used to treat a variety of medical conditions, there is insufficient evidence to support its use in CRS; therefore, the authors cannot currently recommend the use of acupuncture in CRS. The existing literature is limited by small sample sizes, lack of standardization in acupuncture techniques, and poorly defined CRS diagnostic criteria. Although it appears useful as an adjunct to conventional therapy, the limited data from published studies have not shown any conclusive advantage over conventional medical therapies. Further research comparing acupuncture to existing conventional treatments, which include control groups and validated outcome measures, are warranted to assess its clinical utility.

**LEVEL OF EVIDENCE**

The level of evidence in this article includes one survey \( (\text{level } 5) \), \(^1\) one cohort study, \(^2\) and three randomized controlled trials \( (\text{level } 1) \). \(^3^–^5\)

**BIBLIOGRAPHY**