Auriculotherapy in Neurology as an Evidence-Based Medicine: A Brief Overview

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ABSTRACT

This article provides a brief overview of the use of auriculotherapy in the treatment of various neurologic conditions. This overview is not comprehensive and is meant to be primarily informative. It is based on the premise that auricular acupuncture is an evidence-based medicine.

Keywords: auricular acupuncture, auriculotherapy, ear, neurology

INTRODUCTION

AURICULOTHERAPY IS A RELATIVELY SAFE and cost-effective system of auricular acupuncture developed by Paul M.F. Nogier, MD.¹ In general, it is well-known for its usefulness in the treatment of painful neurologic disorders, such as migraine, polyneuropathy, and radiculopathy. What is perhaps less well-known is auriculotherapy's usefulness in the treatment of nonpainful neurologic conditions. Yet, such applications are particularly relevant to the field of neurology, as neurophysiology was postulated by Nogier and other researchers to be a primary factor underlying auriculotherapy's clinical efficacy.² Although this current report is meant to be primarily clinically oriented, literature related to the neurophysiologic and other mechanisms of auricular acupuncture are included in the references.^{3–5} Thus, the purpose of this article is to provide the reader with an overview of a few potential applications of auriculotherapy for treating neurologic conditions.

METHODS

Relevant literature was consulted primarily by journal articles referenced in PubMed. In addition, certain pertinent books were consulted. The literature cited is not presented comprehensively, but is noted to demonstrate that the auriculotherapy used in neurology is an evidence-based medi-

cine. It should be understood that auriculotherapy has been used to treat neurologic conditions not included in this report. This subject was presented as a workshop at the Ninth International Symposium in Auriculotherapy, in Singapore, August 10–12, 2017.

DISCUSSION

Auricular acupuncture has been reported with respect to treatment of cranial neuropathies. Some examples include potential beneficial effects on olfactory acuity⁶ and optic neuropathy.⁷ Auriculotherapy has also been applied to treat patients who have hiccups.⁸ Regarding the treatment of hiccups, the author has had favorable personal clinical experience in treating patients with an auricular treatment protocol developed by David Alimi, MD, at the University of Paris XIII and described in a published textbook of auriculotherapy.⁹

A potential application of auriculotherapy in neurology concerns the adjunctive treatment of epilepsy. In addition to some interesting reports involving auricular acupuncture in animal models of epilepsy,¹⁰ there have been encouraging human trials.¹¹ As patients with epilepsy do not always experience good results with pharmaceutical therapy, the possibility of adjunctive treatment with auriculotherapy is interesting.

A favorable auricular acupuncture intervention in ocular myasthenia gravis has been reported.¹²

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Auricular acupuncture has been reported with favorable results in the treatment of behaviors linked to dementia,¹³ and also for usefulness in the prevention of postoperative delirium in elderly patients.¹⁴ In this population, adjunctive treatments that might spare patients from receiving high doses of potent, sedating drug therapies are of interest.

Auriculotherapy has also been reported to be useful for treating sleep disorders, notably in cases of insomnia. For example, reports have included veterans with post-traumatic stress disorder and insomnia,¹⁵ and women with insomnia.¹⁶ A review of the literature on auriculotherapy for insomnia has been published.¹⁷ Such patients are at risk for becoming psychologically or physically dependent on hypnotic medications. Auriculotherapy could provide an adjunctive benefit together with cognitive-behavioral therapy for treating chronic insomnia, with the latter being a treatment that is considered first-line by the U.S. National Institutes of Health.

One reason why auriculotherapy may benefit patients with sleep disorders—in addition to other neurologic conditions—resides in the unique innervation of the auricle of the ear. This includes primarily trigeminal, great auricular, and vagal sensory afferents, along with sympathetic motor and motor efferent innervation to the intrinsic and extrinsic muscles of the ear. Acupuncture stimulation of the auricle of the ear could affect the balance of sympathetic and parasympathetic tone, via the reticular formation, among other central nervous system pathways.² By promoting parasympathetic tone in patients with insomnia, sleep onset and maintenance could be favored.⁹

Auricular acupuncture first came to modern medical attention for its efficacy in the treatment of pain, notably sciatic pain.¹ It has since been applied clinically in patients with many painful conditions. For example, there is evidence that ear auriculotherapy may be effective in the treatment of migraine, and that the selection of auricular target points matters.²⁰

An auriculotherapy protocol known as Battlefield Acupuncture has been found through clinical trials to be useful for treating patients in a variety of painful situations.²¹ A technique known as auricular point acupressure, has been applied with high acceptance in the setting of patients with chronic low back-pain; this is also noteworthy in that it illustrates how nonneedling techniques may possibly be helpful.²²

Such techniques could be particularly useful for patients who are afraid of needles, or for whom needling may be relatively contraindicated by immunosuppression or bleeding diatheses. In this author's personal clinical experience, auriculotherapy can be helpful for patients with painful peripheral neuropathy.

CONCLUSIONS

The present article provides a brief overview of reports of the utility of auricular acupuncture in various neurologic settings. Much literature in the form of books and journal

articles has been published, including discussions about neurologic applications beyond the few cited in this report. Reviews have been published regarding the role of acupuncture in neurology in general.^{18,19} Compared to the field of medical acupuncture, there has been relatively less literature pertaining to auricular acupuncture. Evidence is nevertheless available, although in general, it is relatively limited. At a time when neurologists take into consideration not only the efficacy and cost of therapeutic interventions, the relative safety of auricular acupuncture merits further attention.

Auriculotherapy has been described as being potentially useful in a variety of neurologic settings beyond those of pain management. The auriculotherapy used in neurology is an evidence-based medicine. However, the evidence is limited, and further studies will be required to better assess the role of auricular acupuncture in the treatment of patients with neurological disease.

AUTHOR DISCLOSURE STATEMENT

No competing financial interests exist.

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