

The Treatment of Meniere's Disease with Acupuncture and Chinese Medicine: A Case Study

By: Lauren Salisbury,
Yong Deng, Yasmin
Hilmi & Jeffrey
Langland

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Abstract

This article presents the use of acupuncture and Chinese herbal medicine to treat a case of Meniere's Disease. The patient presented with a five-month history of Meniere's disease which was caused by prolonged exposure to elevated temperatures. The patient had been evaluated by a head, ear, eye, nose and throat (HEENT) doctor, and a neurologist, along with being hospitalised weekly for severe episodes of vertigo. The patient had been treated with conventional medication, which did not resolve their symptoms. Over a period of ten weeks involving 14 acupuncture treatments and Chinese herbal medication, the patient's vertigo completely resolved and concomitant symptoms such as tinnitus and sensorineural hearing loss also improved. The patient also completely discontinued their meclizine, which at the beginning of treatment they had been taking every six hours.

Introduction

Meniere's disease is a disorder that arises from abnormal fluid and ion balance in the inner ear. It affects up to 10 to 15 people per 100,000 in the United States (Moskowitz et al, 2017) and 12 out of every 1,000 people worldwide (Moskowitz et al, 2017). Meniere disease refers to the presentation of a typical set of symptoms such as tinnitus, episodic vertigo and sensorineural hearing loss, with an idiopathic aetiology (Moskowitz et al, 2017). Different aetiologies such as immunologic, viral and vascular causes, as well as hypoplasia of the vestibular aqueduct, have been suggested, however the exact mechanism remains unknown (Moskowitz et al, 2017). Medications such as meclizine (an anti-histamine), Zofran (ondansetron hydrochloride - an anti-nausea medication) and hydrochlorothiazide (a diuretic) are given to Meniere's patients with the hope of managing symptoms, as the episodes of Meniere's can be debilitating. The pathogenesis of Meniere's disease is thought to be associated with endolymphatic hydrops and changes of the membranous, endolymph-containing portions of the labyrinthine system (Moskowitz et al, 2017). It is unknown why these changes lead to excess fluid build up in the endolymphatic spaces of the inner ear, causing severe symptoms.

According to traditional Chinese medicine (TCM), one of the most common causes of Meniere's disease

(Maciocia, 2005) involves Liver wind stirring phlegm. Other possible Chinese patterns include deficiency of qi and blood, deficiency of Kidney essence, Liver yang rising, and phlegm and dampness in the middle jiao (Chell, 1997). In one research study, 34 participants with Meniere's disease all had complete resolution of symptoms such as vertigo after acupuncture, even after previously trying various pharmaceutical interventions (Steinberger et al, 1983). Another study that used acupuncture in an emergency department setting revealed an immediate effect of significantly reduction of dizziness and vertigo after a 30-minute acupuncture treatment (Chiu et al, 2015). This case presents the treatment of a patient who experienced complete resolution of vertigo due to Meniere's disease and was also able to discontinue their medication for the condition.

Presenting condition

A 70-year-old male presented in the clinic with vertigo, tinnitus and sensorineural hearing loss for the last five months. The symptoms had developed after his car broke down and he had to walk in the heat for a long period of time without access to water. He reported severe weekly episodes of vertigo that would last one and a half hours and had required multiple hospitalisations, along with tinnitus (an air-like sound) that lasted all day, and hearing loss in the right ear. He had been evaluated by both an HEENT

doctor and a neurologist, who had diagnosed Meniere's disease and sensorineural hearing loss. He was prescribed meclizine 25mg, hydrochlorothiazide 25mg and Zofran 4mg. His HEENT doctor also performed the Epley manoeuvre (in which the patient's head was placed in a series of different positions to dislodge crystals in the ear). While the medications helped to control his symptoms (particularly the meclizine) he did not like their side-effect of drowsiness. However, he was unable to discontinue the medications due to his symptoms returning whenever he stopped them. His goal with acupuncture and Chinese medicine was to reduce and ultimately discontinue his medication without the return of any symptoms. The vertigo was the most troublesome symptom as he would be incapacitated during the attacks. He did not have a family history of Meniere's, but had a past medical history of prostate cancer (possibly due to exposure to Agent Orange according to his oncologist) and cataracts which had been treated with surgery.

Diagnosis

The patient's Chinese medicine diagnosis was Liver wind stirring phlegm, Liver yang rising and Kidney and Liver yin deficiency. This was based on the patient's red tongue body with a white sticky coat, and rapid, wiry, slippery pulse, along with his symptoms of vertigo, sensorineural hearing loss and tinnitus. According to Chinese medicine theory, phlegm blocks qi flow through the channels and orifices causing symptoms of vertigo, tinnitus and hearing loss (Glick, 2003). In this patient, internal Liver wind from Liver and Kidney yin deficiency and Liver yang rising also contributed to vertigo. As human beings age, yin fluids tend to decline, leaving them susceptible to internal wind conditions that manifest as vertigo or tremors. When the yin is damaged it can lead to hyperactive Liver yang that rises to the brain as wind, causing dizziness (Liangyue, 1999).

Treatment

The primary treatment principles were to clear wind, transform phlegm and nourish Kidney and Liver yin. Every week before treatment the patient was asked about their improvement from the previous treatment and an intake asking about their current symptoms was completed. Next the patient's pulses were assessed along with observation of their tongue. Their Chinese medicine pattern was then determined based on this information and acupuncture points (Table 1) were selected. Acupuncture needles were inserted and retained for 30 minutes and stimulated after 15 minutes. A total of 14 treatments were given at intervals of once or twice a week. Chinese herbal medications were also prescribed throughout the course of treatment (see Table 2).

Points	Target
Yinlingquan SP-9	Drain damp
Susanli ST-36	Promote flow of qi
Yintang M-HN-3	Calm the shen
Fengchi GB-20	Clear wind
Taichong LIV-3	Promote flow of qi
Hegu LI-4	Promote flow of qi
Tinghui GB-2	Clear wind
Taiyang M-HN-9	Clear wind
Baihui DU-20	Calm the shen
Sishencong M-HN-1	Calm the shen
Auricular Liver, Kidney, Shenmen	Calm the shen
Fenglong ST-40	Clear phlegm
Taixi KID-3	Tonify Kidney yin

Table 1: Acupuncture points used with indications

Formula Name	Target Name
Rising Courage Teapills (Plum Flower) Zhu Ru (Bambusae Caulis in taeniam), Zhi Shi (Aurantii Fructus immaturus), Zhi Ban Xia (Pinelliae Rhizoma preparatum), Chen Pi (Citri reticulatae Pericarpium), Fu Ling (Poria), Gan Cao (Glycyrrhizae Radix), Sheng Jiang (Zingiberis Rhizoma recens), Da Zao (Jujubae Fructus), activated carbon, botanical wax, Hua Shi (Talcum)	Regulates qi, clears and transforms phlegm-heat, harmonizes the Gall Bladder and Stomach, calms the shen
Tian Ma Gou Teng Teapills (Plum Flower) Tian Ma (Gastrodiae Rhizoma), Gou Teng (Uncariae Ramulus cum Uncis), Zhi Zi (Gardeniae Fructus), Huang Qin (Scutellariae Radix), Yi Mu Cao (Leonuri Herba), Chuan Niu Xi (Cyathulae Radix), Shi Jue Ming (Haliotidis Concha), Sang Ji Sheng (Taxilli Herba), Fu Shen (Poriae Sclerotium paradidicis), Du Zhong (Eucommiae Cortex), Ye Jiao Teng (Polygoni multiflori Caulis), activated carbon, botanical wax, Hua Shi (Talcum)	Sedates the yang, calms the Liver, extinguishes internal wind, tonifies the Liver and Kidneys, invigorates the blood, clears heat

Table 2: Chinese herbal medicine formulas used with indications

Outcomes

After two treatments, over a week, the patient experienced one episode of vertigo and then had complete resolution of this symptom (Fig. 1C), which never returned during treatment. The patient also reported the severity of his sensorineural hearing loss reduced from a rating of 10 out of 10 (the worst) to 7 out of 10 the second week of treatment, to 3 out of 10 by the third week of treatment

(Fig. 1A), which then stayed at the same rate throughout treatment. His tinnitus went from a rating of 10 out of 10 the first week of treatment to 3 out of 10 by the fourth week of treatment. The tinnitus also greatly improved from a severe ringing to mild ringing to an air-like sound that was much more manageable (Fig. 1B). Although the tinnitus improved from the treatments, the air-like sound of the tinnitus did not change after treatment. The patient was able to wean himself off his medication and went from taking it every six hours at the initial visit to discontinuing it at the final treatment.

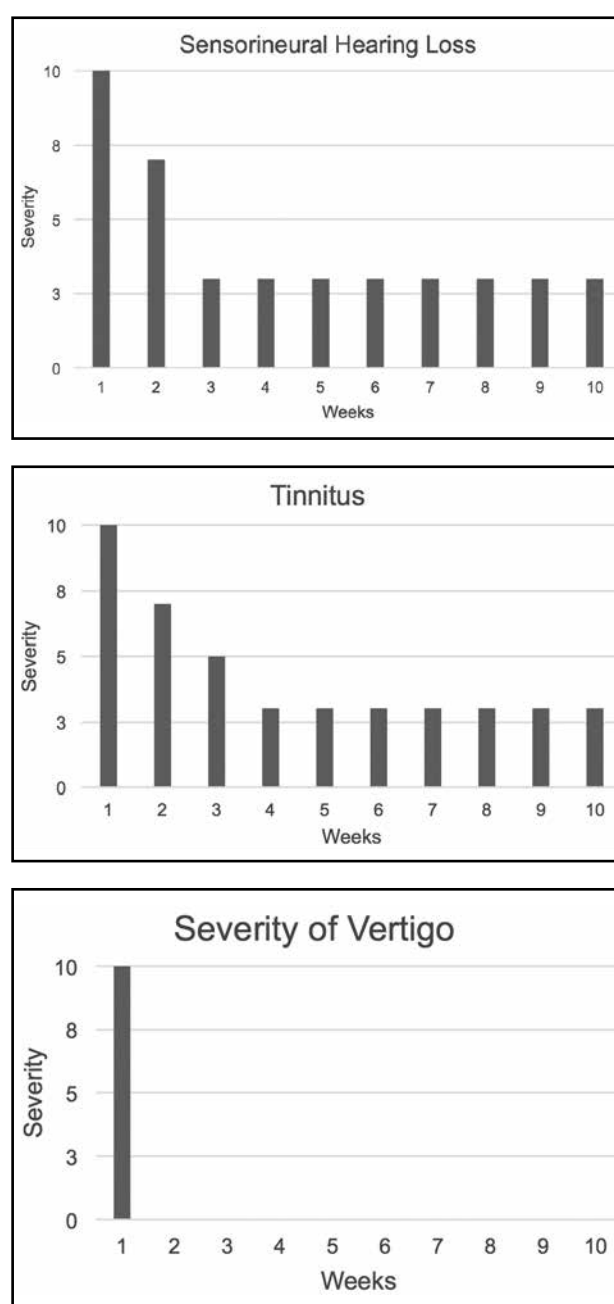


Figure 1A: Sensorineural hearing loss - patient symptom severity

Figure 1B: Tinnitus - patient symptom severity

Figure 1C: Vertigo - patient symptom severity

Discussion

This case represents the successful treatment of Meniere's disease with acupuncture and Chinese herbal medicine. This case also demonstrates that patients with Meniere's may be able to stop medication to manage their symptoms with the help of acupuncture and Chinese medicine. This patient was able to gradually wean themselves off their medication. Literature reviews show promising research for the treatment of Meniere's with acupuncture. For example, a systemic review showed beneficial effects both for those beginning to experience symptoms of Meniere's as well as those who experience chronic disease (Long, 2011). Although this patient's hearing loss improved, this response was in line with a recent systemic review of acupuncture and Meniere's that reports that hearing loss did not worsen but did not resolve (Jiaojun et al, 2016). Overall, this case suggests that acupuncture and Chinese medicine may offer an effective treatment for those interested in managing Meniere's without medication.

Dr. Lauren Salisbury¹ graduated from Our Lady of the Lake University in San Antonio, Texas, with a B.A. in Political Science, where she was chosen as a McNair Scholar. She went on to earn a Master's of Science in non-profit management. She is a graduate of Southwest College of Naturopathic Medicine, where she received her doctorate in Naturopathic Medicine. She has completed a one-year general medicine residency and is currently a second year general medicine resident at Southwest College of Naturopathic Medicine. She is currently working on her Master's degree in Acupuncture at the Phoenix Institute of Herbal Medicine and Acupuncture.

Dr. Yong Deng¹ is an international expert in Chinese medicine and acupuncture. He earned his medical degree from and is former faculty of Chengdu University of Traditional Chinese Medicine in China. He has been teaching and practising at medical schools in China and the United States for more than 33 years with a concentration in Traditional Chinese Medicine for a wide range of diseases and conditions. Due to his extensive knowledge, Dr. Deng was invited to SCNM in 1996 and currently serves as the chair and professor within the Department of Acupuncture and Oriental Medicine. Dr. Deng is a licensed acupuncturist in Arizona and works with MDs in hospitals and several fertility treatment centres within the Phoenix area. He is a member of the State of Arizona Acupuncture Board of Examiners and has published over 30 papers and several books including the Encyclopedia of Chinese and U.S. Patent Herbal Medicines.

Dr. Yasmin Hilmi¹ received her doctoral degree at Michigan State University, where she focused on the mechanism and regulation of energy transduction in mitochondria and bacteria, and kinetics, mechanics, and protein chemistry of electron and proton transfer in cytochrome c oxidase. She previously taught biochemistry, genetics and molecular biology at Khartoum College of Medical Sciences for 12 years. Dr. Hilmi has performed research on cytotoxicity, antioxidant activity, enzymatic inhibition and elemental composition of some Sudanese medicinal plants used in traditional medicine, with special emphasis on the treatment of diabetes and cancer.

Dr. Jeffrey Langland^{1,2} received his doctorate degree from Arizona State University in the area of virology in December 1990. His area of interest at that time and still today is investigating and understanding

the complex cellular defenses against microorganisms. After graduating from Arizona State, he was a post-doctoral fellow at UC Davis studying oncolytic viruses, followed by a post-doctoral position at the University of Wyoming comparing similarities between plant and human defenses against viruses. In 1995, he returned to Arizona State University as a Research Assistant Professor. In this capacity he has instructed several courses including General Virology and The Biology of AIDS. In August 2007, Dr. Langland became the first joint faculty member at Southwest College of Naturopathic Medicine, maintaining his position at ASU and becoming the instructor for Medical Microbiology and Concepts in Research courses. Dr. Langland is chair of the Research Department at SCNMM bringing new insight and a fresh approach to research for the students and to the eld of naturopathic medicine.

Affiliations

¹ Southwest College of Naturopathic Medicine,
Tempe (Arizona)

² Arizona State University, Biodesign Institute,
Tempe (Arizona)

Corresponding author: Jeffrey Langland,
j.langland@scnm.edu

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