

Is There Any Evidence For Complementary And Alternative Therapy In Menieres Disease

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Abstract

Many of the treatment options for Meniere's disease have little proven benefit over placebo. Despite the lack of rationale for these treatments, many clinicians advocate them to their patients. Patients are often keen to try any medications to relieve their symptoms. With the recent surge in the use of complementary and alternative medications, Meniere's patients too have been drawn to them. It is imperative that clinicians are aware of the range of therapies available. This article reviews the evidence available for complementary and alternative therapies in Meniere's disease with emphasis on their proposed method of effect and potential side effects.

INTRODUCTION

In 1861 the French physician, Prosper Meniere first described Meniere's disease. Despite more than a century of research on Meniere's disease, there is still no cure for it.¹ Patients are often willing to try different treatments in an attempt to control their symptoms. The evidence for the efficacy of these treatments, both medical and surgical is often lacking.² Many therapies are highly controversial with little proven benefit over placebo.³ Patients are increasingly turning to Complementary and Alternative Medicine (CAM) to supplement or substitute their conventional management.⁴ This article is based on a review of literature on the potential role of CAM in the treatment of Meniere's disease.

MATERIALS AND METHODS

A literature search of articles published in English was conducted from MEDLINE, CISCOP, AMED and a number of non-Medline journals and websites of Meniere's disease support groups.

Search words included: Meniere's disease, dizziness, vertigo, labyrinthine disease, acupuncture, Chinese medicine, homeopathy, herbal medicine, ayurvedic medicine, chiropractic medicine, Tai Chi, biofeedback, hypnotherapy, alternative medicine, complementary medicine and CAM. All articles in which therapies were used to relieve symptoms due to Meniere's disease were included.

RESULTS

Randomised controlled studies on CAM for Meniere's disease are scarce. Most publications are based on single case-reports or observational case-series. The majority of therapies are based on individualised intervention and are directed to symptomatic relief of vertigo or tinnitus rather than to the whole disease complex. Acupuncture, homeopathy, herbal medicine, ayurvedic medicine, chiropractic medicine, Tai Chi, biofeedback and hypnotherapy are the popular therapies used for Meniere's disease.

ACUPUNCTURE

Acupuncture has been widely used in the treatment of Meniere's disease. In Meniere's disease, the needle stimulation is performed around the ear. The stimulation of acupoints is postulated to release natural opiates from nerves resulting in endogenous analgesia.⁶ Other effects may include alteration in blood flow⁷ or immune function.⁸

There are no randomised controlled trials (RCTs) on acupuncture for Meniere's disease. The clinical evidence of the effectiveness of acupuncture for vertigo is based on single case reports and observational case series. The effects of acupuncture were not defined or graded objectively. Responses to treatment were based on subjective improvement of vertigo as documented by patients or by specialist evaluation.

There are case reports of relief of vertigo following

acupuncture, with recurrence of symptoms when acupuncture is stopped.^{9, 10} Yang SM obtained a satisfactory result on 189 patients with Meniere's disease.¹¹ Steinberger and Pansini also reported good patient response.¹² Acupuncture with electric impulses has also been tried.¹³

Park et al. thoroughly reviewed the use of acupuncture therapy for tinnitus on the basis of rigorous, randomized, controlled trials and concluded that this treatment does not work.¹⁴ Similar conclusions have been documented by other authors.^{15, 16}

High quality RCT's are needed to provide more robust effectiveness data and to address important questions such as the optimal acupuncture procedures, value of booster doses and possible synergistic effects of acupuncture with conventional therapies in patients with Meniere's disease.

HOMEOPATHY

The efficacy of homeopathy in Meniere's disease is based on observational case series. Recommended medicines include salicylicum acidum, natrum salicylicum nux vomica and chenopodium. Symptomatic relief of Meniere's disease have been reported (Hoover, 1998; Jach, 1988).^{17, 18} Romer noted that 8 patients with Meniere's disease treated with salicylic acid were relieved of vertigo (30c potency) but not tinnitus.¹⁹ A randomised double blind controlled clinical study on homeopathic treatment (vertigoheel) versus conventional treatment (betahistine) for the treatment of vertigo showed the therapeutic equivalence of the two drugs established statistically.²⁰ Both reduced the frequency, duration and intensity of vertiginous attacks during the 6-week treatment period. The study was not specific for Meniere's patients. The primary ingredients of vertigoheel are Cocculus indicus, Conium maculatum, Ambra grisea, and petroleum. The mechanism of action of Cocculus indicus (Anamirta paniculata) mediated by its effects on gamma-aminobutyric acid (GABA) receptors. Coniine is an alkaloid derivative of C. maculatum that has suppressive effect on nicotinic receptors in the medulla.

HERBAL MEDICINE

WHO estimated that 80% of the world's population presently use herbal medicine in primary health care. Physicians regularly see patients who self-prescribe herbal medicinal products for Meniere's disease. Examples of herbal medicine used in Meniere's disease include Vinpocetine,²¹ Valerion, Ginger root and Ginkgo biloba. The mode of action of these agents varies. Experimentally, Vinpocetine is found to alter

red blood cell rigidity and dilates cerebral vessels.²² This may be the reason for its beneficial effect in Meniere's disease. Valerion has a sedative action similar to benzodiazepines.²³ Ginger root helps reduce nausea, which may be beneficial to Meniere's patients.²⁴ The active ingredient of Ginger (*Zingiber officinale*) is a phytonutrient called gingerol, which has known anti-emetic, antispasmodic, anti-inflammatory, and hypoglycaemic activity. However, it may interfere with anticoagulant therapy. Caution must be used when patients are taking heparin or coumadin.

Ginkgo biloba is one of the most well researched herbs in the world. It has been shown to be anti-ischaemic, anti-hypoxic and a radical scavenger. It increases efficiency of metabolism, regulates neurotransmitters and boosts oxygen levels in the brain.²⁵ These factors may contribute to its beneficial effect in Meniere's disease.

A double blind placebo controlled questionnaire-based trial on 1121 patients in treating tinnitus found that Ginkgo Biloba did not have any more positive effect on subjective improvement compared to placebo.²⁶ An RCT on low dilutions of the extract also proved Ginkgo biloba to be ineffective.²⁷ However, other randomised controlled trials on Ginkgo Biloba for tinnitus produced a positive result.^{28,29} Ginkgo Biloba products, dosages and duration of treatment varied in these trials and the results of these trials are subject to bias. In addition, the causes of tinnitus varied and so the particular effect on tinnitus due to Meniere's disease cannot be extrapolated from these trials. A recent systematic review on the effect of Ginkgo Biloba on tinnitus also showed that it is not effective.³⁰ The dosage of Ginkgo Biloba varied from suboptimal homeopathic dose of 2x 14.6mg to 160mg extract per day. Ginkgo Biloba may interact with anticoagulants and antiplatelet agents and should not be given along with them as it increases the risk of bleeding.³¹ Spontaneous hyphaema has been reported in patient taking Ginkgo Biloba in the absence of any pre-disposing factor.³² Ginkgo can also interact with thiazide diuretics and cause raised blood pressure.³³

At present, the body of evidence for the role of herbal medications for Meniere's disease is small. Though observational studies have noted favourable responses, it is important that more well-designed trials, with rigorous methodology and consistent dosages of the herbal extract, be used for patients with Meniere's disease.

AYURVEDIC MEDICINE

Charmomile tea and garlic oil are used to suppress Vata Dosa and relieve tinnitus.³⁴ This may be the basis of treating Meniere's disease though there are no articles specific to their use in Meniere's disease cited in peer-reviewed literature.

TAI CHI

This Chinese martial art views balance as the relationship between the body and the natural force of gravity. Being well balanced physically provides the foundation for balance of mind and emotions. Hain et al studied the effects of Tai Chi on balance rehabilitation. They found highly significant improvement in balance following Tai Chi training.³⁵ Further robust trials are required to acknowledge its effect on Meniere's disease, although vestibular rehabilitation in the form of Cawthorne-Cooksey exercises is commonly used in western practice.

CHIROPRACTIC MEDICINE

In Meniere's disease, it is suggested that relaxation of the neck muscles induced by this form of therapy improves blood supply to the ear.³⁶ Like acupuncture, endogenous opiates may also play a role in the relief of symptoms in Meniere's disease. The low level of evidence for the therapy has to be boosted by more rigorous trials for universal acceptance.

BIOFEEDBACK

Biofeedback is a treatment technique in which people are trained to improve their health by using signals from their own bodies. For example, audio signal from frontalis muscle electromyography is used to reduce the intensity of tinnitus and muscle tension in tinnitus patients.³⁷ Biofeedback is often aimed at changing habitual reactions to stress that can cause pain or disease. Increased activity of the proprioceptive and visual systems can help compensate for diseases of the vestibular system. One study looked into the visual-vestibular biofeedback in Meniere's disease and found transitory improvement in symptoms.³⁸ The articles on the effect of biofeedback are not specifically for Meniere's disease.

HYPNOTHERAPY

Hypnotherapy is one of the mind-body therapies used in a multitude of chronic illnesses. The notion that stress precipitates attacks in Meniere's disease are well documented.^{39,40,41,42} Hypnotherapy induces a state of trance with selective suppression of various functions of the

nervous system. The subjective relaxation induced by hypnotherapy may provide patients with a greater sense of control and involvement in their disease. Many web-based support groups have recommended hypnotherapy for Meniere's disease. Three non-controlled studies examining the effectiveness of hypnosis for tinnitus found improvement in patients' symptoms.^{43,44,45} However, the studies are not specifically for Meniere's disease.

MISCELLANEOUS THERAPIES

Many other mind body therapies are tried to decrease stress that may initiate or aggravate Meniere's disease. These include aromatherapy, massage, meditation, Yoga, psychotherapy etc. Whilst these therapies may be of benefit, unfortunately there is no scientific evidence supporting their use in Meniere's disease.

DOSAGES AND SIDE EFFECTS

Table 1 shows a list of the various homeopathic and herbal medications used for Meniere's disease. Dosage regimes vary significantly in different reports. This is because one specific dose may elicit different responses in different people and even a different response in the same individual at different times. Cost also varies significantly. Company literature is rarely substantiated. Local health food store sell many different types and dosages of the same alternative care product. Many patients self-medicate these drugs as they are sold over the counter. Patients will invariably take them when they hear that such products have cured other patients with Meniere's disease.

Figure 1

Table 1: Drugs used in Meniere's disease

Drug	Dosage
Homeopathic drugs	
Salicylicum acidum	30x potency
Salicylicum natrum	30x, 6x potency
Nux vomica	6% 4 tablets sublingually 4 times daily
Chenopodium	5g
Vertigoheel	1-3 tablets thrice daily or 15 drops thrice daily
Herbal drugs	
Ginkgo Biloba	EGb 761- 40mg tid or 250mg 1 cap twice daily
Vinpocetin	10mg – 1 tablet once to thrice daily
Valerion	3mg- 2 tabs thrice daily
Ginger root	100mg- 1tablet daily

Though CAM medications are deemed harmless, serious side effects have been reported. It is therefore important physicians and specialists to be aware of side effects and interactions of CAM with various conventional drugs. Table II gives the various adverse effects documented with drugs used in Meniere's disease.

Figure 2

Table 2: Adverse effects reported in literature

Therapy	Adverse effects
Homeopathic drugs	Mild and transient headache, nausea, diarrhoea, skin rashes, initial aggravation of symptoms
Ginkgo Biloba	Interacts with anticoagulants (increased risk of bleeding) and thiazides (raises blood pressure)
Vinpocetine	Interferes with blood coagulation
Valerion	Interacts with benzodiazepines
Ginger root	Contraindicated in patients with gall stones

DISCUSSION

The management of Meniere's disease often provides a formidable clinical challenge largely because its precise aetiology is unknown.^{46,47,48} Therefore, most treatments are directed to the relief of symptoms of Meniere's disease rather than to the disease process as a whole. This applies to both conventional and CAM. Jongkees cited that the existence of multitude of therapies is the best evidence of lack of good treatment for the disease.⁴⁹ In addition, extensive review of conventional therapies for Meniere's disease have shown that the success rates of conventional therapies such as labyrinthine suppressants, diuretics, histamine analogues-betahistine in controlling symptoms ranged between 60-80% .^{1, 50} Some of these results may indicate a non specific or placebo effect.³

There has been a worldwide surge in the use of CAM. The general public may perceive these therapies as more successful than, or supplementary to, conventional treatment for chronic illnesses such as Meniere's disease.

A number of popular therapies have been discussed in this review. Overall, nearly all the trials have been criticized because of deficiencies in design, including the lack of appropriate controls, inappropriate randomization procedures, and poor choices of end points. Further studies may well provide more evidence to support these treatments. The increase in popularity of CAM demands that conventional medical practitioners have some understanding of these therapies and the evidence that underpins them. From the literature presented, it is quite clear that at present not all CAM therapies can be integrated into conventional therapies for Meniere's disease. Acupuncture and mind body therapies appear to be safe and on an empirical basis, it is reasonable to think that these approaches can be integrated to conventional therapy. The preliminary evidence for homeopathy suggests benefit but there is a clear need for more definitive studies before we can make a clear conclusion. However, herbal medications should be used with caution; particularly as adverse drug reactions are more likely than with any other CAM treatments.

CONCLUSION

The last decade has seen an increased use of CAM in treatment of disease entities where limited success has been achieved with conventional medicines. This is especially so in the case of Meniere's disease. Patients use both conventional medicine and CAM in their management of Meniere's disease. Hence it is imperative that physicians treating patients with Meniere's disease be aware not only of the potential therapeutic benefits of CAM agents, but also their potential risks, including toxicity and drug interactions.

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References

1. Torok N. Old and new in Meniere's disease. *Laryngoscope* 1977; 85:131-135.
2. Thorp MA, Shehab ZP, Bance ML, Rukta JA. Does evidence-based medicine exist in Meniere's disease? A critical review of the last decade of publications. *Clinical Otolaryngol* 2000; 25: 456-460
3. Thomsen J, Bertlau P, Tos M, Johnsen JN. Placebo Effect in surgery for Meniere's disease *Arch Otolaryngol* 1981;

107:271-277

4. British Medical Association. Complementary medicine: new approaches to good practice. Oxford: Oxford University Press, 1993.
5. NIH Office of alternative medicine Clearing -house. What is Complementary and alternative medicine, in: General Information US Public Health Service Publication, Package-Spring 1998
6. Chung SH, Dickenson A. Pain enkephalin and acupuncture. *Nature* 1980; 283:243-244.
7. Balogun JA, Biasci S, Han L. The effects of acupuncture, electroneedling and transient electrical stimulation therapies on peripheral haemodynamic functioning. *Disability and rehabilitation* 1998 Feb; 20(2): 41-48
8. Gollub RL, Hui KK, Stefano GB. Acupuncture: pain management coupled to immune stimulation. *Acta Pharmacologica Sinica* 1999 Sep; 20(9): 769-777
9. Ji XP. Meniere's syndrome. *International Journal of Acupuncture* 1998; 9(2): 157-60
10. Xu B, Ge S. Treatment of Meniere's disease by acupuncture: report of 75 cases. *Journal of Traditional Chinese Medicine* 1987 ; 7(1): 69-70
11. Yang SM. Acupuncture for Meniere's syndrome: short and long-term observation of 189 cases. *International journal of clinical acupuncture* 1999; 10(3): 303-4
12. Tian ZM. Treatment by electro-acupuncture: Meniere's disease. *Journal of Chinese Medicine* 1999 Oct; 61: 28-9
13. Steinberger A, Pansini M. The treatment of Meniere's disease by acupuncture. *American J. Chinese Medicine* 1983; 1-4:102-5
14. Park J, White AR, Ernst E. Efficacy of acupuncture as a treatment for tinnitus: a systematic review. *Arch Otolaryngol Head Neck Surg* 2000;126:489-92.
15. Axelsson A, Andersson S, Gu LD. Acupuncture in the management of tinnitus: A placebo-controlled study. *Audiology* 1994; 33: 351-60.
16. Marks NJ, Emery P, Onisiphorou C. A controlled trial of acupuncture in tinnitus. *J Laryngol Otol* 1984; 98: 1103-9.
17. Hoover T. Meniere's disease: *New England Journal of homeopathy* 1998; 7(2): 23-4
18. Jach RA. Meniere's disease treatment with *Chenopodium*. *Br Homeopath J* 1988 Jul; 77(3): 169-71
19. Romer R. Salicylic acid in Meniere's syndrome and similar conditions. *Homeopath* 1987 winter; 7(2): 66-77
20. Weiser M, Strosser N and Klein P. Homeopathic versus conventional treatment of vertigo: A randomised double blind controlled clinical study. *Arch Otolaryngol Head Neck Surg* 1998 Aug; 124(8): 879-85.
21. Taiji H and Kanzaki J. Clinical study of Vinpocetin in the treatment of vertigo. *Japanese Pharmacology and Therapeutics (Japan)* 1986; 14: 577-589
22. Hayakawa M. Effect of vinpocetine on red blood cell deformability in stroke patients. *Arzneimittelforschung* 1992; 42:425-7
23. Dergal JM, Gold JL, Laxer DA, Lee MS, Binns MA et al. Potential interactions between herbal medicines and conventional drug therapies used by older adults attending a memory clinic. *Drugs Aging* 2002; 19(11): 879-86
24. Commission E Monographs. Ginger root. Caution in people with gallstones and pregnancy. *The Therapeutic guide to herbal medicines*. Sept 1990
25. Cupp MJ. Herbal remedies: adverse effects and drug interactions. *Am Fam Physician* 1999; 59(5): 1239-1244.
26. Drew S, Davies E. (2001) Effectiveness in Meniere's disease of Ginkgo biloba in treating tinnitus: Double blind, placebo-controlled trial. *BMJ* 2001; 322: 73
27. Von Wedel H, Calero L, Walger M, Hoenen S, Rutwalt D. (1995) Soft-laser/ginkgo therapy in chronic tinnitus: placebo controlled study. *Adv Otorhinolaryngol* 1995; 49:105-108
28. Holgers KM, Axelsson A, Pringle I. Ginkgo biloba extract for the treatment of tinnitus. *Audiology* 1994; 33(2): 85-92
29. Meyer, B. Etude multicentrique randomisee a double insuface au placebo du traitement des acouphenes par l'extrait de Ginkgo biloba. *La Presse Medicale*, 1986;15:1562-1564
30. Hilton M, Stuart E. Ginkgo biloba for tinnitus. *Cochrane Database Syst Rev*. 2004(2):CD003852.
31. Heck Am, De Witt Ba, Lukes AL. Potential interactions between alternative therapies and warfarin. *Am J Health Syst Pharm* 2000 Jul; 57(13): 1221-7
32. Schneider C, Bord C, Misse P, Arnaud B, Schmitt-Bernard CF. Spontaneous hyphaema caused by Ginkgo Biloba extract *J Fr Ophthalmol* 2002 Sep; 25(7): 731-2.
33. Izzo AA, Ernst E. Interactions between herbal medicine and prescribed drugs: a systematic review. *Drugs* 2001; 61(15): 2163-75.
34. (<http://www.holistic-online.com>)
35. Hain TC, Fuller L, Weir L, Kotsias J. Effects of Tai Chi on balance. *Arch Otolaryngol Head Neck Surg* 1999 Nov; 125(11): 1191.
36. Keith K, Orlowski M, Keith E. Treatment of vertigo. *Chiropractic* 1989 Oct; 2(4): 95-6.
37. Borton TE, Clarke SR. Electromyographic biofeedback for treatment of tinnitus. *Am J Otol* 1988; 9(1): 23-30.
38. Hahn A, Sejna I, Stolbova K, Cocek A. Visuo-vestibular biofeedback in patients with peripheral vestibular disorders. *Acta Oto-Laryngologica - Supplement*. 2001; 545:88-91.
39. Saweda S, Takeda T, Saito H. Antidiuretic hormone and psychosomatic aspects in Meniere's disease. *Acta Otolaryngologica (Stockh)*, Suppl. 1997; 528:109-112.
40. Stahle J. Allergy, immunology, psychosomatic, hypo- and hypertonus. *Archives of Oto-Rhino-Laryngology* 1976; 212: 287-292.
41. Fowler Ep, Zeckel A. Psychosomatic aspects of Meniere's disease. *Journal of the American Medical Association*. 1952; 148: 1265-1268
42. Andersson G, Hagnebo C, Yardley L. Stress and symptoms of Meniere's disease: A time-series analysis. *Journal of Psychosomatic research* 1997; 43: 595-603
43. Kaye JM, Marlowe FI, Ramchandani D, Berman S, Schindler B, Loscalzo G. Hypnosis as an aid for tinnitus patients. *Ear Nose Throat J* 1994;73:309-12, 315.
44. Brattberg G. An alternative method of treating tinnitus: relaxation- hypnotherapy primarily through the home use of a recorded audio cassette. *Int J Clin Exp Hypn* 1983; 31: 90-97
45. Mason JD, Rogerson DR, Butler JD. Client centered hypnotherapy in the management of tinnitus: is it better than counselling? *J Laryngol Otol* 1996; 110: 117-120.
46. Paparella MM. Pathogenesis of Meniere's disease and Meniere's syndrome. *Acta Otolaryngol (Stokh) Suppl* 1984; 406: 10.
47. Dickins JR, Graham SS. Meniere's disease 1983-1989. *American Journal Of Otology* 1990; 11: 51-65.
48. Pearson BW, Brackmann DE. Guidelines to report treatment results in Meniere's disease. *Otolaryngology Head and Neck Surgery* 1985; 93: 579-81.
49. Jongkees LBW. Some remarks on Meniere's disease. *ORL* 1980; 42:1-9
50. Ruckenstein MJ, Rutka JA, Hawke M. The treatment of Meniere's disease: Torok revisited. *Laryngoscope* 1991 Feb; 101(2): 211-218.

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