

Corporate Medical Policy

Transtympanic Micropressure Applications as a Treatment of Meniere's Disease

File Name: transtympanic_micropressure_applications_as_a_treatment_of_menieres_disease
Origination: 8/12/2004
Last CAP Review: 9/2019
Next CAP Review: 8/2020
Last Review: 9/2019

Description of Procedure or Service

Transtympanic micropressure treatment for Meniere's disease involves use of a hand-held air pressure generator that delivers intermittent complex pressure pulses. For this device to be used, a conventional ventilation tube is surgically placed in the eardrum. Patients then place an ear-cuff in the external ear canal and treat themselves for 3 minutes, 3 times daily. Treatment is continued for as long as patients find themselves in a period of attacks of vertigo.

Meniere's disease is an idiopathic disorder of the inner ear characterized by episodes of vertigo, fluctuating hearing loss, tinnitus, and ear pressure. The vertigo attacks are often unpredictable and incapacitating, and may prevent activities of daily living. Therapy is symptomatic in nature and does not address the underlying pathophysiology. Although the pathophysiology of Meniere's disease is not precisely known, it is thought to be related to a disturbance in the pressure/volume relationship of the endolymph within the inner ear. Conservative therapy includes a low sodium diet and diuretics to reduce fluid accumulation (i.e., hydrops) and pharmacologic therapy to reduce vestibular symptoms. Persons who do not respond to these conservative measures may receive gentamicin drops in the ear, as a technique of chemical labyrinthectomy to ablate vestibular function on the affected side. No therapy is available to restore hearing loss.

There has been interest in developing a more physiologic treatment approach by applying local transtympanic pressure to restore the underlying fluid homeostasis. Researchers have noted that symptoms of Meniere's disease improve with fluctuations in ambient pressure, and patients with acute vertigo have been successfully treated in hypobaric chambers. It is hypothesized that the application of low-frequency, low-amplitude pressure pulse to the middle ear functions to evacuate endolymphatic fluids from the inner ear, thus relieving vertigo.

In 1999, the Meniett® device (Medtronic Xomed, Jacksonville, FL)) received clearance to market through a U.S. Food and Drug Administration (FDA) 510(k) process specifically as a symptomatic treatment of Meniere's disease.

*****Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.**

Policy

Transtympanic Micropressure Applications as a Treatment of Meniere's disease are considered investigational. BCBSNC does not provide coverage for investigational services.

Benefits Application

Transtympanic Micropressure Applications as a Treatment of Meniere's Disease

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore member benefit language should be reviewed before applying the terms of this medical policy.

When Transtympanic Micropressure Applications as a Treatment of Meniere's disease are covered

Not applicable.

When Transtympanic Micropressure Applications as a Treatment of Meniere's disease are not covered

Transtympanic micropressure applications as a treatment of Meniere's disease are considered investigational.

Policy Guidelines

For individuals who have Meniere disease who receive transtympanic micropressure therapy (Meniett), the evidence includes randomized controlled trials (RCTs) and systematic reviews. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. Six RCTs of positive pressure therapy have been reported, with five trials specifically investigating the Meniett device. Systematic reviews of these five trials found that micropressure therapy does not result in a greater reduction in vertigo than placebo. The sixth trial also found no significant benefit of the transtympanic micropressure therapy for Meniere disease. The evidence is sufficient to determine that the technology is unlikely to improve the net health outcome.

In 2016, the American Academy of Otolaryngology-Head and Neck Surgery updated their position statement on the use of transtympanic micropressure: "We find that there is some medical evidence to support the use of micropressure therapy (such as the Meniett device) in certain cases of Meniere disease. Micropressure therapy is best used as a second level therapy when medical treatment has failed. The device represents a largely non-surgical therapy that should be available as one of the many treatments for Meniere's disease." No supporting evidence was provided.

In 2012, guidance from the United Kingdom's National Institute for Health and Care Excellence (NICE) concluded that current evidence on the safety of micropressure therapy for refractory Meniere's disease is inadequate in quantity. Although there is some evidence of efficacy, it is based on limited numbers of patients.

Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable codes: A4638, E2120

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BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful, but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

Scientific Background and Reference Sources

U.S. Food and Drug Administration, Center for Devices and Radiological Health, 510 (k)s Final Decisions Rendered for December 1999; Meniett 20-K991562. Retrieved from <http://www.fda.gov/cdrh/pdf/k991562.pdf>

BCBSA Medical Policy Reference Manual, 1.01.23; 4/29/03

BCBSA Medical Policy Reference Manual, 1.01.23; 12/17/03

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.23, 4/16/04.

Specialty Matched Consultant Advisory Panel - 6/2004

ECRI Target Report #845 (2003, September) Content current as of: March, 2005. Transtympanic micropressure treatment for Meniere's disease. Retrieved on March 7, 2006 from http://www.target.ecri.org/summary/detail.aspx?e=6&doc_id=1756&q=Meniett+device&anm.

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.23, 8/17/05.

Specialty Matched Consultant Advisory Panel - 6/2006

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.23, 4/17/07.

Gates GA, Green JD, Tucci DL et al. The effects of transtympanic micropressure treatment in people with unilateral Meniere's disease. *Arch Otolaryngol Head Neck Surg* 2004; 130(6):718-25.

Thomsen J, Sass K, Odkvist L et al. Local overpressure treatment reduces vestibular symptoms in patients with Meniere's disease: a clinical, randomized, multicenter, double-blind, placebo-controlled study. *Otol Neurotol* 2005; 26(1):68-73.

Gates GA, Verrall A, Green JD Jr et al. Meniett clinical trial: long-term follow-up. *Arch Otolaryngol Head Neck Surg* 2006; 132(12):1311-6.

Specialty Matched Consultant Advisory Panel - 6/23/08

American Academy of Otolaryngology - Head and Neck Surgery. AAO-HNS position on micropressure therapy. Available at: <http://www.entnet.org/Practice/micropressure.cfm> . Last viewed July 2008.

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.23, 10/06/09

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.23, 10/08/2010

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.23, 10/04/11

Specialty Matched Consultant Advisory Panel - 8/2012

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.23, 10/11/12

Specialty Matched Consultant Advisory Panel - 8/2013

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.23, 10/10/13

Specialty Matched Consultant Advisory Panel - 9/2014

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.23, 10/9/14

Specialty Matched Consultant Advisory Panel – 8/2015

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.23, 2/11/16

Transtympanic Micropressure Applications as a Treatment of Meniere's Disease

Specialty Matched Consultant Advisory Panel – 8/2016

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.23, 2/9/2017

Specialty Matched Consultant Advisory Panel – 8/2017

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.23, 2/8/2018

Specialty Matched Consultant Advisory Panel – 8/2018

BCBSA Medical Policy Reference Manual [Electronic Version]. 1.01.23, 2/14/2019

Specialty Matched Consultant Advisory Panel – 9/2019

Policy Implementation/Update Information

- 8/12/04 Notification of new policy titled "Transtympanic Micropressure Applications as a Treatment of Meniere's Disease". Specialty Matched Consultant Advisory Panel review. Transtympanic micropressure applications as a treatment of Meniere's Disease is considered investigational. Notification given 8/12/04. Effective date 10/14/04.
- 9/18/06 Additional information added to Description section. Policy Guidelines and Reference sources added. (pmo)
- 7/28/08 Reference sources added. Specialty Matched Consultant Advisory Panel review 6/23/08. "Policy Guidelines" section updated. (pmo)
- 6/22/10 Policy Number(s) removed. (amw)
- 7/6/2010 Description section revised. Specialty Matched Consultant Advisory Panel review 5/24/10. No change to policy statement. (adn)
- 9/13/11 Rationale in the Policy Guidelines section updated. Specialty Matched Consultant Advisory Panel review 8/31/11. (adn)
- 9/4/12 Specialty Matched Consultant Advisory Panel review 8/15/12. No change to policy statement. (sk)
- 11/27/12 Reference added. Policy Guidelines updated. No change to policy statement. Medical Director review. (sk)
- 11/12/13 Specialty Matched Consultant Advisory Panel review 8/21/13. No change to policy statement. (sk)
- 10/14/14 Reference added. Specialty Matched Consultant Advisory Panel review 9/30/14. No change to policy statement. (sk)
- 12/30/14 Reference added. (sk)
- 10/1/15 Specialty Matched Consultant Advisory Panel review 8/26/15. (sk)
- 4/29/16 Reference added. Policy Guidelines updated. (sk)
- 9/30/16 Specialty Matched Consultant Advisory Panel review 8/31/16. (sk)
- 4/28/17 Reference added. Policy Guidelines updated. (sk)
- 9/29/17 Specialty Matched Consultant Advisory Panel review 8/30/2017. (sk)
- 3/29/18 Reference added. (sk)
- 10/12/18 Specialty Matched Consultant Advisory Panel review 8/22/2018. (sk)
- 4/16/19 Reference added. (sk)

Transtympanic Micropressure Applications as a Treatment of Meniere's Disease

10/1/19 Specialty Matched Consultant Advisory Panel review 9/21/2019. (sk)

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.