

The effect of intratympanic steroids compared to betahistine on vertigo outcomes in adult patients with Meniere's disease

Rationale

Meniere's disease (also known as idiopathic endolymphatic hydrops) is the result of a fluid imbalance in the inner ear. Meniere's disease has been described as one of the most debilitating diseases due mainly to the accompanying severe vertigo. Intratympanic steroids and betahistine are two recommended medications used to treat vertigo symptoms. The objective of this review is to compare the effects of intratympanic steroids and betahistine on patient-oriented vertigo outcomes in adult patients with Meniere's disease.

Implications

This rapid review aims to provide adult patients with Meniere's disease and their physicians with recommendations to help guide their anti-vertigo regimen.

Date Registered: 2018-12-14

Link to Protocol Registration:
<https://osf.io/g65fw/>

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Background

- Globally 12 in 1000 people are diagnosed with Meniere's disease, with the prevalence shown to increase with age. Despite this trend, the available literature on patient-oriented vertigo treatments remains low. This review will look at two anti-vertigo regimens for Meniere's disease: intratympanic steroids and betahistine.

Objective

- To conduct a rapid review comparing the effects of intratympanic steroids and betahistine on vertigo outcomes in adult patients with Meniere's disease.

Methodology

- Our eligibility criteria are outlined using the PICOS framework:
 - Population:** Adults (>18 years old) with Meniere's disease diagnosed based on the American Academy of Otolaryngology-Head and Neck Surgery criteria. All types of Meniere's disease (MD) will be included:
 - *Certain MD* – definite disease determined through microscopic examination
 - *Definite MD* – two or more confirmed episodes of vertigo with hearing loss combined with tinnitus, aural fullness, or both
 - *Probable MD* – only one confirmed episode of vertigo with hearing loss combined with tinnitus, aural fullness, or both
 - *Possible MD* – definitive vertigo without hearing loss or non-definitive equilibrium with hearing loss
 - Intervention:** Intratympanic steroids at any dose, frequency and duration
 - Comparator:** Betahistine at any dose, frequency and duration
 - Outcome:** Frequency, severity and control of vertigo measured via electrocochleography score test or other methods (e.g. eye movement testing, posturography, etc.)
 - Study design:** RCTs with a minimum follow-up duration of six months
- A comprehensive literature search strategy will be developed for MEDLINE and Embase by an information specialist, and peer reviewed by a second information specialist using the Peer Review of Electronic Search Strategies (PRESS) checklist.
- The search will be limited to English articles published in the last 10 years.
- To further ensure relevant studies have been included, the references of the included studies will be scanned by a reviewer.
- Title and abstract screening and full-text screening will be done on Synthesi.SR by one reviewer. Any discrepancies will be resolved through discussion. Data abstraction will be done by one reviewer and verified by a second reviewer.
- A narrative synthesis of included studies, and if possible a random-effects meta-analysis will be conducted using a frequentist approach.

Knowledge Translation Strategy

- A one page summary report will be submitted to the knowledge user panel responsible for selecting the PICO's criteria.

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