Background

- Benign Positional Vertigo (BPPV) is characterized by a brief episode of vertigo elicited by positional changes of the head relative to gravity (Bhattacharyya 2017).
- The horizontal canal (HC) is the second most commonly involved canal in BPPV, and causes horizontal nystagmus in the roll test.
- The canalithiasis variant causes nystagmus beating towards the ground (geotropic), while the cupulolithiasis variant causes nystagmus beating away from the ground (apogeotropic).
- The most commonly performed treatments for HC BPPV are the Gufoni Maneuver and the Canalith Repositioning Maneuver (CRM) for the horizontal canal (Lempert Maneuver).
- The efficacy of these treatments is not well established.

Methods

- Electronic literature search of MEDLINE, CINAHL, and Web of Science.
- Studies were evaluated in a two-part screening process to establish eligibility for inclusion in the study.
- Quality assessment was performed using the PEDro scale and ratings were assigned to each study.
- Data was extracted for canalithiasis and cupulolithiasis of the horizontal canal with the primary outcome of interest being resolution of vertigo and nystagmus, and were compiled into a PICO table.
- When there was sufficient data, fixed-effect meta-analyses (Mantel-Haenszel model) were run to produce summary estimates of the overall efficacy of the individual maneuvers, and, when possible, to compare maneuvers.

Conclusions

- For the treatment of HC BPPV canalithiasis, based on the results of the meta-analyses, both the Gufoni Maneuver and the CRM for the HC are effective maneuvers. There are a limited number of studies that have compared the two treatments, but the results suggest that there is not a difference in the efficacy of the treatments.
- The Prolonged Positioning maneuver is another recommended treatment for HC BPPV canalithiasis. While the initial results are promising, there is insufficient data to draw strong conclusions about this treatment.
- For the treatment of HC BPPV cupulolithiasis, based on the results of the meta-analysis, the Gufoni Maneuver appears to be an effective treatment.
- For the other suggested treatments for HC BPPV cupulolithiasis, such as vibration during the CRM and head shaking maneuvers, there is limited evidence to support these treatments.

Clinical Relevance

- For the treatment of HC BPPV canalithiasis, both the Gufoni Maneuver and the CRM for the HC are appropriate treatments. The Gufoni Maneuver is a simpler maneuver to perform, involves fewer movements, and may be easier for the patient to perform.
- The clinician should consider several factors, including the severity of the symptoms, age, size, past medical history, and musculoskeletal limitations, in selecting the appropriate treatment.

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