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The Epley Maneuver for Treatment of Benign Paroxysmal Positional Vertigo

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Clinical Question

How effective is the Epley maneuver in the treatment of posterior canal benign paroxysmal positional vertigo?

Evidence-Based Answer

Treatment with the Epley maneuver resolves benign paroxysmal positional vertigo better than sham therapy or control. Minor adverse effects are uncommon. (Strength of Recommendation: A, based on multiple good-quality randomized controlled trials.)

Practice Pointers

Symptoms of benign paroxysmal positional vertigo are caused by calcium debris called canaliths floating in the endolymph. Canaliths causing pressure on the hair cells of the semicircular canals provoke symptoms of dizziness and nausea. The highest incidence is in patients 50 to 70 years of age, and lifetime prevalence is estimated at 2.4%. The Dix-Hallpike test is a diagnostic maneuver used to confirm benign paroxysmal positional vertigo in patients with suggestive symptoms.¹ If this test result is abnormal, benign paroxysmal positional vertigo is diagnosed and the Epley maneuver may be used for treatment. The Epley maneuver is thought to move the canaliths out of the semicircular canal and away from the hair cells. Videos demonstrating the Dix-Hallpike test and the Epley maneuver can be found online (see <https://www.youtube.com/watch?v=7ZgUx9G0uEs> and <https://www.youtube.com/watch?v=hq-IQWSrAtM>). Other options include observation, alternative maneuvers, and, for

refractory cases, surgery. No medications have been proven effective for benign paroxysmal positional vertigo.¹

The 11 trials represented in this review included a total of 745 patients. Five studies (334 participants) compared the Epley maneuver with a sham maneuver, and three compared the Epley maneuver with a control (no treatment, medication only, or postural restriction). Participants in the Epley maneuver group experienced short-term resolution of vertigo 56% of the time vs. 21% of the time among those in the sham maneuver or control groups (odds ratio [OR] = 4.4; 95% confidence interval [CI], 2.6 to 7.4; number needed to treat = 3). The Epley maneuver also more often resulted in conversion to a normal Dix-Hallpike test result (OR = 9.6; 95% CI, 6.0 to 15.4).

The Epley maneuver was equivalent to the Semont (two studies, 117 participants) and Gans maneuvers (one study, 58 participants) when a normal Dix-Hallpike test result was the outcome measure. However, resolution of an abnormal Dix-Hallpike test result was increased with the Epley maneuver compared with Brandt-Daroff exercises at seven days, but there was no difference at one month.

The long-term effectiveness of the Epley maneuver is less clear, because the included studies reported only short-term outcomes. The rate of spontaneous resolution of benign paroxysmal positional vertigo was 20% among the control patients in two of the included studies. A normal Dix-Hallpike test result was seen in 27% of control patients at one month in one study,² and 38% at one to two weeks in another study.³ In one unblinded study not included in the review, 84% of participants in the control group (n = 25) had normalization of the Dix-Hallpike test result in three months.⁴ These data suggest that the natural history of benign paroxysmal positional vertigo is spontaneous resolution in a high percentage of cases, with or without intervention.

There were no serious adverse effects from treatment, although they were not reported in all trials. Some patients could not tolerate the treatment because of cervical spine disorders. The Epley and Semont are the two particle-repositioning maneuvers recommended as initial therapy for benign paroxysmal positional vertigo in the American Academy of Otolaryngology–Head and Neck Surgery Foundation clinical practice guideline.⁵

SOURCE: Hilton MP, Pinder DK. The Epley (canalith repositioning) manoeuvre for benign paroxysmal positional vertigo. *Cochrane Database Syst Rev*. 2014;(12):CD003162.

The practice recommendations in this activity are available at <http://summaries.cochrane.org/CD003162>.

The views expressed in this article are those of the authors and do not reflect the official policy or position of the U.S. government, the Department of the Army, or the Department of Defense.

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