Evaluating the Epley maneuver

Emélie Braschi PhD MD  David Ross MD CCFP  Christina Korownyk MD CCFP

Clinical question

How effective is the Epley maneuver in treating benign paroxysmal positional vertigo (BPPV)?

Bottom line

Epley maneuvers will lead to complete resolution of symptoms for 1 in every 2 to 3 patients treated. Post-Epley movement restriction does not improve symptom resolution but might promote a negative Dix-Hallpike test result for 1 in every 10 patients treated.

Evidence

Six systematic reviews of RCTs consistently supported Epley maneuvers (as classically described) despite considerable heterogeneity among trials.1-6

• Most recent review (11 RCTs, N = 745):1
  - Results were statistically significant for the Epley maneuver versus control at 24 hours and 4 weeks.
    - Resolution of symptoms (5 RCTs, n = 273): 56% versus 21% with control (NNT = 3).
    - Positive to negative Dix-Hallpike test result (8 RCTs, n = 507): 80% versus 37% with control (NNT = 3).
• A few small studies compare the Epley to other maneuvers and report equivalence (eg, Semont and Gans) or inferiority (eg, Brandt-Daroff) of these interventions. Two systematic reviews looked at movement restriction after the Epley maneuver, such as a neck brace or postural advice (avoid lying on affected side for 1 to 5 days and sleep upright for 24 to 48 hours).7,8 They had slightly different inclusion criteria leading to different conclusions.7,8

• Larger review (9 RCTs, N = 1078):
  - Resolution of symptoms and negative Dix-Hallpike test result: 86% versus 85% without restriction.
• Smaller review:
  - Resolution of symptoms (2 RCTs, n = 119): 52% versus 41% without restrictions (not statistically different).
  - Negative Dix-Hallpike test result (9 RCTs, n = 528): 89% versus 78% without restrictions (statistically different).

Context

• The natural history of BPPV is unclear.1 One small trial reported that 36.5% of patients experienced recurrence of symptoms within 48 months.9

• Clinicians perform the classical Epley maneuver while patient self-treatment is the modified Epley maneuver.

• Two small RCTs found that modified Epley maneuvers (3 times daily until symptoms resolved) resulted in symptom improvement in 64% to 95% of patients by 1 week.10,11 Trials that demonstrated improvement included initial supervision by an instructor.10

• Adverse events are poorly reported but include neck discomfort, transient nausea, and disequilibrium.8

Implementation

Generally, BPPV can be diagnosed clinically; neuroimaging is rarely required. Red flags include focal deficits with numbness or weakness, cerebellar signs including severe ataxia, unilateral hearing loss or tinnitus, and direction-changing nystagmus.12 The Epley maneuver is the treatment of choice. It is best demonstrated in the office, with patient handouts5 given if symptoms recur or do not resolve. Videos demonstrating the maneuver are also available online.14,15 In a retrospective study, 47% of patients obtained symptomatic control of BPPV after a single Epley maneuver; 84% experienced symptomatic improvement after 3 maneuvers.16

Dr Braschi is a family medicine resident at McGill University in Montreal, Que. Dr Ross is Associate Professor and Dr Korownyk is Associate Professor, both in the Department of Family Medicine at the University of Alberta in Edmonton.

The opinions expressed in Tools for Practice articles are those of the authors and do not necessarily mirror the perspective and policy of the Alberta College of Family Physicians.

References


