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Rapid Systematic Review

Rapid Systematic Review of the Epley Maneuver for Treating Posterior Canal Benign Paroxysmal Positional Vertigo

Jeroen G. van Duijn1*, Liz M. Isfordink1*, Jenny A. Nij Bijvank1*, Carlijne W. Stapper1*, Annelies J. van Vuren1*, Inge Wegner, MD1,2, Marlous F. Kortekaas, MD3, and Wilko Grolman, MD, PhD1,2

Abstract

Objective. The aim of this study was to compare watchful waiting to the Epley maneuver as a management option for patients with posterior canal benign paroxysmal positional vertigo (p-BPPV) regarding symptom relief.

Data Sources. PubMed, Embase, and The Cochrane Library.

Methods. A systematic search was conducted. Studies reporting original study data were included. Relevance and risk of bias (RoB) of the selected articles were assessed. Studies with low relevance, high RoB, or both were excluded. Absolute risk differences and their 95% confidence intervals (CIs) were extracted for the included studies.

Results. A total of 1448 unique studies were retrieved. Eight of these satisfied the eligibility criteria. At 1-week follow-up, all included studies reported a clinically relevant effect in favor of the Epley maneuver regarding symptom relief (absolute risk differences ranging from 20% [95% CI, 5%-37%] to 59% [95% CI, 32%-76%]) or conversion to a negative Dix–Hallpike (absolute risk differences ranging from 17% [95% CI, –5%-37%] to 64% [95% CI, 29%-79%]). At 1-month follow-up, the results of the included studies diverged further. Absolute risk differences ranged from 6% (95% CI, –24%-35%) more symptom relief in favor of watchful waiting to 79% (95% CI, 56%-88%) in favor of the Epley maneuver.

Conclusion and Recommendations. All data of the selected studies show a benefit in favor of the Epley maneuver at 1-week follow-up in the management of p-BPPV. The Epley maneuver should be considered in all patients with p-BPPV.

Keywords

BPPV, Epley, systematic review, vertigo

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Background

Benign paroxysmal positional vertigo (BPPV) is the most common cause of dizziness. No data are available on the incidence of BPPV in the Netherlands. In the United States, the incidence is 64 per 100,000.1 Patients complain of recurrent episodes of dizziness, often described as a “spinning sensation.” Normally, there are no other neurological symptoms. Symptoms are provoked by sudden changes of head position.2 The clinical diagnosis can be confirmed by the Dix–Hallpike test, which elicits the characteristic nystagmus.1,2 Of the different kinds of BPPV, posterior canal BPPV is the most common.3

One of the effective treatment options for posterior canal BPPV is the Epley maneuver,4 first described by Epley.5 The maneuver is based on the theory that the clinical features are triggered by the presence of free-floating particles in the posterior semicircular canal.6 The Epley consists of a series of head positions, which return the particles in the utricle, thereby removing the stimulus of the vertigo.5,7 On the other hand, according to the AAO-HNS clinical practice guideline,4 spontaneous resolution of symptoms occurs, ranging from 15% to 86%, at 1 month in all kinds of BPPV. Therefore, watchful waiting might be a considerable option in the management of (posterior) BPPV.

Keywords

BPPV, Epley, systematic review, vertigo

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Clinical Question

What is the effectiveness of watchful waiting compared to the Epley maneuver in patients diagnosed with posterior canal BPPV regarding symptom relief?

Methods

Retrieving Studies

A systematic search in PubMed, Embase, and The Cochrane Library was conducted with the assistance of a clinical librarian. Relevant synonyms for the search terms BPPV and Epley maneuver were combined (see Table 1). Five assessors (J.G.V.D., L.M.I., J.A.N.B., C.W.S., and A.J.V.V.) independently excluded duplicate titles and screened the title and abstract of the retrieved records for inclusion, followed by screening of the full texts of eligible articles. Studies on the effectiveness of watchful waiting versus the Epley maneuver in patients with posterior canal BPPV were included. Only reports of original study data were included; systematic reviews, opinion papers, animal or laboratory studies, and case reports were excluded (see Figure 1 for selection criteria). Related publications were searched in PubMed, whereas Scopus and Web of Science were used for cross-reference checking for studies not identified by the initial literature search. Selected articles, related reviews, meta-analyses, and guidelines were hand searched for relevant cross-references.

Assessing Studies

Using predefined criteria, based on the PRISMA statement, 5 reviewers (J.G.V.D., L.M.I., J.A.N.B., C.W.S., and A.J.V.V.) independently assessed the selected studies for their relevance and risk of bias (RoB; see Table 2). Relevance concerned the applicability of the study findings for answering the clinical question and involved the evaluation of patients and compared treatments and outcomes: (1) patients, notably patients diagnosed with posterior canal
BPPV with the Dix–Hallpike maneuver; (2) treatment comparison, notably watchful waiting versus the Epley maneuver; and (3) outcomes, notably our primary outcome of interest, patient-reported symptom relief. Secondary outcome measures were (1) disappearance of nystagmus when performing the Dix–Hallpike maneuver, and (2) symptom relief scored in patients without a nystagmus when performing the Dix–Hallpike maneuver. When an item was reported, it was classified as either “satisfactory” or “unsatisfactory.” When an item of the study assessment was not reported, it was rated “unclear.” Studies were classified as having high, moderate, or low relevance if they complied with all 3, 2, or 1 of these criteria, respectively. With the RoB assessment, the extent of selection and information bias was established. Assessment of RoB involved evaluation of (1) blinding, (2) concealment of treatment assignment, (3) baseline comparability, (4) standardization of treatment, (5) standardization of outcome assessment, (6) completeness of reported data, and (7) the use of intention-to-treat. Studies were classified as having a low risk of bias if they satisfied all criteria and a moderate risk of bias if they satisfied at least 3 criteria, and the remaining studies were classified as high risk of bias. Initial discrepancies between independent reviewers were resolved by discussion and reported results were based on full consensus. Studies with low relevance, high risk of bias, or both were excluded from further review.

**Data Extraction**

From the included studies, 5 authors (J.G.V.D., L.M.I., J.A.N.B., C.W.S., and A.J.V.V.) independently extracted descriptive data of patients and treatments. For the outcomes of interest, absolute risks, risk differences, and their 95% confidence intervals (CIs) were extracted. Preferably, absolute risks were extracted. If these were not given or could not be recalculated, findings were presented as reported in the article. Outcome data were pooled when study designs and methods of the included studies were considered comparable.

**Results**

**Retrieving Studies**

A total of 2476 titles were retrieved, of which 1448 were unique studies (see Figure 1; date of last search was October 23, 2013). One paper was excluded based on language (Chinese). After selection based on title and abstract, and subsequent full-text screening, 8 articles were initially considered eligible for answering our clinical question. Cross-reference checking revealed no additional articles.

**Assessing Studies**

The relevance was moderate in 2 studies and high in 6 studies (see Table 2). The study by Sekine et al. included children. Waleem et al. prescribed a placebo (a multivitamin tablet) in the control group. Five of the 8 included studies reported the primary outcome measure “subjective symptom relief.” Three of the 8 studies reported the secondary outcome measure “disappearance of nystagmus with the Dix–Hallpike maneuver in combination with symptom relief,” and 1 study reported the secondary outcome measure “disappearance of nystagmus with the Dix–Hallpike maneuver.” The RoB was moderate in all of the included studies (see Table 2). Three studies were prospective cohort studies. Of the randomized controlled trials, only the study by Yimtae et al. scored positive on both items of randomization: the method of treatment allocation, and blinding of treatment allocation. There was no completeness of data in the studies performed by Asawavichianginda et al. and Yimtae et al. None of the included studies reported whether they analyzed results...
### Table 2. Assessment of Studies on the Effect of the Epley Maneuver versus Watchful Waiting.

<table>
<thead>
<tr>
<th>Study</th>
<th>Sample Size of Study, n</th>
<th>Study Design</th>
<th>Patients</th>
<th>Treatment</th>
<th>Outcome</th>
<th>Randomization</th>
<th>Baseline Comparability</th>
<th>Standardization (T)</th>
<th>Standardization (O)</th>
<th>Complete Data</th>
<th>Intention-to-Treat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asawavichianginda et al (2000)</td>
<td>85</td>
<td>RCT</td>
<td>†</td>
<td>†</td>
<td>†</td>
<td>?</td>
<td>?</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>○</td>
</tr>
<tr>
<td>Blakley (1994)</td>
<td>38</td>
<td>RCT</td>
<td>†</td>
<td>†</td>
<td>†</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Richard et al (2005)</td>
<td>81</td>
<td>PCS</td>
<td>†</td>
<td>†</td>
<td>†</td>
<td>NA</td>
<td>NA</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Seo et al (2007)</td>
<td>34</td>
<td>PCS</td>
<td>†</td>
<td>†</td>
<td>†</td>
<td>NA</td>
<td>NA</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Sekine et al (2006)</td>
<td>127</td>
<td>RCT</td>
<td>○</td>
<td>†</td>
<td>†</td>
<td>?</td>
<td>?</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>?</td>
</tr>
<tr>
<td>Waleem et al (2008)</td>
<td>44</td>
<td>PCS</td>
<td>†</td>
<td>○</td>
<td>○</td>
<td>NA</td>
<td>NA</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>?</td>
</tr>
<tr>
<td>Wolf et al (1999)</td>
<td>41</td>
<td>RCT</td>
<td>†</td>
<td>†</td>
<td>†</td>
<td>?</td>
<td>?</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Yimtae et al (2003)</td>
<td>58</td>
<td>RCT</td>
<td>†</td>
<td>†</td>
<td>†</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>•</td>
<td>○</td>
</tr>
</tbody>
</table>

**Abbreviations:** †, unclear, no information provided; NA, not applicable; PCS, prospective cohort study; RCT, randomized controlled trial.

*Relevance*—Patients: † = adults with posterior benign paroxysmal positional vertigo (p-BPPV) objected with positive Dix–Hallpike maneuver; ○ = children included, p-BPPV not confirmed by Dix–Hallpike maneuver, other. Treatment: † = Epley maneuver compared to watchful waiting; ○ = Epley maneuver versus sham or other treatment, other. Outcome: † = subjective recovery of symptoms and/or recovery of nystagmus upon performing the Dix–Hallpike maneuver; ○ = other.

*Risk of bias*—Blinding: † = outcome assessors were blinded for treatment allocation; ○ = outcome assessors were not blinded. Treatment allocation: † = adequate concealment (eg, sealed envelopes); ○ = no adequate concealment. Baseline comparability: † = groups were equal; ○ = clinically relevant differences between patient groups. Standardization (T) of treatment with Epley maneuver: † = a protocol on the Epley maneuver was provided; ○ = no protocol on the Epley maneuver was provided. Standardization (O) of outcome: † = a protocol of outcome assessment was provided and outcome was assessed at a standardized follow-up moment; ○ = no protocol of outcome assessment was provided or outcome was not assessed at a standardized follow-up moment. Complete data for primary outcome: † = below 10% nonselective missing data; ○ = 10% or more missing data and/or missing data were selective. Intention-to-treat: † = an intention-to-treat analysis was used; ○ = no intention-to-treat analysis was used.
based on an intention-to-treat protocol. All 8 studies were characterized by moderate to high relevance and moderate RoB. They were therefore included for further review.

### Summary of Findings

#### 1-Week Follow-Up

Three studies\(^{11,12,15}\) reported the primary outcome measure at 1 week. All 3 studies found a statistically significant effect in favor of the Epley maneuver (see Table 3). The effects ranged from 20% to 59% less symptom relief in the watchful waiting group. Asawavichianginda et al\(^ {12}\) reported complete resolution of symptoms in 23% of the patients in the Epley group, improvement of symptoms in 66%, and no improvement or worsening of symptoms in 11% of the patients in the Epley group, versus 3%, 54%, and 44% in the watchful waiting group, respectively. Waleem et al\(^ {11}\) reported complete resolution of symptoms in 64% of the patients in the Epley group, improvement in 18%, and no improvement or worsening in 18%, versus 5%, 41%, and 55% in the watchful waiting group, respectively. Seo et al\(^ {15}\) did not report the outcome “improvement of symptoms.” Pooled data analysis displayed a significant effect in favor of the Epley maneuver (risk difference, 39%; 95% CI, 25%-51%).

The 3 studies\(^ {10,16,17}\) that reported the secondary outcome measure “disappearance of nystagmus with the Dix–Hallpike maneuver” found a statistically significant effect in favor of the Epley maneuver.

#### 1-Month Follow-Up

The primary outcome measure ranged from 6% in favor of the watchful waiting group to 79% in favor of the Epley group (see Table 4). The largest difference between the 2 treatment groups was seen in the study by Richard et al\(^ {14}\) (risk difference, 79%; 95% CI, 56%-88%). Blakley et al\(^ {13}\) and Seo et al\(^ {15}\) did not report a difference in symptom relief between both groups (6%; 95% CI, –24%-35% in favor of watchful waiting, and 1%; 95% CI, –22%-26%, respectively). Only the study by Asawavichianginda et al\(^ {12}\) reported a larger risk difference between both groups at 1-month follow-up, compared to 1-week follow-up. Asawavichianginda et al\(^ {12}\) reported improvement of symptoms in 47% and no improvement or worsening in 6% of the patients treated with the Epley maneuver versus 58% and 22% in the control group, respectively. Blakley et al\(^ {13}\) reported improvement of symptoms in 50% and no improvement or worsening in 6% of the patients treated with the Epley maneuver versus 36% and 14% in the control group, respectively. Compared to the results of Asawavichianginda et al\(^ {12}\) at 1 week, the number of patients in the category “no improvement” or “worsening of symptoms” had decreased at 1-month follow-up in both groups. The number of patients in the control group without any improvement of symptoms at 1 month was still larger than the number of patients without improvement in the Epley group.\(^ {12,13}\) Pooled data analysis showed a statistically significant effect in favor of the Epley maneuver (risk difference, 39%; 95% CI, 23%-47%).

### Table 3. Summary of Findings at 1-Week Follow-Up.

<table>
<thead>
<tr>
<th>Study</th>
<th>Outcome</th>
<th>Risk Difference</th>
<th>Lower Limit of 95% CI</th>
<th>Upper Limit of 95% CI</th>
<th>Watchful Waiting</th>
<th>Epley Maneuver</th>
<th>Risk Difference and 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asawavichianginda et al (2000)(^ {12})</td>
<td>SR</td>
<td>–0.20</td>
<td>–0.37</td>
<td>–0.05</td>
<td>1/39</td>
<td>8/35</td>
<td></td>
</tr>
<tr>
<td>Blakley (1994)(^ {13})</td>
<td>NR</td>
<td>–0.47</td>
<td>–0.69</td>
<td>–0.14</td>
<td>4/16</td>
<td>13/18</td>
<td></td>
</tr>
<tr>
<td>Richard et al (2005)(^ {14})</td>
<td>NR</td>
<td>–0.59</td>
<td>–0.76</td>
<td>–0.32</td>
<td>1/22</td>
<td>14/22</td>
<td></td>
</tr>
<tr>
<td>Cai et al (2007)(^ {15})</td>
<td>SR</td>
<td>–0.39</td>
<td>–0.51</td>
<td>–0.25</td>
<td>677</td>
<td>35/75</td>
<td></td>
</tr>
<tr>
<td>Pooled data</td>
<td>Neg DH</td>
<td>–0.17</td>
<td>–0.37</td>
<td>0.05</td>
<td>20/39</td>
<td>24/35</td>
<td></td>
</tr>
<tr>
<td>Sekine et al (2006)(^ {10})</td>
<td>Neg DH and SR</td>
<td>–0.29</td>
<td>–0.44</td>
<td>–0.13</td>
<td>29/60</td>
<td>52/67</td>
<td></td>
</tr>
<tr>
<td>Wolf et al (1999)(^ {16})</td>
<td>Neg DH and SR</td>
<td>–0.64</td>
<td>–0.79</td>
<td>–0.29</td>
<td>1/10</td>
<td>23/31</td>
<td></td>
</tr>
<tr>
<td>Yimtae et al (2003)(^ {17})</td>
<td>Neg DH and SR</td>
<td>–0.38</td>
<td>–0.56</td>
<td>–0.16</td>
<td>1/27</td>
<td>12/29</td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations: CI, confidence interval; Neg DH, negative Dix–Hallpike test; NR, not reported; SR, symptom relief.
difference ranging from 11% to 40% in favor of the group treated with the Epley maneuver, although this effect was significant only in 2 studies.12,16

Long-Term Follow-Up

Two studies12,14 provided information about symptom relief at longer term follow-up, namely, between 3 and 6 months. Asawavichianginda et al12 reported more symptom relief of 19% (95% CI, –6%-41%) in the Epley group at 3 months follow-up. Two studies reported symptom relief at 6 months. Asawavichianginda et al12 showed a risk difference of 4% (95% CI, –29%-22%) and Richard et al14 of 42% (95% CI, 20%-62%), both in favor of the Epley group. In both studies,12,14 there was a decrease in risk difference compared to the results at 1 month.

Discussion

In this article, we described the results of a rapid systematic review on the comparison between watchful waiting and the Epley maneuver in patients with posterior canal BPPV. For the primary outcome, a strong but variable effect of 20% to 59% in favor of the Epley maneuver was found at 1-week follow-up. This effect decreased to some extent after a longer follow-up period.

Some aspects need consideration when interpreting our findings. First, the studies showed differences, which limited comparability, especially in study design; some studies repeated (cycles of) the Epley maneuver,16,17 and others prescribed side-medication12,17 and instructed patients to apply different postural restrictions after treatment. As repeated cycles of the Epley maneuver in a single session seem to be superior to 1 single maneuver,18 this might be an explanation for the broad range of the results we found. On the other hand, there is no evidence that postural restrictions are effective in patients treated with the Epley maneuver.4

In 1 study,12 patients in the watchful waiting group received multivitamin tablets as a placebo. This theoretically may have altered the results and reduced the risk difference. One study10 included children; the age of the 127 included patients ranged from 13 to 82 years old. The mean age was 60.1 ± 14.0 years, indicating that the number of included children was small. The differences in study population and the use of concomitant treatment between the studies reporting the primary outcome of interest were considered small and, therefore, data were pooled for this outcome. For the secondary outcome of interest, the Dix–Hallpike maneuver was included in the outcome measure. One study12 reported disappearance of nystagmus with the Dix–Hallpike maneuver. The other 3 studies10,16,17 reported symptom relief in patients and conversion to a negative Dix–Hallpike maneuver. This may have caused an underreporting of patients with symptom relief, because patients with subjective symptom relief and a positive Dix–Hallpike maneuver were registered as having a negative outcome. Furthermore, 2 studies16,17 performed multiple sessions of the Epley maneuver (on a weekly basis), and 1 study17 performed repeated cycles of the Epley maneuver in 1 session. Due to these differences between the studies, it was considered inappropriate to pool the data for the secondary outcome.

Second, it is important to note that our study focused on complete remission of symptoms. However, a reduction of symptoms without complete remission might be a clinically relevant outcome for the patient as well.

Finally, although individual studies were limited by sample size, relevance, and RoB, altogether there was sufficient evidence to answer our clinical question.

Recent reviews reported the effectiveness of the Epley maneuver up to 1-month follow-up.19-22 In contrast to our

Table 4. Summary of Findings at 1-Month Follow-Up.

<table>
<thead>
<tr>
<th>Study</th>
<th>Outcome</th>
<th>Risk Difference</th>
<th>Lower Limit of 95% CI</th>
<th>Upper Limit of 95% CI</th>
<th>Watchful Waiting</th>
<th>Epley Maneuver</th>
<th>Risk Difference and 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asawavichianginda et al (2000)12</td>
<td>SR</td>
<td>–0.28</td>
<td>–0.46</td>
<td>–0.06</td>
<td>7/36</td>
<td>16/34</td>
<td></td>
</tr>
<tr>
<td>Blakley (1994)13</td>
<td>SR</td>
<td>0.06</td>
<td>–0.24</td>
<td>0.35</td>
<td>11/22</td>
<td>7/16</td>
<td></td>
</tr>
<tr>
<td>Richard et al (2005)14</td>
<td>SR</td>
<td>–0.79</td>
<td>–0.88</td>
<td>–0.56</td>
<td>2/20</td>
<td>54/61</td>
<td></td>
</tr>
<tr>
<td>Sze et al (2007)15</td>
<td>SR</td>
<td>–0.01</td>
<td>–0.26</td>
<td>0.22</td>
<td>14/16</td>
<td>16/18</td>
<td></td>
</tr>
<tr>
<td>Waleem et al (2008)11</td>
<td>NR</td>
<td>–0.39</td>
<td>–0.47</td>
<td>–0.23</td>
<td>34/94</td>
<td>93/129</td>
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<tr>
<td>Asawavichianginda et al (2000)12</td>
<td>Neg DH</td>
<td>–0.27</td>
<td>–0.45</td>
<td>–0.08</td>
<td>23/36</td>
<td>31/34</td>
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<tr>
<td>Sekine et al (2006)10</td>
<td>Neg DH and SR</td>
<td>–0.11</td>
<td>–0.24</td>
<td>0.01</td>
<td>48/60</td>
<td>61/67</td>
<td></td>
</tr>
<tr>
<td>Wolf et al (1999)16</td>
<td>Neg DH and SR</td>
<td>–0.40</td>
<td>–0.67</td>
<td>–0.10</td>
<td>5/10</td>
<td>28/31</td>
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</tr>
<tr>
<td>Yimtae et al (2003)17</td>
<td>Neg DH and SR</td>
<td>–0.29</td>
<td>–0.52</td>
<td>0.00</td>
<td>7/20</td>
<td>16/25</td>
<td></td>
</tr>
</tbody>
</table>

Abbreviations: CI, confidence interval; Neg DH, negative Dix–Hallpike test; NR, not reported; SR, symptom relief.
Regarding complications of treatment, the Epley maneuver is associated with mild and generally self-limiting adverse effects. Only 2 of the included studies reported the occurrence of side effects of the maneuver. In the study by Richard et al., researchers had not been aware of any complications. In the study by Yimtae et al., complications occurred in 14% (4/29) of the patients; 2 patients had complaints of fainting, pallor, and sweating after repeated maneuvers in 1 session, and in 2 patients, a conversion to lateral canal BPPV occurred immediately after the Epley maneuver was applied. Both studies did not report the occurrence of adverse events in the control group. Because of the mild adverse effects, the Epley maneuver should be a considerable treatment option.

All included studies were conducted in the ENT department. In the Netherlands, though, the majority of BPPV patients are treated in general practice. The Dutch guideline for general practitioners acknowledges the initial benefit of the Epley maneuver but advises watchful waiting. This recommendation is based on the occurrence of spontaneous symptom relief and lack of experience in performing the maneuver, as suggested by other researchers.

The burden of BPPV is high. Thirty-seven percent of the patients cannot work, and 18% avoid leaving their homes. Health care costs for patients with BPPV are significant. The costs of the Epley maneuver as a treatment modality are low. When referral to the ENT department is required, though, this management option would be more expensive. It might be more cost-effective to train general practitioners in performing the Epley maneuver to avoid the costs of referral to the ENT department. However, even in the current situation in the Netherlands, the Epley maneuver might be cost effective: sooner relief of symptoms results in less absenteeism from work, and thus economic advantage.

**Conclusion and Recommendations**

All data of the selected studies show a benefit in favor of the Epley maneuver at 1-week follow-up in the management of BPPV of the posterior canal. At 1-month follow-up, differences in symptom relief between watchful waiting and the Epley maneuver decrease, although there is a tendency toward more symptom relief after treatment with the Epley maneuver. At longer term follow-up, the differences between both groups decrease even further.

Because of the potential effect of the symptoms on daily functioning, we believe that the findings in this study should be considered in management decisions for patients with posterior BPPV (p-BPPV). The negligible negative side effects of the maneuver and the low costs should also be taken into account.

**Translating Evidence into Practice**

The Epley maneuver should be considered in every patient diagnosed with p-BPPV, due to the proven effectiveness of the maneuver in symptom reduction. It is important to create facilitations that make it possible to treat all of these patients. Exploring the possibility of training general practitioners or physiotherapists might be an option, although evidence on the effectiveness of the maneuver performed by doctors other than ENT specialists is lacking.

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**Author Contributions**

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