

Benign paroxysmal positional vertigo (ECPG)

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Abbreviations

AAO-HNS	American Academy of Otolaryngology—Head and Neck Surgery
BPPV	Benign paroxysmal positional vertigo
BPPN	Benign paroxysmal positional nystagmus
CRP	Canalith repositioning procedure
MD	Meniere’s Disease
VR	Vestibular rehabilitation

Executive Summary

Clinicians should diagnose posterior semicircular canal BPPV when vertigo associated with torsional, up beating nystagmus is provoked by the Dix-Hallpike maneuver, performed by bringing the patient from an upright to supine position with the head turned 45° to one side and neck extended 20° with the affected ear down. The maneuver should be repeated with the opposite ear down if the initial maneuver is negative. (Strong recommendation)

If the patient has a history compatible with BPPV and the Dix-Hallpike test exhibits horizontal or no nystagmus, the clinician should perform, or refer to a clinician who can perform, a supine roll test to assess for lateral semicircular canal BPPV. (Strong recommendation)

Clinicians should differentiate, or refer to a clinician who can differentiate, BPPV from other causes of imbalance, dizziness, and vertigo. (Strong recommendation)

Clinicians should assess patients with BPPV for factors that modify management, by the recommended repositioning maneuvers, including impaired mobility or balance, central nervous system disorders, a lack of home support, and/or increased risk for falling. (Strong recommendation)

Clinicians should not obtain radiographic imaging in a patient who meets diagnostic criteria for BPPV. (Strong recommendation against)

Clinicians should not order laboratory vestibular testing in a patient who meets diagnostic criteria for BPPV in the absence of additional vestibular signs and/or symptoms inconsistent with BPPV that warrant testing. Vestibular testing may be ordered in case of recurrence, persistence of complaint after repositioning manoeuvre or in the presence of atypical nystagmus (Conditional recommendation against)

Clinicians should treat, or refer to a clinician who can treat, patients with posterior canal BPPV with a canalith repositioning procedure. Epley's or Semont's are equivocally effective for posterior canal BPPV. Semont's is recommended in cupulolithiasis than Epley's. (Strong recommendation)

The barbecue roll manoeuvre or Gufoni manoeuvre appear moderately effective for the geotropic form of lateral semi-circular canal BPPV. (Conditional recommendation)

Clinicians may not routinely recommend post procedural postural restrictions after canalith repositioning procedure for posterior canal BPPV. Post procedural postural restriction might be recommended in selected cases as in failure (or repeated failure) of the repositioning maneuvers, recurrent cases, or cases associated with other vestibular pathology as MD or vestibular Migraine. (Conditional recommendation against)

1-2 sessions would resolve the condition in 87-100% of patients. A minority would require a 3ed trial. Otherwise persistent BPPV is suspected. (Strong recommendation)

Clinicians should start with CRP (or modified) even in those patients who are very obese; have severe cervical or lumbar discs; or upon patient's preference. In the latter case patients should be instructed to avoid activities that may increase the risk of falls until symptoms resolve. (Strong recommendation)

Clinicians may offer observation with follow up only if there is difficulty in performing successful manoeuvre after trials in some patients as : very obese; severe cervical or lumbar discs; or upon patient's preference not to repeat the manoeuvre. (Strong recommendation)

VR should be considered an option in the treatment of BPPV rather than a recommended first-line treatment modality. Home based Brandt-Daroff exercises is indicated in patients with persistent dizziness or imbalance after successful CRP or patients who refuse CRP. A more comprehensive customized VR program is indicated in patients with other vestibular pathology or with comorbid impairments that require balance rehabilitation specially in elderly. (Strong recommendation)

Clinicians should not treat BPPV with vestibular suppressant medications such as antihistamines and/ or benzodiazepines. Exceptions: Prior to CRP in patients with severe nausea and/or vomiting, or patients previously manifested severe nausea and/or vomiting during testing. (Strong recommendation against)

Clinicians should reassess patients within an initial period of observation following the canalith repositioning procedure (40 minutes up to one week) to document resolution, need for repetition of CRP session or persistence of symptoms. (Strong recommendation)

Clinicians should evaluate, or refer to a clinician who can evaluate, patients with persistent symptoms for unresolved BPPV and/or underlying peripheral vestibular or central nervous system disorders. (Strong recommendation)

Clinicians should educate patients regarding the impact of BPPV on their safety, the potential for disease recurrence, and the importance of follow-up. (Strong recommendation)

Introduction, scope and audience

Introduction

Benign paroxysmal positional vertigo (BPPV) is a very common cause for dizziness and vertigo in the general population. It is estimated that over one third of dizzy patients referred to a dizziness clinic have BPPV. Many maneuvers were proposed for treatment of BPPV. Persistent symptoms for unresolved BPPV after successful maneuver or atypical pattern of nystagmus should raise the index of suspicion.

Scope:

The scope of the guideline is the diagnosis and management of BPPV. The guideline is required to increase the skills of all target specialists for proper diagnosis of cases of positional vertigo and avoid faulty diagnosis

Target audience:

Audiovestibular physicians
Otorhinolaryngologist
Neurologist
Physical Therapist

Methods

Methods of development

Stakeholder Involvement: Individuals who were involved in the development process. Included the above-mentioned Audiology Chief Manager, Audiology Executive Manager, Assembly Board, Grading Board and Reviewing Board.

Information about target population experiences were **not applicable** for this topic.

The adaptation cycle passed over: set-up phase, adaptation phase (Search and screen, assessment: currency, content, quality & /decision/selection) and finalization phase that included revision and external reviewing.

Search Method

Electronic database searched:
Pubmed, Medline, and Medscape

Keywords

Benign paroxysmal positional vertigo; Otoconia; Utricle; repositioning maneuvers

Time period searched: June 2015 to December 2018.

Results

Four national audio-vestibular experts reviewed the guidelines available. Guidelines from the American Academy of Otolaryngology—Head and Neck Surgery (2018) gained the highest scores as regards currency, contents and quality

It was graded GRADE by twenty six experts and reviewed by three expert reviewers to improve quality, gather feedback on draft recommendations.

The external review was done through a rating scale as well as open-ended questions.

Setting: Primary, secondary and tertiary care centers & hospitals, and related specialties.

Interpretation of strong and conditional recommendations for an intervention

Audience	Strong recommendation	Conditional recommendation
Patients	Most individuals in this situation would want the recommended course of action; only a small proportion would not. Formal decision aides are not likely to be needed to help individuals make decisions consistent with their values and preferences.	Most individuals in this situation would want the suggested course of action, but many would not
Clinicians	Most individuals should receive the intervention. Adherence to the recommendation could be used as a quality criterion or performance indicator.	Different choices will be appropriate for individual patients, who will require assistance in arriving at a management decision consistent with his or her values and preferences. Decision aides may be useful in helping individuals make decisions consistent with their values and preferences.
Policymakers	The recommendation can be adopted as policy in most situations.	Policy-making will require substantial debate and involvement of various stakeholders.

WHO handbook for guideline development – 2nd ed.
Chapter 10, page 129

The Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach to Decision frameworks (GRADE Working Group 2013)

Grade	Definition
High	We are very confident that the true effect lies close to that of the estimate of the effect.
Moderate	We are moderately confident in the effect estimate: the true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
Low	Our confidence in the effect estimate is limited: the true effect may be substantially different from the estimate of the effect.
Very Low	We have very little confidence in the effect estimate: the true effect is likely to be substantially different from the estimate of effect

Recommendations,

The following statements and flowchart were adapted from the Guidelines from American Academy of Otolaryngology—Head and Neck Surgery which received the highest scores as regards the currency, contents, and quality.

Recommendations statements

Accepted statements	
Modified statements	
Added statements	

Statement topic	Egyptian Recommendation	Evidence Quality	Strength of Recommendations	Study type	Reference
1.Diagnosis of posterior semicircular canal BPPV	Clinicians should diagnose posterior semicircular canal BPPV when vertigo associated with torsional, up beating nystagmus is 45° to one side and neck extended 20° with the affected ear down. The maneuver should be repeated with the opposite ear down if the initial maneuver is negative.	Moderate	Strong Recommendation	Diagnostic study with minor limitation	Honrubia V, Baloh RW, Harris MR, et al. Paroxysmal positional vertigo syndrome. Am J Otol. 1999;20:465-470.
2.Diagnosis of lateral (horizontal) semicircular canal BPPV	If the patient has a history compatible with BPPV and the Dix-Hallpike test exhibits horizontal or no nystagmus, the clinician should perform, or refer to a clinician who can perform, a supine roll test to assess for lateral semicircular canal BPPV.	Moderate	Strong Recommendation	Diagnostic study with minor limitation	Baloh RW, Jacobson K, Honrubia V. Horizontal semicircular canal variant of benign positional vertigo. Neurology. 1993;43:2542-2549.
3.Differential diagnosis	Clinicians should differentiate, or refer to a clinician who can differentiate, BPPV from other causes of imbalance, dizziness, and vertigo.	Low	Strong Recommendation	Observational study	Kentala E, Rauch SD. A practical assessment algorithm for diagnosis of dizziness. Otolaryngol Head Neck Surg. 2003;128:54-59.
4.Modifying factors	Clinicians should assess patients with BPPV for factors that modify management ,by the recommended repositioning maneuvers, including impaired mobility or balance, central nervous system disorders, a lack of home support, and/or increased risk for falling.	Low	Conditional Recommendation	Observational study	Lawson J, Johnson I, Bamiou DE, et al. Benign paroxysmal positional vertigo: clinical characteristics of dizzy patients referred to a Falls and Syncope Unit. QJM. 2005;98:357-364.
5.Radiographic testing	Clinicians should not obtain radiographic imaging in a patient who meets diagnostic criteria for BPPV.	Low	Strong Recommendation (against)	Observational study	Turski P, Seidenwurm D, Davis P; American College of Radiology. Expert Panel on Neuroimaging: Vertigo and Hearing Loss. Reston, VA: American College of Radiology; 2006.
6.Vestibular testing	Clinicians should not order laboratory vestibular testing in a patient who meets diagnostic criteria for BPPV in the absence of additional vestibular signs and/or symptoms inconsistent with BPPV that warrant testing. Vestibular testing may be ordered in case of recurrence, persistence of complaint after repositioning manoeuvre or in the presence of atypical nystagmus .	Low	Conditional Recommendation(against)	Observational study	Baloh RW, Honrubia V, Jacobson K. Benign positional vertigo: clinical and oculographic features in 240 cases. Neurology. 1987;37:371-378
7.Repositioning procedures as initial therapy (a)	Clinicians should treat, or refer to a clinician who can treat, patients with posterior canal BPPV with a canalith repositioning procedure. Epley's or Semont's are equivocally effective for posterior canal BPPV. Semont's is recommended in cupulolithiasis than Epley's.	High	Strong Recommendation	Well designed RCT and systemic review with meta-analysis	Hilton MP, Pinder DK. The Epley (canalith repositioning) manoeuvre for benign paroxysmal positional vertigo. Cochrane Database Syst Rev. 2014;(12):CD003162 . Prim-Espada MP, De Diego-Sastre JI, Pérez-Fernández E. Meta-analysis on the efficacy of Epley's manoeuvre in benign paroxysmal positional vertigo. Neurologia.

					2010;25:295-299.
8.Repositioning procedures as initial therapy (b)	The barbecue roll maneuver or Gufoni maneuver appear moderately effective for the geotropic form of lateral semicircular canal BPPV.	Moderate	Conditional Recommendation	RCT	Kim JS, Oh S-Y, Lee S-H, et al. Randomized clinical trial for geotropic horizontal canal benign paroxysmal positional vertigo. Neurology. 2012;79:700-707.
9.Post procedural restrictions	Clinicians may not routinely recommend post procedural postural restrictions after canalith repositioning procedure for posterior canal BPPV. <u>Post procedural postural restriction might be recommended in selected cases as in failure (or repeated failure) of the repositioning maneuvers, recurrent cases, or cases associated with other vestibular pathology as MD or vestibular Migraine.</u>	High	Conditional Recommendation (against)	Diagnostic study with minor limitation Well-designed RCT	Roberts RA, Gans RE, DeBoodt JL, et al. Treatment of benign paroxysmal positional vertigo: necessity of postmaneuver patient restrictions. J Am Acad Audiol. 2005;16:357-366. Balicki HH, Ozbay I. Effects of postural restriction after modified Epley maneuver on recurrence of benign paroxysmal positional vertigo. Auris Nasus Larynx. 2014;41:428-431.
10.Number of CRP repetitions	1-2 sessions would resolve the condition in 87-100% of patients. A minority would require a 3ed trial. Otherwise persistent BPPV is suspected.	Low	Strong Recommendation	Observational study	Kentala E, Pyykkö I. Vertigo in patients with benign paroxysmal positional vertigo. Acta Otolaryngol Suppl. 2000;543:20-22.
11.If there is difficulty in performing successful maneuver	<u>Clinicians should start with CRP (or modified) even in those patients who are very obese; have severe cervical or lumbar discs; or upon patient's preference. In the latter case patients should be instructed to avoid activities that may increase the risk of falls until symptoms resolve.</u>	Low	Strong Recommendation	Observational study	Kerber KA. Benign paroxysmal positional vertigo: opportunities squandered. Ann N Y Acad Sci. 2015;1343:106-112.
12.Observation as initial therapy	Clinicians may offer observation with follow up <u>only if there is difficulty in performing successful maneuver after trials in some patients as : very obese; severe cervical or lumbar discs; or upon patient's preference not to repeat the maneuver.</u>	Low	Strong Recommendation	Observational study	Kerber KA. Benign paroxysmal positional vertigo: opportunities squandered. Ann N Y Acad Sci. 2015;1343:106-112.

Statement topic	Egyptian Recommendation	Evidence Quality	Strength of Recommendations	The statement is based up on:	
13.Vestibular rehabilitation	VR should be considered an option in the treatment of BPPV rather than a recommended first-line treatment modality. Home based Brandt-Daroff exercises is indicated in patients with persistent dizziness or imbalance after successful CRP or patients who refuse CRP.A more comprehensive customized VR program is indicated in patients with other vestibular pathology or with comorbid impairments that require balance rehabilitation specially in elderly.	Moderate	Strong Recommendations	Systemic review	Hillier SL, Hollohan Vestibular rehabilitation for unilateral peripheral vestibular dysfunction. Cochra Database Syst Rev. 2007;(4):CD005397
14.Medical therapy	Clinicians should not treat BPPV with vestibular suppressant medications such as antihistamines and/or benzodiazepines. Exceptions: Prior to CRP in patients with severe nausea and/or vomiting, or patients previously manifested severe nausea and/or vomiting during testing.	Moderate	Strong Recommendation (against)	Diagnostic study with minor limitation	Fujino A, Tokumasu Yosio S, et al. Vestibular training for benign paroxysmal positional vertigo: its efficacy in comparison with antivertigo drugs. Arch Otolaryngol Head Neck Surg. 1994;120:497-504.
14.Outcome assessment	Clinicians should reassess patients within an initial period of observation following the canalith repositioning procedure (40 minutes up to one week) to document resolution, need for repetition of CRP session or persistence of symptoms.	Very low	Strong Recommendation	Observational study	Sekine K, Imai T, Sa G, et al. Natural history of benign paroxysmal positional vertigo and efficacy of Epley and Lempert maneuvers. Otolaryngol Head Neck Surg. 2006;135:529-533.
15.Evaluation of treatment failure	Clinicians should evaluate, or refer to a clinician who can evaluate, patients with persistent symptoms for unresolved BPPV and/or underlying peripheral vestibular or central nervous system disorders.	Low	Strong Recommendation	Observational study	Buttner U, Helmchen C, Brandt T. Diagnostic criteria for central versus peripheral positioning nystagmus and vertigo: a review. Acta Otolaryngol. 1999;119:1-5.
16.Patient Education	Clinicians should educate patients regarding the impact of BPPV on their safety, the potential for disease recurrence, and the importance of follow-up.	Low	Strong Recommendation	Observational study	Brandt T, Dieterich Vestibular falls. J Vestib Res. 1993;3:14.

Research needs

No need for new study to confirm our choice of statements

Monitoring and evaluating the impact of the guideline

Monitoring/ Auditing Criteria

The audiovestibular physicians should:

- Search for spontaneous nystagmus
- Perform oculomotor tests (gaze, smooth pursuit, and saccading testing)
- Perform Dix-Hallpike test and other positional tests properly
- Proper diagnosis of the side (right vs left), canal affected, and type of BPPV (canalolithiasis vs. Cupulolithiasis).

Updating of the guideline

Updating Procedure:

Any recommendation of this guideline will be updated when new evidence that could potentially impact the current evidence base for this recommendation is identified. If no new reports or information are identified for a particular recommendation, the recommendation will be revalidated. The focus will be on recommendations supported by very-low- or low certainty evidence and where new recommendations or a change in the published recommendations may be needed.

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1. Brandt T, Daroff RB. Physical therapy for benign paroxysmal positional vertigo. *Arch Otolaryngol*. 1980;106:484-485.
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14. Howick J, Chalmers I, Glasziou; OCEBM Levels of Evidence Working Group. The Oxford 2011 levels of evidence. <http://www.cebm.net/index.aspx?o=5653>. Accessed October 22, 2015.
15. McDonnell MN, Hillier SL. Vestibular rehabilitation for unilateral peripheral vestibular dysfunction. *Cochrane Database Syst Rev*. 2015;(1):CD005397.
16. Takao I, Noriaki T, Tetsuo I, et al. Classification, diagnostic criteria and management of benign paroxysmal positional vertigo. Committee for Standards in Diagnosis of Japan Society for Equilibrium Research *Auris Nasus Larynx*. 2017;44:1-6.
17. Bhattacharyya N, Gubbels SP, Schwartz SR, et al. Clinical practical guidelines: Benign paroxysmal positional vertigo (update). *Otolaryngology-Head and Neck Surgery* 2017, Vol. 156(3S) S1-S47. Clinical Practice Guideline: Benign Paroxysmal Positional Vertigo (Update); AAO-HNS *Otolaryngol Head Neck Surg*. 2017;156(3_suppl): S1-S47.

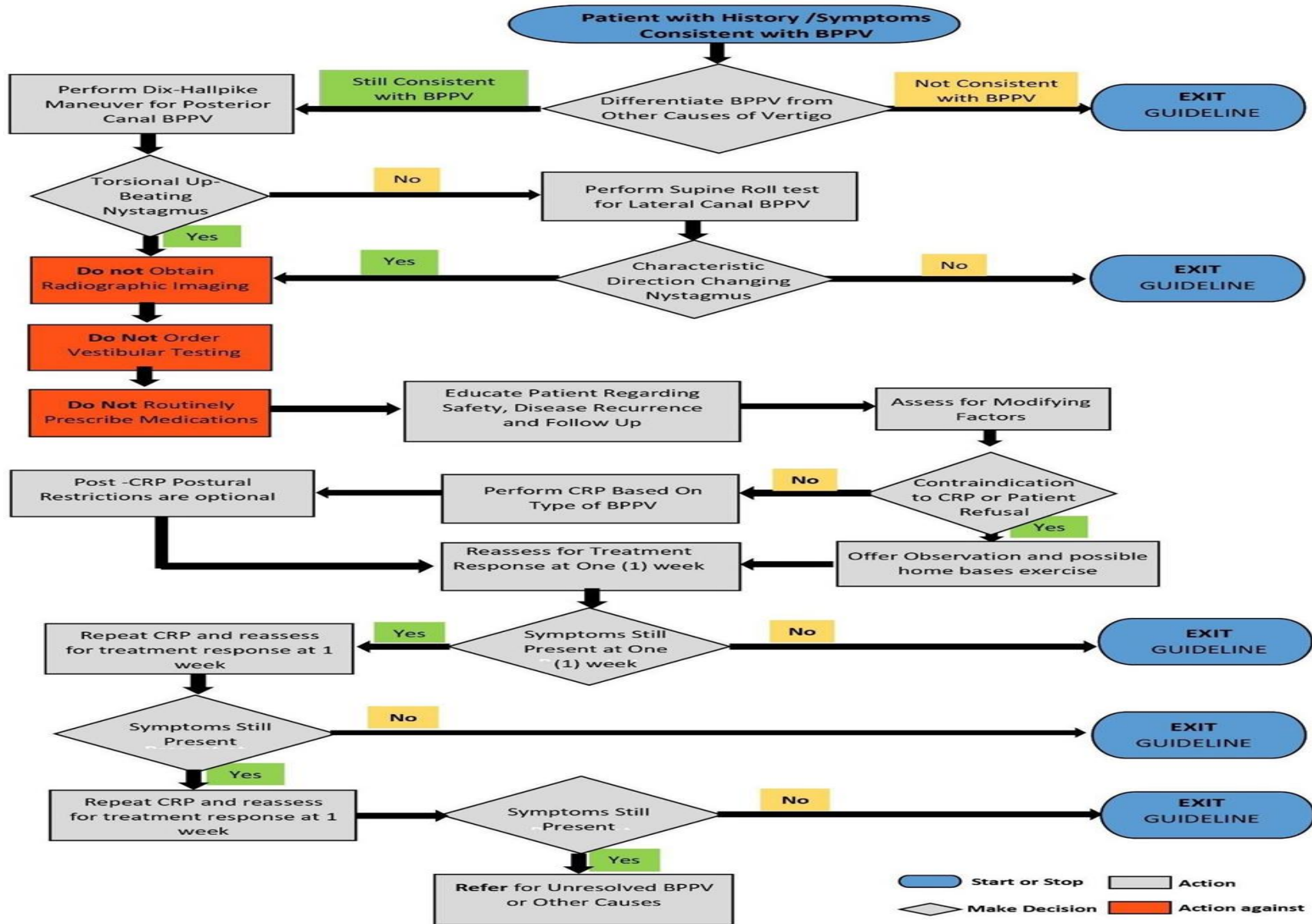
18. Pérez-Vázquez P, Franco-Gutiérrez V, Soto-Varela A, et al. Practice Guidelines for the Diagnosis and Management of Benign Paroxysmal Positional Vertigo. Otolaryngology Committee of Spanish Otorhinolaryngology and Head and Neck Surgery Consensus Document *Acta Otorinolaringol Esp.* 2018;69(6):345-36

Annexes

Editorial Independence:

- This guideline was developed without any external funding.
- All the guideline development group members have declared that they do not have any competing interests.

Annex 1: Guideline Flowchart



Annex 2: Tables of appraisal of selected guidelines: Currency (table 1), Content (table 2) and Quality (table 3) of the selected guidelines.

Table 1: Currency

<p>Benign paroxysmal positional vertigo: Diagnostic criteria. Consensus document of the Committee for the Classification of Vestibular Disorders of the Bárány Society</p>	<p>Practice Guidelines for the Diagnosis and Management of Benign Paroxysmal Positional Vertigo. Otolaryngology Committee of Spanish Otorhinolaryngology and Head and Neck Surgery Consensus Document</p>	<p>Classification, diagnostic criteria and management of benign paroxysmal positional vertigo Committee for Standards in Diagnosis of Japan Society for Equilibrium Research</p>	<p>Clinical Practice Guideline: Benign Paroxysmal Positional Vertigo (Update) ; AAO-HNS</p>
<p>Journal of Vestibular Research 25;105–117 (2015)</p>	<p>Acta Otorinolaringol Esp. ;69(6):345-366 (2018)</p>	<p>Auris Nasus Larynx 44;1–6 (2017)</p>	<p>Otolaryngol Head Neck Surg. Mar;156(3_suppl): S1-S47 (2017)</p>

Table 2: Content

CRITERIA	American Academy ORL-HNS	Bárány Society	Spanish ORL- HNS Consensus	Japan Society for Equilibrium Research
Credibility	9/9	5.4/9	7.2/9	3.6/9
Observability	9/9	7.2/9	3.6/9	3.6/9
Relevance	9/9	7.2/9	7.2/9	5.4/9
Relative advantage	7.2/9	7.2/9	7.2/9	7.2/9
Easy to install and understand	9/9	9/9	7.2/9	5.4/9
Compatibility	9/9	9/9	9/9	9/9
Testability	9/9	9/9	9/9	9/9
Total	61.2	54	50.4	43.2

Table 3: Quality

Domain	AAO-HNS	Bárány Society	Spanish ORL-HNS Consensus	Japan Society for Equilibrium Research
1. Transparency	A	A	C	C
2. Conflict of interest	A	A	B	B
3. Development group	A	C	C	C
4. Systematic review	A	B	A	B
5. Grading of evidence	A	B	B	B
6. Recommendations	A	C	C	C
7. External review	A	A	NR	B
8. Updating	B	B	B	B

Annex 3: The risks and benefits of added and/or modified statements

Statement topic	Original statement	The statement action to be adapted	Benefits	Risk/Harm
Vestibular testing	Clinicians should not order laboratory vestibular testing in a patient who meets diagnostic criteria for BPPV in the absence of additional vestibular signs and/or symptoms inconsistent with BPPV that warrant testing.	Clinicians should not order laboratory vestibular testing in a patient who meets diagnostic criteria for BPPV in the absence of additional vestibular signs and/or symptoms inconsistent with BPPV that warrant testing. <u>Vestibular testing may be ordered in case of recurrence, persistence of complaint after repositioning maneuver or in the presence of atypical nystagmus</u>	Diagnosis and treatment of possible causes of positional vertigo other than BPPV	Cost of vestibular testing
Repositioning procedures as initial therapy for posterior canal (a)	Clinicians should treat, or refer to a clinician who can treat, patients with posterior canal BPPV with a canalith repositioning procedure	Clinicians should treat, or refer to a clinician who can treat, patients with posterior canal BPPV with a canalith repositioning procedure. Epley or Semont are equivocally effective for post.canal BPPV	High value ascribed to prompt resolution of symptoms and the ease with which the CRP may be performed	No serious adverse events reported in controlled randomized trials
Repositioning procedures as initial therapy for lateral canal (b)	Not reported	the barbecue roll maneuver or Gufoni maneuver appear moderately effective for the geotropic form of lateral semicircular canal BPPV	Helps in resolution of patients symptoms	None
Post procedural restrictions	Clinicians may not routinely recommend post procedural postural restrictions after canalith repositioning procedure for posterior canal BPPV.	Clinicians may not routinely recommend post procedural postural restrictions after canalith repositioning procedure for posterior canal BPPV. <u>Post procedural postrural restriction might be recommended in selected cases as in failure (or repeated failure) of the repositioning maneuvers, recurrent cases, or cases associated with other vestibular pathology as MD or vestibular Migraine.</u>	Help patients to tolerate symptoms till complete recovery	Possible musculoskeletal discomfort and cost of cervical collars
Number of CRP repetitions	Not reported	1-2 sessions would resolve the condition in 87-100% of patients. A minority would require a 3ed trial. Otherwise persistent BPPV is	Help the clinician to search for causes of resolution failure	Cost of investigations

		suspected.		
If there is difficulty in performing successful maneuver	Not reported	Clinicians should start with CRP (or modified) even in those patients who are very obese; have severe cervical or lumber discs; or upon patient's preference. In the latter case patients should be instructed to avoid activities that may increase the risk of falls until symptoms resolve.	Faster recovery and resolution of BPPV	Patient discomfort and difficulty of performing the maneuver
Observation as initial therapy	Clinicians may offer observation with follow up as initial management for patients with BPPV	Clinicians may offer observation with follow up only if there is difficulty in performing successful maneuver after trials in some patients as : very obese; severe cervical or lumber discs; or upon patient's preference not to repeat the maneuver	Avoidance of increased risks of falls; the use of vestibular suppressants with their known side effects	Prolonged symptoms compared with other interventions that may expose patients to increased risks for falls or lost days of work; indirect costs of delayed resolution compared with other measures
Vestibular rehabilitation	The clinician may offer VR in the treatment of BPPV	VR should be considered an option in the treatment of BPPV rather than a recommended first-line treatment modality. Home based Brandt-Daroff exercises is indicated in patients with persistent dizziness or imbalance after successful CRP or patients who refuse CRP.A more comprehensive customized VR program is indicated in patients with other vestibular pathology or with comorbid impairments that require balance rehabilitation specially in elderly.	Reduce patient symptom in the mentioned cases	None for home-based exercise. Cost if formal VR program is recommended
Medical therapy	Clinicians should not routinely treat BPPV with vestibular suppressant medications such as antihistamines and/or benzodiazepines	Clinicians should not treat BPPV with vestibular suppressant medications such as antihistamines and/or benzodiazepines. Exceptions: Severely symptomatic patients	Avoidance of adverse effects from, or medication interactions with, these medications;	None

		refusing other treatment options and patients requiring prophylaxis for CRP	prevention of decreased diagnostic sensitivity from vestibular suppression during performance of the Dix-Hallpike maneuvers	
Outcome assessment	Clinicians should reassess patients within 1 month after an initial period of observation or treatment to document resolution or persistence of symptoms	Clinicians should reassess patients within time frame of 3 weeks following the canalith repositioning procedure to document resolution, need for repetition of CRP session or persistence of symptoms	Confirming the success of the maneuver; avoidance of missing other versions of BPPV as multiple canals or central causes	None