International Neurological
Physical Therapy Association

INPA webinar series
Benign Paroxysmal Positonal Vertigo
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Amber: If a patient is symptomatic with the Dix - Hallpike maneuver without presence of nystagmus with repeated testing, would you still treat using the Epley maneuver or a variant?

Sue Whitney (SW) Based on several studies about "subjective" BPPV (Haynes et al 2002; UZ U et al, 2019) I would try to do the modified Epley, Semont or repositioning of your choice for 2-3 visits BUT only if they had the typical history including: they feel off with a change of head position relative to gravity, the symptoms come on with a change of head position and last under one minute, and that the symptoms fatigue. If they are not improving, I would consult with the referring physician.

Fiona Lucey: I'm wondering if you have a recommendation for the rare occasion when a canal jam occurs during repositioning manouvre?

SW: If a canal jam occurs, my advice would be to try to move the head as much and as fast as they are willing to let you move it to see if you can dislodge the otoconia. I believe that if you can get the otoconia loose, you can move the otoconia if it is anatomically possible. Horii et al in 2010 showed that there are some abnormal variants of the anatomy of the semicircular canals scanned via a 3D MRI, suggesting that in some persons with intractable BPPV their anatomy is affecting their clinical progress.

Ayala: Are there patients that you wouldn't treat due to contraindications or would you just do a modification to the Epley's with the Li maneuver?

SW: There are people how are too medically unstable to treat but that is very unusual. I have figured out methods to manage every person that I have seen in out-patient care, but I have waited to manage some persons BPPV while in hospital. Increased intracranial pressure and post retinal surgery are 2 examples of absolute contraindications for me — I would not treat them until they were medically stable. I believe that your level of experience and support of other team members dictates how aggressive to be with managing BPPV. I have a lot of experience so I more willing to treat challenging cases that others who are afraid to treat, but I also use my years of experience to decide if it is safe for the patient to undergo the testing and the maneuver. I have treated some of these challenging cases with the help of 4 to 5 physical therapists and in one case of a person post head injury with fractures in all 4

extremities, we used SEVEN physical therapists to treat a person in the step down unit in hospital. In this case he had horizontal canal BPPV and it was challenging since he had to be log rolled in bed. The Li maneuver for posterior (Li et al, 2017) and horizontal canal (Li et al, 2018) are optimal for persons with decreased mobility since both can be done with less movement than the typical modified Epley or barbeque maneuvers.

Amanda Male: When do you draw the line between reinforcing someone's beliefs they have BPPV and it is not or is motion sensitivity, and treating subjective (or symptomatic) BPPV?

SW: If there is not improvement within 2-3 visits, I am moving on and will try to determine what their problem is. Persons with BPPV-like symptoms and motion sensitivity typically present very differently. Vestibular migraine and multiple sclerosis can mimic BPPV as can STROKE, so one needs to carefully examine the eye movements to be sure that the persons does not have downbeating nystagmus and make sure that that the nystagmus stops within a minute.

Harry Truong: What if a patient does not have enough Cervical range for the Dix Hallpike?

SW: Placing the person's head in Trendelenburg is optimal if you can do this. If not, I have the persons head over the edge of the bed and have them bridge so that their hips go UP and their head goes DOWN. That has worked very effectively. Both Dr. Santos (from Rio de Janeiro) and I have used the bridging technique with persons with decreased neck range of motion. One can also do the Sidelying test (Cohen HS 2004) for making the diagnosis in lieu of the Dix Hallpike. The Sidelying test has good sensitivity and specificity for identifying BPPV.

Harry Truong : Does the speed that you perform the Dix-Hallpike matter?

SW: I have always wondered the same question and did check to see if I could locate any study about the speed of the Dix-Hallpike and found none. It may be in the literature but I did not find it on PubMed. This is purely my opinion: I do the Dix-Hallpike fairly slowly and find it works MOST of the time. If I have a strong suspicion that they have BPPV and I have done the Dix-Hallpike and saw nothing, the second time that I do it, I will do it more quickly. I am not sure if it is because I did the Dix-Hallpike faster or it became positive because I did it faster or maybe somehow I changed the angle of the head, BUT if you decide to do it faster, you MUST support the head/neck well to avoid neck injury.

CGB Physio: How do you differentiate BPPV from other similar conditions?

SW: Normally when I teach about BPPV, it takes me a day to do it well. I tried to present a very simple case, but life is not simple. I gave you the "bare bones" information during the online talk. There is a wealth of additional information that you would need to know to differentially diagnose BPPV from other conditions. As a physio,

probably the best textbook that does this is by Herdman SJ and Clendanial (Editors) by F.A. Davsi (2014).

KBtb23: What is the prevalence of patients with chronic problems developing PPPD

SW: I am not sure that we know this answer since the diagnosis is so new. Persons with PPPD are challenging to treat and need to be treated differently. The objective for all of us is to identify these people early and give them different care than you would others to maximize their activity and participation. It also depends on where you work as in tertiary care centers like where I work, the numbers would be higher than in an outpatient setting.

Marcelo Duperre: Do you use Demi Semont Manouver in cupulolitiasis of the posterior canal? if not, which manouver do you prefer?

SW: I know the maneuver but have not used it. I use the approach that I described in a previous question where I attempt to get the otoconia moving.

Ellie Morrison: I have some patients who have chronic BPPV as in I successfully reposition but symptoms return within a week, how many times would you Epley?

SW: I have had the same problem, but thankfully not very often. If it keeps coming back after they are clear when they leave me, I try different maneuvers (not discussed in the online talk). I attempt to find out what they are doing after they leave me: going to the hair stylist once a week, putting eye drops in a few times a day, etc to see if there is any way that this could be positionally induced. I have suggested occasionally that they modify their head positioning, and it has been successful. The above suggestions are expert opinion only and are NOT supported in the literature.

Is there any other best practise that you would advise? I agree that vestibular migraines increase risk of BPPV and I have many older people who I believe have vestibular migraines but have never been managed correctly/ diagnosed that seem to have this repetitive BPPV

SW: I am not sure what you mean by best practice, but I would suggest that everyone become familiar with the BPPV practice guidelines published by the American Academy of Head and Neck Surgery (2017). You are less likely to see active vestibular migraine in older adults, but they often have a history of migraine which makes them more at risk for the development of BPPV.

The BPPV guideline link in ENGLISH is provided below:

Clinical Practice Guideline: Benign Paroxysmal Positional Vertigo (Update) - Neil Bhattacharyya, Samuel P. Gubbels, Seth R. Schwartz, Jonathan A. Edlow, Hussam El-Kashlan, Terry Fife, Janene M. Holmberg, Kathryn Mahoney, Deena B. Hollingsworth, Richard Roberts, Michael D. Seidman, Robert W. Prasaad Steiner, Betty Tsai Do,

Courtney C. J. Voelker, Richard W. Waguespack, Maureen D. Corrigan, 2017 (sagepub.com)

The diagnostic criteria for BPPV from the Barany Society are free in ENGLISH:

Benign paroxysmal positional vertigo: Diagnostic criteria - IOS Press

Another free access BPPV guideline written in SPANISH is provided below:

Vértigo posicional paroxístico benigno: criterios diagnósticos. Documento de consenso del Comité para la Clasificación de los Trastornos Vestibulares de la Bárány Society | Acta Otorrinolaringológica Española (elsevier.es)

Below is the link on YouTube for the Dr. Parnes movies that show the intraoperative otoconia:

https://www.youtube.com/watch?v=qpW98U7MUyc&t=4s