



Letter to the Editor

# A Comprehensive Insight into the Rehabilitative Treatment of Persistent Benign Paroxysmal Positional Vertigo

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Dear Editor,

We read with interest the intriguing study by Pérez et al. <sup>[1]</sup> entitled "A Pilot Study Using Intratympanic Methylprednisolone for Treatment of Persistent Posterior Canal Benign Paroxysmal Positional Vertigo."

We always appreciate the experimental, and sometimes invasive, approach implemented worldwide to better acknowledge and treat this kind of disorder, one the other one we retain it is of regard to better speculate about those already known and accepted procedures that were recently validated in the literature.

As stated by the above-mentioned authors, persistent benign paroxysmal positional vertigo (PBPPV) can be as an extensive labyrinth disease. Beyond the particular affected canal, it may lead to a chronic, persistent disorder in which the detachment of otocorial deposits from macular receptors, and their movements in endolymphatic fluids can elicit a gravity-related stream that may provoke many clinical features <sup>[2]</sup>.

In this heterogeneous physiopathological perspective, in the past, some authors have suggested the use of wide, less invasive, and ecological approaches <sup>[2,3]</sup>. To this end, clinical readers of your journal may receive a more integrated view of therapeutic chances if the above-mentioned authors would have mentioned the already successfully validated procedures employing mastoid vibration to introduce another attempt to improve the efficacy of canalith repositioning procedures in PBPPV <sup>[2,3]</sup>. In particular, a recent study has demonstrated that home-made, patient-tailored, rehabilitative treatment involving self-assessed temporal bone vibration (TBV) with a common low-intensity massaging cushion markedly improved the outcomes of PBPPV <sup>[2]</sup>.

Thus, considering the debilitating consequences on daily activities that PBPPV may lead to, we hope that clinical and research readers may keep in mind, after a thorough insight of the literature, that a TBV-integrated rehabilitative protocol ensures a significant positive outcome for patients suffering from PBPPV.

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## Authors' Reply

Dear Editor,

A definition for persistent BPPV has not been firmly established yet. In 2010, Horii et al. <sup>[1]</sup> defined persistent BPPV as the "presence of positional or positioning nystagmus confirmed by a clinician using an infrared charge-coupled device camera for more than 1 year, despite adequate physical therapy (canalith repositioning procedure)." Later, other authors, such as Choi et al. <sup>[2]</sup> in 2012, introduced a different criterion based on the number of maneuvers employed: "BPPV continuing for more than 2 weeks (more than 5 sessions) in the same canal despite repeated CRPs." To date, the repetition of therapeutic maneuvers has been claimed as the treatment of choice for this type of intractable BPPV <sup>[2]</sup>.

In the study by Alessandrini et al. <sup>[3]</sup>, the previous definition by Horii was employed and repeated maneuvers (modified self-administered maneuvers using a mastoid vibrator) after a year of persistence were performed. Conversely, in our study, we intended to reduce the time to BPPV recovery by defining persistent BPPV after six unsuccessful maneuvers <sup>[4]</sup> and employing intratympanic methylprednisolone. This is a procedure that is considered safe and well tolerated and where side-effects have not been commonly reported <sup>[5]</sup>.

Macias et al. <sup>[6]</sup> found no evidence of the benefit of mastoid oscillation applied during the Epley maneuver, and a Cochrane review has supported this statement <sup>[7]</sup>. For this reason, we did not employ a mastoid oscillator. Mastoid vibration disperses particles that form the canalith, helping the complete maneuver resolve the BPPV. However, dispersion itself can make particles temporarily incompetent to promote a positive Dix-Hallpike test result <sup>[8]</sup>. This may explain recurrence after completing the applied treatment in the series by Alessandrini et al. <sup>[3]</sup>

In summary, our study and the one by Alessandrini et al. <sup>[3]</sup> show different approaches to the treatment of persistent BPPV; however, both may be useful and do not invalidate each other. Future randomized clinical trials with larger series will determine the effectiveness of both approaches.

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