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Benign Paroxysmal Positional Vertigo: comparison of two recent international guidelines

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Abstract

Benign Paroxysmal Positional Vertigo (BPPV) is characterized by vertigo, lasting for a few seconds and usually managed by head positioning maneuvers. To educate clinicians concerning the state-of-the art knowledge about its management, the international societies developed guidelines.

Aim: the aim of this paper is to discuss, in a practical fashion, the current options available to manage BPPV.

Method: Study design: non-systematic review. This study reviews two recent guidelines regarding the evaluation and treatment of BPPV. The first one was published by the American Academy of Otolaryngology Head and Neck surgery (AAO-HNS) and the other by the American Academy of Neurology (AAN). The similarities were presented in different tables.

Results: Those guidelines presented differences regarding methods. Only the AAO-HNS guidelines recommend the Dix-Hallpike test for the diagnosis of BPPV. Only canalith repositioning maneuver, Semont maneuver and vestibular rehabilitation had showed some benefit and were recommended as good treatment options.

Conclusions: Both guidelines fulfilled all the aspects required for clinicians to diagnosed and manage BPPV; only the AAO-HNS's guidelines were more comprehensive and of better quality.

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INTRODUCTION

Vertigo corresponds to the feeling of rotation in the environment or having the environment rotate around oneself[1]. Benign Paroxysmal Positional Vertigo (BPPV), described in 1921 is very likely the most common cause of vertigo, with a prevalence of 20%-30% in specialized clinics[2,3]. The main symptom is the feeling of rotational dizziness triggered by a change in head position. It can happen in an unpredictable and sudden way, but it does not have a progressive pattern[4]. Parnes et al.[5] reported that approximately 58% of the BPPV cases do not have a clearly identified cause. Its primary form corresponds to 50-70% of the cases. On the other hand, the second most common cause is head injury (7%-17%), followed by vestibular neuritis (15%). With an annual incidence of 0.6%, it affects more women than men, and its prevalence is seven times higher in people older than 60 years, with an age peak between 70 and 78 years. Consanguineous relatives have five times more likelihood of developing BPPV[6]. In a German epidemiological study, Brevern et al.[7] reported that 86% of the interviewed individuals had important psychosocial limitations which prevented them from developing their daily activities, they avoided driving or leaving their homes during the spells, and most of them ended up developing depression and anxiety[7]. In a North-American epidemiological study, the calculated expenses to control BPPV reached the sum of two thousand dollars per patient. Most of these costs were not necessary and it was associated with misdiagnosis and inefficient treatment[8]. Another study, in England, calculated that the time between BPPV's onset until effective clinical treatment was of 92 weeks[9]. The diagnosis of this condition is based on clinical history, followed or not by vomit, instability and unbalance. Different maneuvers can be used to confirm the diagnosis. The Dix-Hallpike maneuver is the most used for the posterior and anterior canals, and it should be done by qualified professionals. Diagnostic criteria include torsional nystagmus and a feeling of vertigo. For horizontal canal BPPV, we use the *roll-test*, turning the patient's head in its own plane[10-15]. Today, there are three basic treatments for BPPV, with their own indications: canalith repositioning maneuver, freeing exercises and the Brandt-Daroff habituation exercises. The choice of which maneuver or exercise is more adequate will depend on the canal involved and the type of BPPV. Usually, the canalith repositioning maneuver is used in cases of canalolithiasis or the freeing maneuver for cupulolithiasis. The habituation exercises are more used with patients with residual and milder complaints[16,17]. In an attempt to better organize the ideas concerning the techniques to be used for the diagnosis and treatment of BPPV, Fife et al.[18] and Bhattacharyya et al.[19] created practical guidelines. The goal of the present paper is to discuss, in a practical and didactical way, the current approach available concerning evaluation and treatment for BPPV.

MATERIALS AND METHODS

This study was an asystematic review with a critical analysis comparing two international guidelines concerning BPPV evaluation, diagnostic and treatment. We chose two papers which aimed at establishing a world consensus on the matter, both published in 2008. One was supervised by the *American Academy of Neurology* (AAN)[18] and the other was supervised by the *American Academy of Otolaryngology* (AAO-HNS)[19], which were published in different journals in the fields of Neurology and Otorhinolaryngology, respectively. The *AAO-HNS* formally established that the clinical practice guidelines were not conceived as the sole source of guidance in the control of BPPV. On the contrary, the intent was to provide support to clinicians as a structure based on evidence for decision making and to define management strategies. The authors explained that the paper was not intended for replacing clinical judgment or to establish a protocol to be followed for all individuals with such condition, especially because it could not provide for one single adequate approach to diagnose and control the problem. The results were presented in comparative tables and the common topics were compared and discussed in order to check the impact of the guidelines concerning each type of recommendation presented by the respective authors and/or academies.

RESULTS

Upon checking both papers, in regards of the methodology used for each study, it was possible to identify some basic differences. While the paper published by the AAN[18] had only neurologists and neurotologists in their team of researchers, the second, under the auspices of the AAO-HNS[19], had a multidisciplinary team of investigators, involving not only otolaryngologists, but also other professional representatives of the following fields: physical therapy, osteopathy, emergency medicine, Family practice, geriatrics, internal medicine, neurology, head and neck surgery, audiologists, physiatrists and rehabilitation professionals. The goals were also distinct, one was broader and with the goal of improving the quality of diagnosis and treatment (AAO-HNS)[19], while the other was dedicated to answers questions concerning only treatment (AAN)[18](Table 1).

The studies found by Fife et al.[18] followed the AAN evidence system classification, dividing it into Classes I, II, III and IV, and the recommendations were made according to AAN criteria, in order to translate the quality