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REVIEW ARTICLE

Effectiveness of Otolith Repositioning Maneuvers and Vestibular Rehabilitation exercises in elderly people with benign paroxysmal positional vertigo: a systematic review[☆]

Q2 Karyna Figueiredo Ribeiro^{a,b,*}, Bruna S. Oliveira^b, Raysa V. Freitas^b,
Lidiane M. Ferreira^c, Nandini Deshpande^d, Ricardo O. Guerra^{a,e}

^a Universidade Federal do Rio Grande do Norte (UFRN), Programa de Pós-Graduação em Ciências da Saúde, Natal, RN, Brazil

^b Universidade Federal do Rio Grande do Norte (UFRN), Departamento de Fisioterapia, Natal, RN, Brazil

^c Universidade Federal do Rio Grande do Norte (UFRN), Programa de Pós-Graduação em Saúde Pública, Natal, RN, Brazil

^d Queen's University, Faculty of Health Sciences, School of Rehabilitation Therapy, Kingston, Canada

^e Universidade Federal do Rio Grande do Norte (UFRN), Programa de Pós-Graduação em Fisioterapia, Natal, RN, Brazil

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KEYWORDS

Benign Paroxysmal
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Elderly;
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Rehabilitation

Abstract

Introduction: Benign Paroxysmal Positional Vertigo (BPPV) is highly prevalent in elderly people. This condition is related to vertigo, hearing loss, tinnitus, poor balance, gait disturbance, and an increase in risk of falls, leading to postural changes and quality of life decreasing.

Objective: To evaluate the outcomes obtained by clinical trials on the effectiveness of Otolith Repositioning Maneuver (ORM) and Vestibular Rehabilitation (VR) exercises in the treatment of BPPV in elderly.

Methods: The literature research was performed using PubMed, Scopus, Web of Science and PEDro databases, and included randomized controlled clinical trials in English, Spanish and Portuguese, published during January 2000 to August 2016. The methodological quality of the studies was assessed by PEDro score and the outcomes analysis was done by critical revision of content.

Results: Six studies were fully reviewed. The average age of participants ranged between 67.2 and 74.5 years. Three articles were not assessed by PEDro score and the remaining received low classification varying from 2 to 7/10. The main outcome measures analyzed were vertigo, positional nystagmus and postural balance. Additionally, the number of maneuvers necessary

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* Corresponding author.

E-mail: karynamy@hotmail.com (K.F. Ribeiro).

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for remission of the symptoms, the quality of life, and the functionality were also assessed. The majority of the clinical trials used ORM ($n = 5$) and 3 articles performed VR exercises in addition to ORM or pharmacotherapy. One study showed that the addition of movement restrictions after maneuver did not influence the outcomes.

Conclusion: There was a trend of improvement in BPPV symptomatology in elderly patients who underwent ORM. There is sparse evidence from methodologically robust clinical trials that examined the effects of ORM and VR exercises for treating BPPV in the elderly. Randomized controlled clinical trials with comprehensive assessment of symptoms, quality of life, function and long-term follow up are warranted.

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PALAVRAS-CHAVE

Vertigem posicional paroxística benigna; Idosos; Vertigem; Tontura; Reabilitação

Eficácia das manobras de reposicionamento de otólitos e exercícios de reabilitação vestibular em idosos com vertigem paroxística benigna: uma revisão sistemática

Resumo

Introdução: a Vertigem Posicional Paroxística Benigna (VPPB) é altamente prevalente em idosos. Esta condição está relacionada a vertigem, perda auditiva, zumbido, equilíbrio precário, distúrbios da marcha e aumento do risco de quedas, levando a mudanças posturais e redução da qualidade de vida.

Objetivo: Avaliar os desfechos obtidos por ensaios clínicos sobre a eficácia da Manobra de Reposicionamento de Otólitos (MRO) e de exercícios Reabilitação Vestibular (RV) no tratamento de VPPB em idosos.

Método: a pesquisa da literatura foi realizada usando bancos de dados do PubMed, Scopus, Web of Science e PEDro e incluiu ensaios clínicos controlados randomizados em inglês, espanhol e português, publicados de janeiro de 2000 a agosto de 2016. A qualidade metodológica dos estudos foi avaliada pelo escore PEDro e a análise dos desfechos foi realizada por revisão crítica do conteúdo.

Resultados: seis estudos foram totalmente revisados. A idade média dos participantes variou entre 67,2-74,5 anos. Três artigos não foram avaliados pelo escore PEDro e os restantes receberam baixa classificação, variando de 2-7/10. As principais medidas de desfecho analisadas foram vertigem, nistagmo posicional e equilíbrio postural. Além disso, o número de manobras necessárias para a remissão dos sintomas, a qualidade de vida e a funcionalidade também foram avaliados. A maioria dos ensaios clínicos usou MRO ($n = 5$) e 3 artigos realizaram exercícios de RV, além de MRO ou farmacoterapia. Um estudo mostrou que a adição de restrições de movimento após a manobra não influenciou os resultados.

Conclusão: houve uma tendência de melhora na sintomatologia da VPPB em pacientes idosos submetidos à MRO. Existem evidências escassas de ensaios clínicos metodologicamente robustos que examinaram os efeitos dos exercícios de MRO e RV para o tratamento da VPPB nos idosos. Ensaios clínicos controlados randomizados com avaliação abrangente de sintomas, qualidade de vida, função e acompanhamento de longo prazo são justificados.

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Introduction

Dizziness is one of the most common symptoms in elderly people and it is considered a geriatric syndrome.¹ Among the causes of dizziness, Benign Paroxysmal Positional Vertigo (BPPV) is the most frequent vestibular disorder, affecting approximately 20% of patients presenting this symptom. BPPV is highly prevalent in elderly, probably due to senile degenerative changes.^{2,3} Diagnosis of BPPV is confirmed using Dix-Hallpike test, and it is classified as objective when

nystagmus is observed during the test, or subjective when there is vertigo without nystagmus.⁴ Female patients have been shown to be most affected by BPPV, which may be justified by the fact that the homeostasis of labyrinthine fluids may be compromised by female hormones decreasing from climacteric phase.⁵

Prevalence of BPPV is estimated at 25% in elderly people over 70 years with complaints about dizziness and this symptom persists for more than one year.⁶⁻⁸ Vertigo is reported as the main complain of BPPV patients and may be associated

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