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Case Report
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Detecting Benign Paroxysmal Position Vertigo in Patients in Nursing Homes: A Case Study Approach

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Abstract

Benign Paroxysmal Position Vertigo (BPPV) can be a debilitating undetected condition for older patients in nursing homes. BPPV is classified as a peripheral vestibular disorder and individuals have various levels of dizziness associated with the disorder. The presentation of BPPV in nursing homes patients may be overlooked as vertigo and dizziness can be triggered by other chronic diseases and disorders. Thus, these patients may be misdiagnosed or have a delayed diagnosis of BPPV resulting in unnecessary health care visits and procedures. The case study in the article highlights how BPPV can manifest in a patient at a nursing home. Awareness about BPPV is key for all health care professionals and educational initiatives must be implemented across care settings. With the necessary education and training, health care professionals can detect BPPV in a timely manner, therefore limiting the amount of human suffering that occurs with this disorder.

Introduction

Benign Paroxysmal Position Vertigo (BPPV) can be a debilitating undetected condition for patients in nursing homes [1]. BPPV is characterized as a sensation of spinning that can provoked with head position changes resulting from shattered endolymph residue found in the posterior semicircular canal of the ear [2]. Another definition of BPPV classifies it as an inner ear disorder that presents with repeated episodes of positional vertigo [3]. BPPV is classified as a peripheral vestibular disorder and individuals have various levels of dizziness associated with the disorder [4]. BPPV is not easily diagnosed because the procedures used to do so are not commonly known among practitioners who do not have some type of otologic training or background [2]. It is estimated that only 10% to 20% of patients diagnosed with BPPV will receive appropriate treatment [5,6]. The presentation of BPPV in nursing homes patients may be overlooked as vertigo and dizziness can be triggered by cardiovascular diseases, medications, and poly neuropathies [1]. Thus, these patients may be misdiagnosed or have a delayed diagnosis of BPPV resulting in unnecessary emergency department visits, costly magnetic resonance imaging scans, and unnecessary medications [3,5,6]. Moreover, BPPV may be responsible for a patient to have a poor quality of life as an older person may have a greater incidence of falls, depression, and difficulties performing daily living activities [7]. The following case study highlights how BPPV can manifest in a patient at a nursing home.

Case Presentation

Mr. Brown is a 75-year-old man who has recently been placed in a nursing home facility. Mr. Jones has hypertension, arthritis, diabetes, and an early Alzheimer's diagnosis. His mobility is altered because of an old hip injury that never healed correctly. His daughter cared for him at home because he could no longer drive, perform personal hygiene, and conduct simple household tasks due to the spinning sensations that he described. The caregiver burden was overwhelming and consequently his daughter decided to place him in a nursing home. Results from a comprehensive geriatric assessment done in the nursing home indicate that Mr. Brown has had untreated vertigo for three years now. Mr. Brown's daughter states that it is unknown why her dad has vertigo. He has gone primarily to a local hospital where has undergone magnetic resonance imaging, tomography scanning, electrocardiograms, and has been prescribed multiple medications. Most recently, the neurologist that he saw prescribed meclizine, which is a medication to treat motion sickness and vertigo. Meclizine only gives Mr. Brown minimal relief with his vertigo. The nurses at the nursing home observes that Mr. Brown is not eating, is unable to transfer from his bed to his wheel chair, is unable to participate in his personal hygiene regimen, and is complaining that he has a spinning sensation along with dizziness and headaches. The nurse manager notifies the physician of Mr. Brown's status. The attending physician for the nursing home visits Mr. Brown. The physician

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had previous otologic training and reviewed Mr. Brown's clinical history and recent laboratory work. He immediately performed the Dix-Hallpike Test (DHT) at the bedside which is the gold standard for testing for BPPV [3]. During the DHT Test he placed Mr. Brown in the position that causes the vertigo and checked for involuntary jerking eye movements or nystagmus. The DHT was positive and the doctor's suspicion of a Benign Paroxysmal Position Vertigo diagnosis was confirmed. The physician wrote a consult for a physical therapist that who specializes in vestibular and balance rehabilitation to follow up with Mr. Brown. The therapist visited Mr. Brown and performed the Canalith Repositioning Maneuver (CRM), which is the preferred treatment for BPPV [3]. After this maneuver was performed, Mr. Brown stated that he had some relief from the vertigo. After several treatments of the CRM, Mr. Brown had minimal to no symptoms of vertigo.

Discussion

Nursing home placement for Mr. Brown might have been delayed if BPPV was diagnosed promptly and treated correctly. Awareness about BPPV is a key for all health care professionals. Recognizing symptoms of BPPV and promptly treating the disorder is of paramount importance to the patient and family members. The implication of health care costs for the patient and the unnecessary burden on the health care system is staggering. Educational initiatives geared towards health care professionals across care settings should include the Clinical Guidelines for BPPV that have been developed by the American Academy of Otolaryngology [8]. There are collaborative models in the literature that describe opportunities for collaborative care for disorders such as vertigo. An example of one such effort involves physical therapists working with emergency department physicians in assisting to evaluate and treat vertigo. The physical therapist focuses on vestibular conditions such as vertigo and provides a treatment plan for the patient [9]. It is very concerning that health care providers in the health care system misdiagnosed and mistreated Mr. Brown's symptoms for so many years. Due to this lack of awareness and education among health care professionals, Mr. Brown suffered unnecessarily with symptoms that could have been treated effectively. Mr. Brown was extremely fortunate to have a physician in the nursing home that who was knowledgeable about the diagnosis and treatment of BPPV. This may not be the realty for many other older adults in nursing homes who may be suffering with BPPV.

Conclusion

Detecting BPPV early and treating it promptly is essential for the well-being of patients in nursing homes. Health care professionals in general should recognize BPPV in a timely manner and should receive the appropriate education to address the issue. Physicians should foster collaborative relationships with those professionals who have vestibular training to establish a plan of care for patients with BPPV. Educating the public and health care professionals about BPPV is a key in preventing suffering that occurs among older adults and in preventing soaring health care costs that are accrued over a period of time.

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