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ORIGINAL RESEARCH

Brandt-Daroff exercise among elderly with vertigo

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Abstract

Vertigo may harm the patients; however, many vertigo sufferers are less concerned about dizziness. The only action taken is taking medication when vertigo recurs and lying down or resting at home. Efforts to reduce vertigo symptoms non-pharmacologically include therapy Brandt-Daroff, which can accelerate vertigo recovery and prevent recurrence without taking drugs. This study aims to apply the therapy Brandt-Daroff to relieve vertigo symptoms in the elderly in the family. The method used in this research is a case study with a purposive sampling technique. The sample was an elderly patient aged 49 years who experienced vertigo with a pain scale of 4. The research data was taken by the participatory observation method. Interview and documentation method. This study found that physical therapy Brandt-Daroff can reduce vertigo symptoms in the form of pain from a scale of 4 to a scale of 2 within six visits for two weeks. Brandt-Daroff exercise minimises the scale of pain that can be done at home.

Keywords: Vertigo; nursing care; community nursing; Brand-Daroff exercise; pain scale

Introduction

Older adults experience ageing processes that can cause various problems or declines in all aspects of their physical, biological, psychological, social, spiritual, and economic well-being (Thompson & Amedee, 2009; Franceschi et al., 2018). Decreased function of the organ causes the elderly to become susceptible to a variety of diseases, in particular, degenerative diseases such as vascular disorders due to hardening of blood vessels, metabolic disturbances, among others, diabetes mellitus, falling quickly due to musculoskeletal disorders, and other health problems (Stambler, 2017). Vertigo occurs due to a disturbance of the middle ear or a visual impairment (Strupp & Brandt, 2008). Different diseases in other parts of the body and around the brain also cause vertigo. The most common cause is a disturbance in the neck; this disorder is caused by the discharge of the necklace bone that causes vertigo. Vertigo attacks, if not addressed immediately, will have negative consequences, namely, loss of life (Stanton & Freeman, 2023). Vertigo can also be a severe case of the early symptoms of brain tumours. Another impact is that vertigo can seriously indicate a disturbance in the ear (Hanley & O'Dowd, 2002). Infections that occur in the inner ear can cause damage to the ear organ so that the person can lose hearing permanently.

There are pharmacological and non-pharmacological actions that reduce the symptoms of vertigo. One is pharmacological therapy or medication. A person who experiences dizziness usually takes medication to reduce or eliminate vertigo symptoms. However, the drugs consumed have side effects. Other medicines, besides pharmacological treatment, to relieve vertigo symptoms, such as Brand-Daroff (Teixido, Casserly & Melley, 2021). Exercises for the vestibular system developed by Brandt and Daroff are just as successful as Epley canalith repositioning techniques in treating Benign Paroxysmal Positional Vertigo (BPPV), with a similarly low recurrence rate. Therefore, depending on the patient's needs, either of these treatments may be utilized. On the other hand, the significance of obtaining an accurate diagnosis before beginning treatment cannot be overstated (Cetin et al., 2018). Epley manoeuvre has created the most significant progress compared to Semont maneuver, whereas Brandt-Daroff Exercises have produced the most negligible improvement. It indicates that one quality of life improvements is linearly proportionate to progress in all other quality of life (Gupta, Sharma & Sharma, 2019). However, studies implementing Brandt-Daroff for patients with vertigo in Indonesia are limited in the literature. Moreover, nursing intervention needs complementary therapy to relieve symptoms of dizziness among older adults. Therefore, this critical study will help community nurses deal with vertigo in various settings. Based on the above, the author is interested in applying Brandt-Daroff therapy to reduce vertigo symptoms in the elderly living in Indonesia.

Method

Data from the study is collected through four stages: interview, observation, physical examination, and documentation. The data is then written in a structured form. The data gathered relates to assessment, diagnosis, intervention, implementation, and evaluation. The tools used are the 32-item family review sheet, the clock or time meter tool to determine how long the action will be carried out, the bed to act, the observation sheet to record the outcome of the action, and the camera to document the family nursing process. The author chose a case study of the descriptive type, i.e., to describe case studies of family nursing by applying Brand-Daroff therapy to reduce vertigo symptoms in the pre-age age group in the family. The sample was taken from an elderly female patient, aged 49 years old, who suffered from vertigo with a four on the pain scale. This activity begins with interviews with clients for data collection and involves performing nursing assessments on clients, performing physical examinations, and performing interventions on clients following the guideline. Brand-Daroff was used six times for two weeks to reduce the symptoms of vertigo. Ethical clearance was also obtained before the study's outset.

Results

The results of the assessment were the patients and families also maintain a high sense of mutual respect and help if other family members need help. The social function of the client is good and both clients were educated with affection following the ages of their two children. The function of family nursing for the client is to foster good relationships within the family. If there are sick people, they should bring to the nearest health services. In the client's family, no one suffered from hereditary illnesses or a history of disease except the client, who suffers from vertigo. For the nutritional fulfilment of the family, clients cook themselves with food ingredients purchased in the traditional market. Clients and families obtain health information through television, social media, and nearby health services. If the client's pain recurs and after taking the medication and resting, the patient's pain has not decreased, then the client is taken to a health care facility not far from the client's home. The client's family said that they are satisfied with how the health services can meet the needs of clients and families. Reproductive function in clients means that the client is still menstruating and has two children. The economic parts of clients and families are clients and husbands who work in the client's dining house and the first child of clients who work as police officers. On May, 2021, subjective data was obtained when the patient said the back head felt heavy and painful on a scale of 4 with a quality. The patient also says to reduce and prevent vertigo by placing yourself for rest or lunchtime and reducing activity. If it is forced to activate, the client feels like turning and falls when the road falls. Based on the calculation of the total score obtained, the priority of the diagnosis that emerged was pain, fall risk, and sleep pattern disorders.

Interventions in pain diagnosis were performed to resolve the problem. After completing actions for six times visits, the pain scale is expected to be reduced from 4 to 0. Vital signs are within normal range, pain complaints are reduced, and there is no difficulty sleeping. His interventions include building trusted relationships, studying the scale of pain, examining pain characteristics, monitoring vital signs, teaching Brandt-Daroff therapy, and providing education on vertigo and how to prevent it. Implementation is done with a coordinated customer response that can be followed from the beginning of the performance to the end of the undertaking. The implementation was carried out for examining the pain scale with the subjective response. The factor that causes it is the vertigo quality of pain, such as reassessment on the part of the head, and the pain scale is 2 with the time of pain sometimes. With the client's objective response, it appears to be occasional but rare pain. Monitoring vital signs to measure its necessary signals and accurate response. Furthermore, the author teaches pain management with the client's emotional response. The author recommended to apply slow deep breathing when experiencing pain. After that, it appears that the patients become more relaxed. Moreover, the participant has a willingness to apply Brandt-Daroff exercise. The author suggested to perform that exercise at home.

Discussion

The examination results obtained subjective data from the client complaining of pain in the part of the head on a scale of 3 with the quality of pain as cautioned. The client also said that during the recurrence of vertigo, the brain should rest, and at the moment, the client reduces activity to prevent the re-emergence. The objective data obtained during the examination indicates that the client appears to withstand pain occasionally and looks drowned. Based on the Standards for Nursing Diagnosis, acute pain is diagnosed according to symptoms in the client, such as complaining of pain, the appearance of sores, difficulty sleeping, an increased pulse, and increased blood pressure (Varndell, Fry & Elliott, 2017). The principle of intervention to control pain is external action that affects the individual's internal response to aches with pain management techniques such as deep breathing relaxation, music

therapy, massage therapies, aromatherapy therapy, and warm or cold compresses (Hamlin & Robertson, 2017; Urits et al., 2021; Bicego et al., 2021; Moore et al., 2019). In addition to the above action, there is a non-pharmacological action, namely administering analgesics. In addition, the movement to overcome the pain is Brandt-Daroff physical therapy, which can be done independently at home without disregarding health energy. The author also uses the outcome criteria or outcomes of the Indonesian Standards for External Nursing and some planning that will be carried out on the client following the Indonesia Standards Intervention, namely building a trusting relationship with clients and families of clients, examining the scale of pain in clients, monitoring vital signs, and providing information about vertigo and how to prevent it. However, several additional interventions are prioritized, namely the teaching of Brandt-Daroff therapy, which is part of non-pharmacological pain management (Choi, Cho, Choi, Oh & Choi, 2020).

From the results of the implementation performed on the client during six visits in two weeks, the results obtained in the form of pain perceived by the client decreased. The innovation that is done to reduce the pain with Brandt-Daroff therapy. The therapy starts by sitting upright next to the bed where the body is lying to the side for 1-2 seconds. Then stay in the sleeping position for 30 seconds, able to move the body in the opposite direction for 1-2 seconds. Stay in this position for 30 seconds or until vertigo recedes, then return to the upright sitting position and stand for 30 seconds. This therapy is carried out for six visits over two weeks to the patients. This therapy is effective in people with vertigo because there is a change in the balance in the occurrence of vertigo, and it increases the blood flow to the brain so that there is an improvement in the function of the body's balance tools (Celis-Aguilar et al., 2022; Karanjai & Saha, 2010). In addition to reducing the pain caused by vertigo, this therapy can also reduce the onset of vertigo. The evaluation results are that the author has controlled fatigue and a lack of rest. Also, the patient's pain was solved due to the Brand-Daroff exercise. The healthcare professional may recommend this therapy to be used in community health services for additional treatment of vertigo among the elderly.

Conclusion

The Brandt-Daroff exercises are a series of motions that can assist individuals in making a speedier recovery from vertigo. Moving from a supine (lying down) position to an upright (seated) one is the focus of this particular workout. In spite of the fact that patients will occasionally practice Brandt-Daroff exercises in professional settings, the vast majority of people who live with vertigo will perform Brandt-Daroff exercises at home. Brandt-Daroff exercise can reduce vertigo symptoms in the form of pain from a scale of 4 to a scale of 2 within six visits for two weeks. Brandt-Daroff exercise minimises the scale of pain that can be done at home. Community healthcare professionals may integrate this therapy for the group of patients. Further study is needed to evaluate the effectiveness in different populations and treatment dosages.

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