Jurnal Keperawatan Universitas Jambi Volume 8 Number 1, December 2023
p-ISSN 2588-4869, e-ISSN 3063-4342

NURSING CARE WITH BRANDT DAROFF THERAPY INTERVENTION AGAINST ACUTE PAIN IN VERTIGO PATIENTS AT ABDUL MANAP HOSPITAL, JAMBI CITY

Aisyah Tita Rahmayuli , Nurhusna

Departement of Nursing, Universitas Jambi, Indonesia
Coresponding : nurhusna@unja.ac.id

Abstract

Vertigo can be classified as a form of balance disorder or orientation disorder in a room. Many systems or organs of the body are involved in regulating and maintaining the balance of our body. Objective: To provide Brand Daroff therapy nursing care for acute pain in vertigo patients at Abdul Manap Hospital, Jambi City. The analysis showed that there was a diagnosis of acute pain with the intervention of giving Brand Daroff Therapy for 3 days. It was found that after the Brand Daroff therapy was carried out, there was a decrease in the pain scale on the first day of intervention with a pain scale of 7 (severe pain category) after the fourth day of intervention with a pain scale of 4 (mild mild pain category).Brand Daroff therapy can reduce acute pain in vertigo patients

Keyword : Nursing, Brandt daroft therapy, Intervention acute pain, Vertigo

INTRODUCTION

Based on epidemiological data, vertigo is one of the most common neurological diseases (Shyam Sudhakar, 2025). Globally, the reported annual incidence of vertigo is 1.4%. Vertigo is a common complaint found in clinical practice (Kim et al., 2025) (Hackenberg et al., 2023). The lifetime prevalence rate of vertigo in adults aged 18-79 years is 7.4% with an annual incidence rate of 1.4% (Putri, 2021).

Herlina et al., (2018) the prevalence of vertigo in Germany, aged 18 years to 79 years was 30%, 24% was assumed to be due to vestibular abnormalities. Research in France found 12 months later the prevalence of vertigo was 48%. The prevalence of peripheral vertigo events that occur in the United States tend to occur in women (Sumarliyah, 2015). The prevalence in America, vestibular dysfunction is about 35% of the population with age 40 years and above. Subjects who experience vestibular vertigo, 75% get peripheral vertigo disorder and 25% experience central vertigo (Laksono, Kusumanigsih, 2022).

The incidence rate is higher in women than men. Mortality of vertigo is associated with the underlying disease. American studies have found the mortality rate of dizziness complaints, including vertigo, to be 9% with the highest mortality rate in traumatized geriatric patients. In patients with central vertigo caused by cerebral infarction, the mortality rate can reach 7% and even 17% when the infarction is related to the superior and posterior inferior cerebral arteries (Putri, 2021).

In Indonesia, the incidence of vertigo is also very high, in 2010 from the age of 40 to 50 years about 50% which is the third most common complaint by patients who come to the , after headache, and stroke. Vertigo is commonly found in 15% of the population and only 4-7% are seen by a doctor2. Whereas in Indonesia in 2019 the incidence of vertigo was very high at around 50% in elderly people aged 75 years (Laksono, M., & Kusumaningsih, 2022).

Vertigo can be caused by a balance disorder in the inner ear or vestibular part and may be caused by brain disorders (Smith et al., 2024) (Annurul Maulidia and Rimbun Silitonga, 2023) (Xing et al., 2024) (Atalay et al., 2023). Vestibular is a system of the inner ear that functions as a balance tool (Sumarliyah, 2015).

According to Neurologychannel in the vestibular system is responsible for connecting stimuli to the senses with body movement and keeping an object in focus when the body moves. Besides being caused by disorders of the vestibular system and brain disorders, vertigo can also be caused by idiopathic factors, trauma, physiological, drug consumption and other diseases or syndromes such as Meniere's disease (Sumarliyah, 2015).

The treatment given to vertigo so far can be done with pharmacology, non-pharmacology and surgery (Kurniawan, 2022). Pharmacological management in the long term of course the drugs consumed have side effects. Some pharmacological treatments are vestibular suppressant treatments used are benzodiazepine (diazepam, clonazepam) and antihistamine (meclizine, dipenhydramine). Benzodiazepines reduce the sensation of being able to spin, Antihistamine has a suppressive effect on the vomiting center so that it can reduce nausea and vomiting due to motion sickness (Setiawati, Susianti, 2016).

Non-pharmacological management for vertigo is that there are several types of maneuvers that can be performed. These maneuvers include Epley maneuver, Semont maneuver, Lempert maneuver, Forced Prolonged Position, and Brandt Daroff exercise (Gan et al., 2021) (Hwu et al., 2022) . Brandt-Daroff is a physical exercise that aims to habituate the central vestibular system, this vertigo exercise has the effect of increasing blood to the brain so as to improve the function of the body's balance apparatus and maximize the work of the sensory system (Hanifa, 2020) (Maliya, 2022) (Septidianti and Permata Sari, 2023).

Brandt Daroff exercise therapy has advantages over other physical therapies or pharmacological therapies that can accelerate the recovery of vertigo and prevent recurrence without having to take medication. Brandt Daroff exercise therapy is a form of exercise that can be done safely and does not require a trained practitioner. The purpose of brandt daroff therapy is to reduce the symptoms felt by patients due to vertigo, one of which is nausea and vomiting (Gunadi, Sulisetyawati, Saelan 2017).

Previous research by Laksono & Kusumaningsih (2022) on the Effectiveness of the Use of Brandt Daroff Exercise in Vertigo Patients with Nursing Problems of Balance Disorders in Sumber Agung Village, Sragi District, South Lampung, the results showed that after brandt daroff training showed a difference between before and after being given the brandt daroff technique.

Research was also conducted by Nike Chusnul Dwi Indah Triyanti, Tri Nataliswati, (2018) on the Effect of Brandt Daroff Physical Therapy on Vertigo in the Ugd Room of Rsud Dr. R Soedarsono Pasuruan, the results showed an effect of giving brandt daroff physical therapy on vertigo at Dr. R Soedarsono Pasuruan Hospital with p value = 0.000 <0.05. This is in line with research by Herlina et al., (2018) on the effectiveness of brandt daroff exercise on the incidence of vertigo in subjects with vertigo, obtained the results of significant differences in brandt daroff exercises given to reduce balance disorders in patients with vertigo with a value of (p <0.05).

Based on the background and the phenomenon above, the authors are interested in conducting research "Nursing Care for Mrs.M with Acute Pain with the Intervention of Providing Brandt Daroff Physical Therapy Against Vertigo Decrease at Abdul Manap Hospital, Jambi City".

METHODS

The research design used is a Case Study of Nursing Care Provision with Brand Daroff therapy for acute pain in vertigo patients. The research conducted aims to find out how far the provision of Brand Daroff therapy therapy to reduce vertigo pain. The research respondent was (Mrs. M) with the age of 73 years with complaints of the patient saying headache and dizziness like swirling if you open your eyes at the time of assessment at the Abdul Manap Hospital, Jambi City. The research procedure was carried out by treating the same subject three times. Vertigo pain monitoring in this study was carried out for 3 days in which assessment and implementation.

RESULTS AND DISCUSSION

Description of Research Location

The research was conducted in the makalam room of the abdul manap hospital in jambi city. The researcher took 1 patient, namely Mrs. M with vertigo.

Nursing Assessment Analysis

Based on the assessment conducted on June 15, 2023, the patient said that 1 day before entering the hospital complained of head pain accompanied by nausea, the pain was felt to increase when opening the eyes and moving the head, the pain felt like spinning, the pain was felt to arise. The problem felt by Mrs. M is in accordance with the theory of Wreksoatinodjo (2014) that the symptoms of vertigo are often described by patients as a spinning sensation accompanied by a sense of swaying and dizziness. The feeling of spinning in vertigo is caused by disruption of the vestibular nervous system which is divided into peripheral vertigo of the inner ear or vestibular nerve and seneral vertigo due to nerve disorders.

Nursing Diagnosis Analysis

The diagnosis raised is in accordance with the superior intervention, namely vertigo which is the main diagnosis as evidenced by clinical conditions (Stringer and Meyerhoff, 1990) (Strupp and Brandt, 2008) (Trzenschik, 2020) . Nursing Intervention Analysis According to Asmadi (2008), the planning stage has several important objectives, including as a communication tool for nurses and other health teams, improving the continuity of nursing care for clients, and documenting the process and criteria for nursing care outcomes to be achieved. The most important elements in this planning stage are prioritizing the order of nursing diagnoses, formulating goals, formulating evaluation criteria, and formulating nursing interventions10. From the established nursing diagnosis of acute pain, the client is given pain management interventions with evidence base practice, namely brand daroff therapy which is an exercise performed to control vertigo symptoms and increase blood flow to the brain so as to improve balance function. Interventions for fall risk diagnoses, namely fall prevention, are expected to reduce the risk of falling by ensuring that the client's bed wheels are locked and handrails are installed on the bed.

Implementation Analysis

Giving therapy to Mrs. M was carried out for 3 days starting on June 16 2023 in the makalam room of the abdul manap hospital obtained results:

First Day: June 16,

Conducted on June 16, 2023 before action is taken first identify pain, characteristics, duration, frequency location, quality, pain

intensity, factors that aggravate and relieve pain. The results obtained by the client complained of head pain, dizziness like spinning, a duration of approximately 2-3 minutes with severe pain intensity, worsening pain when opening the eyes and moving the head. after the intervention was carried out, the client understood how to brand darof and tried it the next day.

Second Day: June 17, 2023

Conducted on June 17, 2023 performing brand darof interventions and getting the results of clients saying they still have pain in the head, the duration of dizziness has been reduced by 1-2 minutes with moderate pain intensity, while doing brand daroff Mrs. M was only able to take 2 steps while sitting 20 seconds and sleeping with the direction of the head looking to the left 15 seconds after intervening the client felt the pain was slightly reduced.

Day Three: June 18, 2023

Conducted on June 18, 2023 before the action was taken first evaluated the brand action from the previous day. The results obtained, Mrs. M said the pain was reduced, dizziness like spinning had decreased with a duration of 1-2 minutes with mild pain intensity. After the intervention, it was found that Mrs. M was able to do 4 steps of Brand Daroff, the pain was reduced and would continue to apply it at home and at home later, to prevent the occurrence of vertigo symptoms.

Nursing Evaluation Analysis

Giving brandt daroff therapy for 3 days resulted in a slow decrease in pain intensity. On the first day, a severe pain scale of 7 was obtained, the second day of intervention with a pain scale of 6 with a moderate category, the third day of pain scale 4 with a mild pain category. So it can be concluded that brand daroff therapy effectively reduces headache and dizziness.

CLOSING

Conclusion After being given brandt daroff therapy in the case of patients experiencing vertigo, it can be concluded that the benefits of brand daroff therapy put a response in the form of a decrease in pain scores on the first day of intervention with a score of 7 severe pain categories. after the fourth day of intervention with a score of 4 mild pain categories.

Advice

It is hoped that the results of scientific work can be an information material for the provision of nursing care in overcoming head pain and dizziness in vertigo patients. And can improve maximum service later as a health professional.

LITERATURE

Annurul Maulidia, A. and Rimbun Silitonga, A. R. (2023) 'Vertigo and Dizziness in Anterior Circulation Cerebrovascular Disease : Systematic Review', *Journal of Advance Research in Medical & Health Science* (ISSN: 2208-2425), 9(8), pp. 184–189. doi: 10.53555/nnmhs.v9i8.1819.

Asmadi (2005) *Konsep Dasar Keperawatan*. Edited by E. A. Mardella. Buku Kedokteran EGC. 1.

Atalay, F. et al. (2023) 'The etiological, demographic, and seasonal characteristics of patients with dizziness and vertigo', *Journal of Surgery and Medicine*, 7(9), pp. 610–613. doi: 10.28982/josam.7562.

Gan, Z. et al. (2021) 'Self-Treatment of Posterior Canal Benign Paroxysmal Positional Vertigo: A Preliminary Study', *Frontiers in Medicine*, 8(April), pp. 1–5. doi: 10.3389/fmed.2021.654637.

Gunadi, Sulisetyawati, S. D., & Saelan. (2017). Pengaruh Posisi Brandt Daroff Terhadap Mual Muntah Pada Pasien Vertigo Di Igd Klinik Griya Medika Utama Karanganyar. Universitas Kusuma Husada Surakarta. 7.

Hackenberg, B. et al. (2023) 'Vertigo and its burden of disease—Results from a population-based cohort study', *Laryngoscope Investigative Otolaryngology*, 8(6), pp. 1624–1630. doi: 10.1002/lio2.1169.

Hanafia, A. N. (2020). "Pengaruh Terapi Brandt Daroff Terhadap Penurunan Tingkat Gejala Vertigo Pada Pasien Vertigo. Muhammadiyah Gresik. Universitas.

Herlina, A., Ibrahim, & Nofia, V. R. (2018). Efektifitas latihan brandt daroff terhadap kejadian vertigo pada subjek penderita vertigo. *Jurnal Medika Saintika*, 8.

Hwu, V. et al. (2022) 'Utilization of the Lempert Maneuver for Benign Paroxysmal Positional Vertigo in the Emergency Department', *Cureus*, 2019(4). doi: 10.7759/cureus.24288.

Kim, H. S. et al. (2025) 'Emergency Department Vestibular Rehabilitation Therapy for Dizziness and Vertigo: A Nonrandomized Clinical Trial', *JAMA Network Open*, 8(2), p. e2459567. doi: 10.1001/jamanetworkopen.2024.59567

Kurniawan, I. (2022) 'Pendampingan Asuhan Keperawatan Medikal Bedah pada Pasien dengan Gangguan Sistem Saraf (Vertigo) di Ruang Flamboyan RSU Banjar', *Kolaborasi Jurnal Pengabdian Masyarakat*, 2(1), pp. 105–122. doi: 10.56359/kolaborasi.v2i1.48.

Laksono, M., & Kusumaningsih, D. (2022). Efektivitas Penggunaan Latihan Brandt Daroff Pada Pasien Vertigo Dengan Masalah Keperawatan Gangguan Keseimbangan Di Desa Sumber Agung Kecamatan Sragi Lampung Selatan. *Jurnal Kreativitas Pengabdian Kepada (PKM)*, 5.

Maliya, R. (2022) 'Efektivitas Terapi Brandt Daroff Terhadap Penurunan Vertigo', *Repositori Stikes Ngudi Husada Madura*, pp. 2–20.

Nike Chusnul Dwi Indah Triyanti, T. N. (2018). Pengaruh Pemberian Terapi Fisik Brandt Daroff Terhadap Vertigo Di Ruang UGD Rsud Dr. R Soedarsono Pasuruan. *Jurnal Keperawatan Terapan*, 59-64.

Putri, D. B. (2021). Vertigo tenaga. Diakses dari: https://www.alomedika.com/penyakit/neurologi/vertigo/epidemiologi

Septidianti, C. and Permata Sari, Y. I. (2023) 'Aplikasi Terapi Brandt Daroff Exercise Terhadap Penurunan Gangguan Keseimbangan Pada Pasien Yang Mengalami Vertigo', *Jurnal Ilmu-Ilmu Kesehatan*, 9(2), p. 16. doi: 10.52741/jiikes.v9i2.81.

Setiawati, M., & Susianti. (2016). Diagnosis dan Tatalaksana Vertigo. *Majority*, 5.

Shyam Sudhakar, S. (2025) 'Etiological factors and management of vertigo - a retrospective study', *The Medical Journal of Malaysia*, 80(October 2024), pp. 59–64.

Smith, L. J. et al. (2024) 'Cognition in vestibular disorders: state of the field, challenges, and priorities for the future', *Frontiers in Neurology*, 15(January), pp. 1–17. doi: 10.3389/fneur.2024.1159174.

Stringer, S. P. and Meyerhoff, W. L. (1990) 'Diagnosis, causes, and management of vertigo', *Comprehensive Therapy*, 16(3), pp. 34–41.

Strupp, M. and Brandt, T. (2008) 'Leitsymptom schwindel: Diagnose und therapie', *Deutsches Arzteblatt*, 105(10), pp. 173–180. doi: 10.3238/arztebl.2008.0173.

Sumarliyah, E. (2015). Jurnal Penelitian Pengaruh Senam Vertigo Terhadap Keseimbangan Tubuh Pada Pasien Vertigo Di RS Siti Khodijah Sapanjang. RS Siti Khodijah. Jawa Timur. http://journal.umsurabaya.ac.id/index.php/Health/article/view/117/69

Trzenschik, K. (2020) 'Zervikale Ursachen', *Deutsches Arzteblatt International*, 117(43), p. 735. doi: 10.3238/arztebl.2020.0735a.

Wreksoatmodjo (2014). Beberapa kondisi fisik dan penyakit yang merupakan faktor penyebab gangguan kognitif. FK Atmajaya: *CDK*, 212/vol.41 no. 1.

Xing, Y. et al. (2024) 'Etiologic distribution of dizziness/vertigo in a neurological outpatient clinic according to the criteria of the international classification of vestibular disorders: a single-center study', *Journal of Neurology*, 271(5), pp. 2446–2457. doi: 10.1007/s00415-023-12166-3.