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REPOSITIONING AS AN INTERVENTION FOR STROKE PATIENTS WITH PRESSURE ULCER RISK - A CASE STUDY

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ABSTRACT

The risk of pressure ulcers are a risk that can occur in patients with stroke. Limited activity and disorders of motor nerves make it difficult for patients to mobilize, resulting in prolonged bed rest. If the risk of pressure sores is left unchecked, a new problem will emerge, namely pressure sores or what is known as pressure ulcers. Repositioning is one solution so that patients can mobilize even in bed. The aim of this research was to conduct a case study analysis of two stroke patients who experienced immobilization and were at risk of pressure ulcers. Using descriptive design with interview techniques, observation, physical examination and documentation. The Braden score instrument is also used as a basis for assessing the risk of decubitus pressure ulcers before and after repositioning. The results of the initial assessment showed that client 1 had a Braden scale score of 10, client 2 had a Braden score of 13 and client 3 had a Braden score of 14, meaning a high risk of pressure sores. Next, repositioning intervention was carried out for 3 days every 2 hours. Other implementations include monitoring weight and changes, using barriers such as lotion or water-absorbing pads at pressure points or bony prominences, patients are also given special mattresses, and administration of corticosteroids is excluded. The results of the 3 day evaluation were that there were no pressure sores found on the client and a reduction in the risk of pressure sores with the achievement of an increase in the Braden score, namely Patient 1 had an increase in the Braden score from a score of 13 (moderate risk of pressure sores) to 15 (mild risk of pressure sores), patient 2 experienced an increase in the Braden score from 13 to 15. Patient 3, a score of 14 to 16 which from a moderate risk to a mild risk of pressure sores. Implementation of intervention delivery repositioning In patients who comply every 2 hours, it is very effective in preventing the occurrence of pressure sores (decubitus) compared to not providing intervention repositioning. So this intervention can be recommended

Keywords

Repositionin, Risk Of Pressure Ulcers, Stroke

INTRODUCTION

Stroke patients can experience impaired neurological function which causes reduced mobility or paralysis of the limbs, causing the patient to experience bed rest for a long time. The location of pressure ulcers most often occurs in the sacrum, buttocks and heels due to pressure and friction in these areas. This is a serious matter because it can increase morbidity, mortality, and requires intensive care, as well as increase the length of time the client is treated.

Prevalence stroke in Indonesia, as many as 10.9 per 1,000 residents experienced it stroke as of 2018 and prevalence stroke in East Java it reached 12.4 per 1000 population (Indonesian Ministry of Health, 2019). The incidence of pressure sores in Indonesia reaches 33.3%, which is quite high compared to the prevalence of pressure ulcers in Southeast Asia, which is only around 2.1-31.3% (Ministry of Health of the Republic of Indonesia, 2023). In Surabaya, East Java, it was found that the average Braden score in stroke patients was 9.87, which means they were at high risk of developing decubitus injuries, however 13.7% of stroke patients developed decubitus (Manan et al., 2024) Data at RSPAL Dr Ramelan Surabaya shows that the number of stroke patients being treated at the room stroke centre in September-November 2023 there were 223 patients, namely 74 patients in September 2023, 65 patients in October 2023 and 84 patients in November 2023 (RSPAL Dr. Ramelan Surabaya, 2023). The number of stroke patients who experienced decubitus from September-November 2023 was 8 people (3.6%) of the total number of stroke patients treated (RSPAL Dr. Ramelan Surabaya, 2023). The results of a preliminary study on 15-18 December 2023 in the Stroke Center Room at RSPAL Dr. Ramelan Surabaya, which was carried out on 5 stroke patients using the Braden scale, showed that 3 patients (60%) were in the high risk category of experiencing decubitus wounds, 1 patient (20%) was on the moderate risk category of having decubitus wounds, and 1 patient (20%) was in the low risk category of having decubitus wounds. Patients who lie or sit for a long time (more than 2 hours) transfer body weight to the patient's bones and cause pressure. This pressure reduces blood flow to body tissues, causing ischemia. This reduction in blood flow (ischaemia) can damage the integrity of the skin and, if left untreated, can cause pressure sores (Potter & Perry, 2015). Pressure on protruding body surfaces can increase capillary pressure in the tissues, resulting in circulation problems. Tissue hypoxia occurs, tissue is damaged, and ultimately necrosis. It is estimated that 30 to 240 minutes is the critical duration of tissue ischemia that can cause pressure sores to form and pressure sores will form 72 hours after compression. (Amirsyah et al., 2020).

The impact of pressure ulcers is felt by patients in the form of increased patient morbidity, pain in the pressure area, affecting emotionally, mentally, physically and socially. The impact of pressure ulcers on the family is associated with relatively high care and treatment costs. Impact of pressure sores this is also felt by health workers, namely increasing the workload of nurses for pressure ulcer treatment. The large impact of pressure sores illustrates the importance of preventive measures against pressure sores (Tarigan et al., 2019). The risk of pressure ulcers can be minimized by mobilizing clients early and this mobilization should begin 24-48 hours after a stroke in clients whose clinical and hemodynamic conditions are stable (Sabbrina & Khamid, 2022).

Repositioning has benefits in preventing pressure sores in clients undergoing treatment in hospital, especially in clients aged 41-60 years. At this age, several changes occur such as thinning of skin tissue, loss of fat tissue, decreased sensory perception function, increased fragility of blood vessels (Kusumah, 2021).

The results of research (Wardani & Nugroho, 2022) show that repositioning every 2 hours can reduce the risk of pressure sores in sufferers, especially post-stroke. Farida et al (2019) in their research also showed that giving a tilted position or repositioning effective in reducing the degree of decubitus wounds. Preventing pressure ulcers is very important in order to minimize pain and improve the quality of life both physically and socially and even reduce the risk of death for clients and prevent long treatment times. Methods for preventing and treating pressure sores can range from risk assessment, skin assessment, activity management, good nutrition, to supporting the client's bed surface and applying repositioning (Primalia & Hudiyawati, 2020).

METHOD

This research uses a case study with a nursing process approach. The research subjects were three people who met the inclusion criteria, including patients with stroke, patients who experienced mobility problems and the Braden score showed a high risk and the exclusion criteria were stroke patients with complications. The case study was carried out over 3 days. Repositioning is carried out every 2 hours. Data collection using nursing care format instruments, Braden scores and data analysis using explanatory text.

RESULTS

Patient 1 experienced complete bed rest with a diagnosis of stroke infarction due to immobilization due to muscle weakness in the right (0/0) and left (5/5) extremities, resulting in the patient not having any movement, movement was very limited because the right side was weak, the examination results showed a Braden score of 13 (moderate risk of developing pressure sores), body temperature 37.10C The skin on the protruding part feels warm, the patient's nutritional intake is inadequate, he sweats so much that it makes the surface of the skin wet, there is an area of reddish bony prominences in the sacrum area, and he is at high risk of developing pressure sores due to long-term immobilization. The results of the assessment of the second and third patients showed the same results where the Braden score for patient 2 was 13 and Patient 3 was 14, so they were classified as being at moderate risk of developing pressure ulcers.

The risk of pressure ulcers occurs because the three patients are stroke patients with immobilization or very limited mobilization due to nerve damage which causes paralysis of the right extremity which makes the patient unable to mobilize. Immobilization for a long time will cause the protruding parts of the body to experience pressure and friction with the base of the bed, putting them at risk of excessive pressure if appropriate intervention is not given. Because the intervention is: repositioning is given to overcome the risk of pressure ulcers. The nursing diagnosis for the three patients was the same, namely risk of pressure ulcers (SDKI, D.0144) proven by a history of stroke.

This diagnosis was made because many risk factors were found that caused the risk of pressure ulcers in the three patients, namely Braden scale score <18, decreased mobilization, increased skin temperature 1-20C, history of stroke, physical immobilization, pressure over bony prominences, and skin surface friction. The clinical conditions experienced by the patient were stroke and immobilization. The difference between the three patients, in patient 2 was added the risk factor of age > 65 years which is considered elderly where in the elderly there are changes in tissue vascularization, including changes in skin elasticity so there is a risk of skin damage and inadequate nutrition because the patient has difficulty swallowing so the portion of food is only eaten 3-4 tablespoons. The Braden scale scores in all three patients were the same, namely a high risk of pressure

ulcers. The interventions designed to treat the risk of pressure ulcers in all three patients were the same, namely prevention of pressure ulcers (I. 12408) in accordance with SIKI standards.

The explanation of pressure ulcer risk interventions according to SIKI (2019) is observation which includes checking pressure sores using a scale (eg, Norton scale, Braden scale), checking for previous pressure sores, monitoring pressure skin temperature, monitoring weight and its changes, monitoring daily skin status, closely monitoring red areas, monitoring skin over bony prominences or pressure points when repositioning, monitoring sources of pressure and friction, monitoring individual mobility and activity, therapeutics which include drying areas of skin that are moist due to sweat, wound fluid, and fecal or urinary incontinence, use a barrier such as lotion or water-absorbing pads, reposition carefully every 1-2 hours, make a schedule repositioning, provide padding on pressure points or bony protrusions, keep bed sheets dry, clean and without wrinkles/folds, use a special mattress, if necessary, avoid massaging over bony protrusions, avoid applying lotion to areas that are injured or red, avoid using warm water and harsh soap when bathing, ensure adequate food intake, especially protein, vitamins B and C, iron and calories, education that includes explaining the signs of skin damage, encouraging reporting if you find signs of skin damage, teaching how to care for the skin, collaboration with administration of analgesics, if necessary and collaboration with administration of corticosteroids, if necessary. The aim of this intervention is that after 3 x 24 hours of nursing action, it is hoped that the integrity of the skin and tissue will increase so that the results criteria show that skin and tissue elasticity will increase, hydration will increase, damage to the skin layer will decrease, and the risk of pressure sores will decrease (SLKI DPP PPNI Working Group Team, 2019).

Nursing interventions are prepared based on standard care that has been established in SIKI, however, the implementation adapts to the patient's condition and the existing conditions in the hospital so that not all interventions can be implemented. Implementation was carried out for 3 days according to previously planned interventions. All three patients were able to follow cooperatively. However, when implementation was carried out, not everything was in accordance with the interventions that had been prepared. The nurse did not monitor BB because this could not be done because the patient was in bed rest which did not allow the patient to stand so it was difficult to do. Interventions of giving lotion or water-absorbing pads, providing pads on pressure points or bone protrusions and using special mattresses were also not carried out due to limited hospital facilities and facilities.

Evaluation of therapy results repositioning carried out for 3 days resulted in significant changes, namely that the therapy was able to reduce the risk of pressure ulcers in stroke patients. Preventing pressure sores in patients on bed rest can be done by minimizing friction between the skin and the surface of objects or clothing, preventing damage to skin integrity, changing positions, observing the condition of the skin, keeping linen clean, and so on. One action that can be taken to prevent pressure sores is changing positions or mobilizing. Mobilization can be done easily with good communication between nurses and patients, families and health service providers (Badruja Maluddin et al., 2022). This is in accordance with research conducted by (Damayanti & Karyanah, 2017) that provides therapeutic repositioning every 2 hours for 3 days can reduce the risk of decubitus injuries Nursing actions need to be carried out at home regularly so that patients do not experience

pressure sores. Therefore, giving KIE to patient 2 who was KRS after 4 days of being treated to carry out repositioning at home, patient 1 continued treatment until the 5th day until the patient's condition improved slightly and the intervention was continued by the family or duty nurse.

Giving repositioning effective in preventing pressure sores until patient 1 did not experience pressure sores after 6 days of treatment, patient 2 was discharged from the hospital after the 5th day and was treated in the hospital without experiencing pressure sores, patient 3 was discharged from the hospital after the 3rd day of treatment at the hospital also without experiencing pressure sores. So that the three patients who were initially at risk of developing pressure sores, after this repositioning did not experience pressure sores or decubitus ulcers. Maintenance repositioning regularly and appropriately can reduce the risk of pressure ulcers in stroke patients because of the many benefits that can be obtained from this therapy. Evaluation It can be concluded that therapy repositioning can be done as one way to overcome the nursing problem of the risk of pressure ulcers in stroke patients.

DISCUSSION

Repositioning done every 2 hours. Client 1 is repositioned every 2 hours in a position of 2 hours on the right side, 2 hours on the left side, and 2 hours on the back. Timetable repositioning carried out every 2 hours except when the patient is sleeping at night (23.00-05.00 WIB). Repositioning It is also carried out by the patient's family who have been educated. Therapy repositioning to avoid ulkus pressure namely by tilting left and right every 2-3 hours (Rachmawati et al., 2019). The patient did repositioning every 2 hours has a very low incidence rate of pressure sores. Repositioning this is done to change the body pressure in certain areas so that there is no imbalance in body weight at a point which can cause disruption of blood circulation in the stressed area. The assessment of Patient 1 was based on the criteria that had been carried out at the third meeting.

After therapy repositioning, The risk of pressure sores is slightly reduced and the integrity of the skin and tissue is increased so that pressure sores do not occur in patients. Patient 1's movements must be given maximum assistance because the patient is still unable to move freely, can only move on the left extremity, the Braden score results have increased from score 13 (moderate risk of pressure sores) to 15 (mild risk of pressure sores), there is movement on the left extremity and little movement on the right extremity, skin elasticity increases, skin hydration increases, moist skin decreases due to frequent drying, redness in the bony protrusion area in the sacrum area appears to be reduced, there is no tissue damage and no pressure sores. bleeding in protruding tissue, no hematoma. Evaluation of patients 2 and 3 experienced an increase in the Braden score from 13 to 15 and the Braden score from 14 to 16, from moderate risk to mild risk of pressure ulcers. The role of nurses in providing intervention aims to prevent further complications in stroke patients who experience bed rest due to weakness in the extremities, one of which is pressure sores. From the results of this case study, it proves that repositioning is an appropriate implementation to prevent the formation of pressure sores. When the intervention is implemented repositioning there are obstacles, namely when carrying out interventions, some of them are not in accordance with the SOP, for example bending the legs or moving the legs forward. Patients with weak extremities cannot do their best so researchers do not force and support patients to do as much as they can. Apart from that, when implementing the intervention outside of the researcher's shift hours, the intervention was carried out by the family and the nurse on duty. So it requires

motivation from the patient and family support.

Based on this, the researcher hopes that in every intervention provided by the researcher and the patient's family, nurses will also provide assistance and participate in monitoring each implementation of the intervention. Researchers did not differentiate between interventions in the three patients, only the main patient should have been given it evidence based nursing while 2 comparison patients were given interventions according to SIKI. This causes there to be no differences between clients 1-3 regarding the risk conditions for pressure ulcers so that effectiveness cannot be known respositioning 2 hours on the risk of pressure ulcers in stroke patients.

CONCLUSION

The conclusion of this nursing care case study is that Patient 1 did not experience pressure sores after 6 days of treatment, patient 2 was discharged from the hospital after the 5th day of being treated in the hospital in a condition without pressure sores and patient 3 left the hospital after the 3rd day of treatment in the hospital also in the condition of not experiencing pressure sores.

During the 3 days of implementation, the patient's results showed that there were no pressure sores and a decrease in the risk of pressure sores with the achievement of an increase in the Braden score, namely Patient 1 had an increase in the Braden score from a score of 13 (moderate risk of pressure sores) to 15 (mild risk of pressure sores), patient 2 experienced an increase in the Braden score from 13 to 15. Patient 3 had a score of 14 to 16, from moderate risk to mild risk of pressure sores.

Implementation of intervention delivery repositioning in patients who comply every 2 hours, it is very effective in preventing the occurrence of pressure sores (decubitus) compared to not providing intervention repositioning. So this intervention can be recommended. The results of this research can be used as a guideline in creating implementation operational standards (SOP) repositioning in stroke patients to reduce the risk of pressure ulcers in order to minimize pain, improve physical and social quality of life, even reduce the risk of death for patients and prevent long treatment times

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