Risk perfusion peripheral no effective in patients with ca mammae dextra with anemia and bisitopenia

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Abstract
The early symptoms of breast cancer include abnormal nipple shape, pain and redness, the appearance of lumps in the breast and armpit, discharge of yellowish-green fluid resembling pus or blood, and necrosis of the surface. It is estimated that 2,089 million women were diagnosed with breast cancer in 2018. By 2020, breast cancer in women has surpassed lung cancer, becoming the leading cause of cancer incidence worldwide, with approximately 2.3 million new cases, accounting for 11.7% of all cancer cases and around 685,000 deaths annually. Anemia is a condition where the body lacks sufficient red blood cells, with hemoglobin levels below 12 g/dL, resulting in the blood's inability to bind enough oxygen required by the body. Nursing interventions to address this issue include checking laboratory hemoglobin levels, recommending an increase in iron and folic acid-rich foods, avoiding high-calcium foods, and advising blood transfusions as needed, along with pharmacological collaboration identified as a method to potentially reduce fatigue frequency in patients. The purpose of this study is to implement nursing care for Mrs. R with the risk of ineffective peripheral perfusion. Nursing care was conducted over three sessions of 7 hours each in the Raudhah Ward of PKU Muhammadiyah Yogyakarta Hospital, with assessments performed on February 11, 2025, at 09:50 WIB. The nursing diagnosis established was the risk of ineffectiveness peripheral perfusion. Nursing interventions included circulation care, recommending blood transfusions, avoiding high-calcium foods, and providing collaborative therapy to reduce fatigue frequency in the patient. The implementation results showed an initial hemoglobin (Hb) level of 5.5 g/dL, with three units of blood transfused, resulting in an increase in Hb to 8.2 g/dL, indicating that the hemoglobin issue was addressed. In conclusion, after independent nursing actions such as blood transfusion and training in deep breathing relaxation techniques, along with collaborative efforts to reduce fatigue frequency, the results indicated improved capillary refill, decreased fatigue frequency, and increased hemoglobin levels, with positive changes in vital signs and patient reactions.

Keywords: anemia; cancer breast; risk perfusion peripheral no effective

1. Introduction
According to the data WHO (World Health Organization) show as many as 2.1 million women suffer from breast cancer in the year 2018. Breast cancer is A disease caused by abnormal cell growth in the breast, 41% of all breast cancer patients experience anemia (hemoglobin <12g/dl) (Sofa & Wardiyah, 2024). Iron deficiency anemia is anemia caused by a lack of iron availability in the body. resulting in iron Which required For erythropoiesis No This is characterized by hypochromic-microcytic erythrocytes, decreased serum iron, transferrin, and iron stores, accompanied by an increase in total iron binding capacity (TIBC) (Nugraha & Yasa, 2022). This condition, known as cancer, is caused by abnormal cell growth in the tubule lining, triggering the development of Cancer. Breast cancer, or carcinoma, is a malignant tumor that damages breast tissue. Cancer is a very serious health problem, with the number of cases increasing by almost 20% each year. is the second leading cause of death after cervical cancer, with an increase which is significant every year (Della Zulfa Rifda et al., 2023).

Protein is crucial for breast cancer patients because it is involved in vital processes. The body uses protein as an energy source because it contains carbon. Furthermore, when the body doesn't receive enough carbohydrates and fats to meet its needs, the body loses energy. will switch to protein to produce energy. This means that some proteins cannot be used to build tissue. People with breast cancer need protein to repair damaged tissue (Laning, 2024).

Symptoms of early-stage breast cancer include scaly skin, inverted or misshapen nipples, and pain. and redness are symptoms and signs of advanced nipple retraction. Lumps in the breast and armpit, changes in the nipple, and a greenish-yellow discharge, such as pus or blood, from the nipple. Skin abnormalities on the breast, such as orange puckering (peau d'orange), and the appearance of a festering rash. the surface. Enlargement lymph glands clear, supraclavicular disease and cervical, bone pain, increased fluid in the lungs, coughing, and shortness of breath are symptoms caused by cancer (Putra,

2015). An estimated 2.089 million women were diagnosed with breast cancer in 2018. In 2020, breast cancer in women surpassed lung cancer and became the leading cause of cancer worldwide. There were approximately 2.3 million new cases, accounting for 11.7% of all cancers. all cancer cases with approximately 685,000 deaths each year (Rachmaningtiyas et al., 2024).

Anemia is a condition where the body does not have enough red blood cells. enough, where level hemoglobin is located in lower 12g/dL which results in The blood cannot bind as much oxygen as the body needs. If the patient's hemoglobin level is low, a blood transfusion is recommended. Six hours after surgery, the patient will have their hemoglobin level rechecked to determine if another blood transfusion is needed. or not (Karwiti et al., 2022).

By Because That, Action collaborative Which given And in recommend is metronidazole, ondansetron, pantoprazole, methylprednisolone, and blood transfusions are used to normalize the Hb level from 8.2 g/dL to 10 g/dL. Treatment also includes monitoring the patient's overall condition. vital signs, as well as physical and psychological symptoms they experienced during treatment. The aim is to implement nursing care with the Risk of Ineffective Peripheral Perfusion in patients with Right Breast Cancer with Anemia and Bcytopenia in the Raudhah Ward of PKU Muhammadiyah Hospital Yogyakarta.

2. Method

This case report uses a descriptive research method in the form of a case study using a nursing approach with one respondent. This research was conducted in the Raudhah Ward of PKU Muhammadiyah Hospital, Yogyakarta. Data were collected using observation and direct interviews with the patient. Patient medical records. Blood transfusion therapy and Metronidazole, Curcuma force, and Ondansetron therapy were performed.

3. Results and Discussion

3.1. Results

Results study This covers information case start from assessment, analysis data, nursing diagnoses, care planning, evaluation, and follow-up. Everything is presented in concise, effective, efficient, and informative language, followed by good explanation.

The assessment includes information about the patient, clinical findings and a timeline of events and illnesses experienced. patient information The patient is as follows: Patient Mrs. R, 51 years old, was admitted to the hospital on February 10, 2025, at 09.50 WIB. During the assessment on February 11, 2025, the patient stated that she had planned to have a breast cancer surgery, but her Hb was low, which resulted in a transfusion. After the blood test, the patient felt stiff and painful around the armpit and right breast, which spread to the back. The general condition was good, the level of consciousness was compos mentis with GCS score: 15 (E:4 V:5 M:6), Pulse= 101x/minute, Temperature=

36.5 o C, Pressure blood pressure = 105/63 mmHg, Respiration = 20x/minute. Then during the inspection by conducting an inspection No there is a disturbance in breathing, while the breathing pattern is regular, the nose is symmetrical and there is no edema. When performing palpation no changes tactile fremitus, and on examination percussion There is no sonor. During auscultation, the sound is clear and smooth and there are no additional sounds such as rhonchi or wheezing. Clinical findings are the management given, namely infusion of Sodium Chloride 0.9% 500mg 20 drops / minute, injection of Metronidazole 500mg / 100ml infusion, Odansetron 4mg / 2ml, Pantoprazole 40 mg (1 ampoule and 10 ml solvent), Methylprednisolone 125 mg (1 ampoule and 2 ml solvent). Laboratory results Hemoglobin 8.2 (g / dL). Eosinophil 0 cells per microliter, Lymphocytes 49 lymphocytes per microliter, RDW 20.8% and MPV 8.81 famtoliter.

Based on the data analysis carried out, a nursing diagnosis of Risk was obtained. Perfusion Peripheral No Effective relate with Decline Concentration Hemoglobin (SDKI D.0009), Acute Pain related to Physiological Injury Agents (SDKI D.0077), and Anxiety related to Situational Crisis (SDKI D.0080). The nursing action plan that the researcher adopted to address the problem Nursing care for Mrs. R is the Risk of Ineffective Peripheral Perfusion related to a Decrease in Hemoglobin Concentration (SDKI D.0009) based on the objective that after the researcher carried out nursing actions for 3x7 hours, it was hoped that Peripheral Perfusion (L.02011) would improve, with the criteria for the results of the pulse rate. Peripheral circulation increases, capillary refill improves, acral improves.

Nursing intervention: Circulation Care (I.02079) observes and checks peripheral circulation (pulse, edema, capillary refill, color, temperature), therapeutic Avoiding IV drips or returning blood to areas of limited perfusion, avoiding blood pressure measurements in extremities with limited perfusion, and providing education and encouraging regular intake of blood pressure control medication.

Acute Pain related to Physiological Injury Agents (SDKI D.0077) is based on the objective that after the researcher carries out nursing actions for 3x7 hours, it is expected that the Pain Level (L.08066) will decrease with reduced pain complaints (Anggita, 2020). Intervention Nursing: Identify the location, characteristics, duration, frequency, quality, and intensity of pain. Identify the pain scale. Provide non-pharmacological techniques for reduce pain (music therapy, deep breathing techniques). Explain the causes, periods, and triggers of pain. Explain pain relief strategies. Teach non-pharmacological techniques to reduce pain. Collaborate in providing analgesics. Anxiety related to Situational Crisis (SDKI D.0080) is based on the objective where after the researcher carries out nursing actions for 3x7 hours, the expected level of Anxiety (L.09093) decreases with reduced anxiety. Nursing interventions: Monitor signs of anxiety, understand situations that cause anxiety, listen attentively, encourage family To stay with the patient, practice relaxation techniques and practice diversional activities to reduce tension (Khadija & Mazdaif, 2025).

Evaluation for nursing actions on the nursing problem of Ineffective Peripheral Perfusion Risk in a patient named Mrs. R. Nursing actions on Mrs. R on February 10, 2025 at 09.50 WIB, the nurse performed a physical examination. After conducting assessment initial (observation) regarding complaints patient, then next Nursing actions were carried out by administering 0.9% Sodium Chloride 500mg infusion fluid 20 drops/minute, checking vital signs and administering Ondansetron 4mg/2ml injection therapy, Pantoprazole 40 mg injection (1 ampoule and 10 ml solvent), Methylprednisolone 125 mg injection (1 ampoule and 2 ml solvent). In patient Mrs. R experienced radiating aches and pains so Metronidazole therapy was given to treat bacterial infections in various areas. organ body, Ondansetron given to lower nauseous vomiting. It is hoped that there will be a decrease in the frequency of nausea and vomiting until it reaches a normal state. return.

3.2. Discussion

Analysis And discussion about theory with reality in the field in give nursing care for patients whose Hb values are below normal limits due to side effects of treatment, the spread of cancer to the bone marrow can inhibit the production of red blood cells in the bone marrow, and inflammation in the body, and cancer can reduce appetite and cause a lack of important nutrients for the production of red blood cells, such as iron, vitamin B12 and folic acid.

Based on the results data Nursing assessment and diagnosis of Mrs. R where the patient has a low Hb value compared to the normal value. The patient will undergo ca mammae surgery but Hb is below the normal limit, so the patient must have a blood transfusion. For add mark Hb. Results study show level hemoglobin as big as 8.5 g/dL. This result indicates that the patient is eligible for a blood transfusion. Anemia is a blood disorder in which the number of red blood cells is low. erythrocytes or hemoglobin in Blood volume is less than normal, so its function in carrying sufficient oxygen to the tissues is less than optimal (Adriani & Fadilah, 2023). The author's study used the Indonesian Nursing Diagnosis Standards (SDKI) developed by the DPP PPNI as a reference for determining nursing diagnoses. This study focuses on nursing care cases with a Risk of Inadequate Perfusion. Effective in patients with right breast cancer with anemia and bicytopenia in the Raudhah Ward of PKU Muhammadiyah Hospital where patients experience hemoglobin deficiency.

This patient has anemia as evidenced by laboratory results. where the results are that RDW and MPV in patients tend to increase. RDW is a measure of variation in red blood cell size. A high RDW indicates a greater than normal variation in red blood cell size. High RDW levels often indicate anemia, a lack of healthy red blood cells in the body. Depending on on the type anemia, symptoms may include fatigue, dizziness, shortness of breath, and rapid heartbeat. MPV measures the average size of platelets (thrombocytes) in the blood. A high MPV indicates that the body is producing larger platelets and chronic. Increased MPVs are often associated with inflammation in body. If inflammation lasts for a long time, it can cause the appearance of various inflammatory and degenerative diseases, including chronic kidney disease and inflammatory bowel disease (Nugraha & Yasa, 2022).

The data from the study results between theory and practice in the field are directly proportional, with the understanding of theory anemia, which is a condition in which the body does not have enough healthy red blood cells or low hemoglobin levels, so that it cannot carry enough oxygen throughout the body and from the results of the assessment it was found that Mrs. R looked weak when the blood transfusion took place.

The nursing diagnosis based on the author's theory and assessment found that the diagnosis was Risk of Ineffective Peripheral Perfusion. Previous research (Astuti & Dwi, 2018) proved that patients with anemia experience physiological disorders in the body where low hemoglobin can cause a reduction in oxygen bound to be carried to the tissues and cause disruption of tissue perfusion, resulting in inhibited metabolism. cells and disrupt the functioning of organs and systems.

Intervention in theory according to SDKI (Nursing Diagnosis Standards) Indonesia). Nursing interventions with the risk of ineffective peripheral perfusion can clearly and accurately about the disease, procedure and prognosis (Hogatama, 2022). Check peripheral circulation (eg: pulse, edema, capillary refill, color, temperature). Avoid IV insertion or blood draw in areas of limited perfusion, avoid blood pressure measurement in extremities with limited perfusion, recommend taking blood pressure control medication regularly and recommend adequate rest. Collaborative administration of Sodium Chloride 0.9% 500mg infusion 20 drops/minute, Metronidazole 500mg/100ml infusion injection, Ondansetron 4mg/2ml, Pantoprazole 40 mg (1 ampoule and 10 ml solvent), Methylprednisolone 125 mg (1 ampoule and 2 ml solvent), if necessary, according to the advice of the attending physician. The case study of nursing action planning for Mrs. R was made after all collected data was analyzed and prioritized. In this planning discussion, the author will discuss the problem Nursing Risk of Ineffective Peripheral Perfusion which is the focus of the problem This case study. Nursing planning includes the formulation of objectives, actions, and assessment of the series of nursing care for patients based on the assessment analysis so that the patient's health and nursing problems can be addressed. All planned interventions, from outcome criteria, objectives, to the planning itself, refer to the SIKI SLKI and SDKI diagnostic books. With the formulation of objectives, it is hoped that Mrs. R's hemoglobin will increase using the observation sheet, within 3x7 hours to carry out the planned actions. Actions Nursing consists of observation and supervision actions and collaborative actions.

Nursing implementation based on (SDKI DPP PPNI 2017) Risk of Ineffective Peripheral Perfusion: Explain the purpose, benefits and risks of each procedure performed. Provide a comfortable, calm and clean environment. Provide an opportunity for the patient to express the current condition. The implementation carried out on Mrs. R is adjusted to the plan made. In this case study focusing on the problem of low hemoglobin experienced by Mrs. R, the author implemented metronidazole, cefotaxime and ondansetron injection therapy where before and after implementation the author conducted an assessment on the observation sheet. This data is supported by subjective data, namely Mrs. R said that weakness has decreased. Previous research (Suandika, 2022) appropriate treatment for anemia is Improving Hb levels and replenishing the body's iron reserves is achieved through blood transfusions. One way to provide circulatory care is to administer blood transfusions for 3 days. treatment, the problem of ineffective peripheral perfusion is partially resolved as indicated by an increase in hemoglobin levels.

Breast cancer surgery with anemia. Based on the theoretical framework according to the Indonesian Nursing Document Standards (SDKI), PPNI 2017 selection of theory as a framework analysis based on its relevance with the patient's condition and efforts to find out the impact of transfusion blood transfusion and metronidazole, cefotaxime, and ondansetron injections on reducing fatigue and normalizing hemoglobin. The statistical analysis method used in this evaluation included an observation sheet. The analysis showed that blood transfusion and metronidazole, cefotaxime, and ondansetron injections had a positive impact on increasing Mrs. R's hemoglobin. This is in line with the journal (Rini, 2021) which states that the patient's ability to perform activities is expected to be ineffective. with care in the form of monitoring vital signs, education patient receiving blood transfusion, perform blood transfusion, monitor for blood transfusion reactions, collaborate on administering medicine. Results This evaluation concludes that the implementation giving Blood transfusion and metronidazole injection are included in the nitroimidazole antibiotic group, cefotaxime is included in the third generation cephalosporin antibiotic group and ondansetron is a drug used as an antiemetic, namely a drug to prevent and treat nausea and vomiting, consistently resulting in an increase in hemoglobin, in

line with the principles contained in the theory according to (Nursyahrani et al., 2024). Recommendations that can be given based on the results This is the importance of considering the use of blood transfusions and injections of metronidazole, cefotaxime and ondansetron as part of holistic care.

4. Conclusion

Based on the results of the assessment of Mrs. R with a diagnosis of right breast cancer, anemia and bicytopenia were found, which pose a risk of causing peripheral perfusion disorders. Objective data showed physical weakness and low hemoglobin. There was a diagnosis of Risk of Ineffective Peripheral Perfusion, Acute Pain, and Anxiety. The diagnosis was Risk of Ineffective Peripheral Perfusion. This diagnosis was established due to the presence of risk factors in the form of anemia and bicytopenia, which can interfere with oxygenation. and peripheral tissue perfusion. The care plan focused on monitoring perfusion status, collaboration in administering blood transfusions and injection therapy of metronidazole, cefotaxime, and ondansetron, laboratory examination of initial Hb of 5.5 g/dL after blood transfusion of 3 colves Hb became 8.2 g/dL. Nursing interventions carried out referred to SIKI, including: monitoring vital signs and peripheral perfusion status, collaboration in further laboratory examinations. Nursing implementation was carried out according to plan with a holistic approach that included improving physical conditions, decreasing anxiety, the patient surrendering and having the spirit to recover. Evaluation after 3 days showed that the patient had no signs decreased peripheral perfusion. Vital signs are within normal limits, capillary refill is good, and the patient reports no longer feeling weak. Thus, the nursing goals and intervention achieved.

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