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Case Report on Circulatory Care for a Postpartum Woman with Nursing Issues Related to Ineffective Peripheral Perfusion

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ABSTRACT

Anemia often occurs in postpartum woman due to the delivery process associated with bleeding, both vaginal and abdominal. This results in ineffective peripheral perfusion nursing problems. Therefore, nurses play an important role in providing nursing care to postpartum woman with ineffective peripheral perfusion nursing problems. The purpose of this case study is to apply nursing care to postpartum mothers with ineffective peripheral perfusion nursing problems in the Mawar Merah room at Bangil Regional General Hospital. The research design used was a case report with three respondents, namely mothers in their first to third days of spontaneous postpartum who experienced ineffective peripheral perfusion problems, as indicated by hemoglobin levels <7 g/dl. The nursing interventions provided included peripheral circulation examination, identification of risk factors for circulation disorders, dietary recommendations, and transfusion therapy according to medical indications. After three days of circulatory treatment, all participants showed improvement in the form of increased peripheral perfusion, as indicated by normal skin color and extremity temperature, hemoglobin levels rising to 10–12 g/dL, a capillary refill time (CRT) of less than 2 seconds, and the absence of signs of cyanosis. This nursing care was effective in overcoming ineffective peripheral perfusion in postpartum woman. The findings of this case report are expected to serve as a basis for nurses to implement preventive measures, including early detection and appropriate interventions, to prevent further complications resulting from peripheral perfusion disorders in postpartum women.

ABSTRAK

Anemia sering terjadi pada ibu post partum yang disebabkan oleh proses persalinan berhubungan dengan perdarahan, baik pervaginam maupun perabdominal. Hal tersebut mengakibatkan masalah keperawatan perfusi perifer tidak efektif. Sehingga diperlukan peran perawat dalam memberikan asuhan keperawatan pada ibu post partum dengan masalah keperawatan perfusi perifer tidak efektif. Tujuan studi kasus ini adalah untuk mengaplikasikan asuhan keperawatan pada ibu post partum dengan masalah keperawatan perfusi perifer tidak efektif di ruangan Mawar Merah RSUD Bangil. Desain penelitian yang digunakan adalah studi kasus dengan jumlah responden sebanyak tiga orang ibu nifas hari ke-1 hingga ke-3 post partum spontan yang mengalami masalah perfusi perifer tidak efektif ditunjukkan dengan kadar hemoglobin <7gr/dl. Intervensi keperawatan yang diberikan meliputi pemeriksaan sirkulasi perifer, identifikasi faktor risiko gangguan sirkulasi, anjuran diet, serta terapi transfusi sesuai indikasi

medis. Setelah tiga hari menjalani perawatan sirkulasi, seluruh responden menunjukkan perbaikan berupa peningkatan perfusi perifer, yang ditandai dengan warna kulit dan suhu ekstremitas yang normal, kadar hemoglobin meningkat menjadi 10-12 g/dL, dan CRT < 2 detik serta tidak adanya tanda-tanda sianosis. Asuhan keperawatan tersebut efektif dalam mengatasi masalah perfusi perifer tidak efektif pada ibu post partum. Hasil laporan kasus ini diharapkan dapat digunakan sebagai Tindakan preventif perawat dalam melakukan deteksi dini dan intervensi yang tepat untuk mencegah komplikasi lebih lanjut akibat gangguan perfusi perifer pada ibu post partum.

A. INTRODUCTION

Bleeding is a physiological process following childbirth, whether vaginal delivery or cesarean section, and postpartum bleeding is considered excessive if it exceeds a certain threshold (Escobar et al., 2022). In vaginal deliveries, bleeding can occur before, during, or after delivery. Bleeding is considered physiological if blood loss does not exceed 500 cc in vaginal delivery and does not exceed 1000 cc in cesarean section (Indriyani et al., 2020). Bleeding after childbirth carries the risk of health problems. Postpartum hemorrhage, or bleeding after childbirth, can have serious consequences for the mother, including anemia, infection, shock, and even death. A deficiency of red blood cells or hemoglobin can worsen postpartum hemorrhage because it can affect uterine contractions and slow healing (Istiningsih et al., 2024).

According to the World Health Organization (WHO) in 2023, postpartum hemorrhage (PPH) is the leading cause of maternal mortality worldwide. A total of 14 million women experience postpartum hemorrhage, resulting in approximately 70,000 deaths globally (WHO, 2025). The number of maternal deaths in Indonesia in 2020 was 4,627 cases (an increase of 9%), with hemorrhage being one of the leading causes of maternal death (Kementerian Kesehatan Republik Indonesia, 2021). Data from the East Java Provincial Health Office shows that hemorrhage accounts for about 37% of total maternal deaths, followed by infection (22%) and hypertension in pregnancy (14%) (Dinas Kesehatan Provinsi Jawa Timur, 2021). According to the Pasuruan District Health Office in 2024, there were 13 cases of mothers who died during childbirth and 38 cases of newborns who died, one of the causes being haemorrhage (Dinas Kesehatan Kabupaten Pasuruan, 2024). Maternal deaths worldwide, with an incidence of 5%-10% of all deliveries, are caused by postpartum hemorrhage (Simanjuntak, 2022).

Postpartum hemorrhage with retained placenta is caused by cotiledons and retained amniotic membranes, placenta in sutures, and placenta implanted too deeply/strongly attached between the placenta and uterus (placenta accreta, anterior placenta). Bleeding due to retained placenta can cause complications such as anemia, hypovolemic shock, polyps, post-saline infection, choriocarcinoma degeneration (malignant tumor), and even death(Septi et al., 2019). Postpartum maternal anemia is a condition where the hemoglobin level in the body is less than 10 g/dl. Although pregnant women have sufficient iron levels, prenatal hemoglobin concentrations are usually around 11 to 12 g/dL. However, this condition can be exacerbated by a decrease in blood volume during childbirth and the postpartum period, causing the mother to become anemic (Haile, 2023).

Anemia that occurs in postpartum woman causes nursing problems, namely ineffective peripheral perfusion. The effects of anemia in mothers after childbirth include susceptibility to infection, decreased physical ability, and increased fatigue (Fairuza & Herdiman, 2023). Anemia

in postpartum woman, characterized by low hemoglobin levels, can cause ineffective peripheral perfusion. This is because anemia reduces the ability of blood to carry oxygen throughout the body, including the extremities, resulting in poor blood circulation to areas of the body (Ramadhani et al., 2024). Anemia in postpartum woman, characterized by low hemoglobin levels, can cause ineffective peripheral perfusion (Amelia et al., 2021).

One effort to overcome nursing problems in patients with postpartum anemia with ineffective peripheral perfusion nursing problems is the provision of food containing iron (Afria et al., 2024). Iron absorption can also be enhanced by vitamin C found in beetroot, dragon fruit, red spinach, and guava juice, vitamin B12, folic acid in green bean extract, and protein, which can increase hemoglobin levels in postpartum patients. Interventions for ineffective peripheral perfusion in postpartum patients focus on restoring optimal blood circulation after childbirth due to bleeding or cesarean section (Oktavianis et al., 2021). Nursing interventions for ineffective peripheral tissue perfusion include circulation care aimed at improving peripheral blood flow, tissue oxygenation, and preventing complications related to impaired perfusion (Federal et al., 2023).

Although postpartum hemorrhage has been extensively studied as a leading cause of maternal morbidity and mortality, most studies have focused primarily on the obstetric aspects and medical management of hemorrhage, while research on nursing issues related to ineffective peripheral perfusion due to postpartum anemia remains limited. Previous studies have generally addressed postpartum anemia in relation to fatigue, infection, and decreased physical capacity; however, they have not specifically evaluated manifestations of peripheral perfusion, indicators of improvement, or the effectiveness of circulatory care based on the Indonesian Nursing Intervention Standards (SIKI) in postpartum women with anemia.

Furthermore, clinical evidence describing the comprehensive nursing care process remains limited, particularly in the context of care at Bangil Regional General Hospital. According to the results of a preliminary study conducted on December 26, 2024, at Bangil Regional General Hospital, there were 37 postpartum women who experienced anemia in the last three months of 2024. Therefore, this study was conducted to address this gap by providing an in-depth description of the implementation of circulatory care for postpartum women with anemia and the nursing issue of ineffective peripheral perfusion, as a basis for the development of more standardized and evidence-based maternity nursing practices.

B. METHODS

The study design used was a case study. This case study was conducted at the Bangil Regional General Hospital from December 29, 2024, to January 20, 2025. The subjects of this case study were three postpartum women who met the inclusion criteria of having given birth vaginally on the first through third day and experiencing ineffective peripheral perfusion, as indicated by a hemoglobin level <7 g/dl. The exclusion criteria in this case study were postpartum mothers who dropped out during the data collection process.

The focus of the problem in this case study was ineffective peripheral perfusion in postpartum woman, with the focus of intervention being circulation care. The nursing care plan for the three patients focused on the nursing diagnosis of ineffective peripheral perfusion due to decreased hemoglobin concentration. The Indonesian nursing intervention standard is enforced with circulation care (PPNI, 2018). The goal is that after 3x24 hours of nursing care, peripheral perfusion will improve. The expected outcome criteria are peripheral perfusion with indicators including: increased capillary pulse strength, decreased pale skin color, decreased peripheral edema, decreased extremity pain, decreased paresthesia, and decreased muscle weakness. Some things that need to be done are observational measures: check peripheral circulation; identify risk factors for circulatory disorders; monitor heat, redness, pain, or swelling in the extremities. Therapeutic actions include: avoid placing IVs or drawing blood in

areas with limited perfusion; avoid measuring blood pressure in extremities with limited perfusion; avoid applying pressure and tourniquets to injured areas; prevent infection; and ensure hydration. Other measures include education, such as: encouraging regular exercise; recommending the use of blood pressure-lowering medications; recommending a diet program to improve circulation; informing patients about emergency signs and symptoms that should be reported; and providing information, education, and communication (IEC) about consuming iron supplements and iron-rich foods (meat, poultry, fish, nuts).

Before conducting the case study, the researchers obtained permission from the Faculty of Health Sciences, Tribhuwana Tunggadewi University, with letter number 1878/TB. FIKes/DL-120/XII/2024 and a reply letter regarding research permission from Bangil Regional General Hospital with number 400.14.5.4/4012/424.072.01/2024. After that, the researchers collected data by observing research ethics principles, including: informed consent, anonymity, confidentiality, veracity, benefit ratio, and the right to justice in fair treatment. Data collection was carried out through anamnesis and physical examinations of all case study subjects. The tools used included a sphygmomanometer to measure vital signs (normal clinical average of 110/70 mmHg), laboratory tests to measure hemoglobin levels (>11 g/dL), nursing care plans as observation forms, and brochures as educational materials on circulatory care. After providing nursing care to each patient for three days, an evaluation was conducted for further analysis.

Data analysis in this case study was conducted descriptively through a nursing assessment process of three patients. The data analyzed included subjective and objective data obtained from interviews, observations, physical examinations, and a review of the patients' medical records. The analysis was conducted systematically at each stage of the nursing process: assessment, determination of nursing diagnoses, planning, implementation, and evaluation. For each patient, subjective and objective data were grouped according to the impaired basic needs and then compared with normal criteria and the SDKI nursing diagnosis standards. An interpretation was then conducted to determine the emerging nursing problems and their contributing factors. The results of the analysis were used as the basis for establishing nursing diagnoses, developing interventions, implementing nursing actions, and evaluating the progression of the patients' conditions. Comparisons among the three patients were made to identify similarities and differences in clinical manifestations, responses to nursing interventions, and the progression of nursing care outcomes during the observation period. The results of the analysis are presented narratively and in tabular form to facilitate data interpretation for each case.

C. RESULT AND DISCUSSION

This case report involves three patients. The first patient, Mrs. G, is a 29-year-old. She complained of dizziness, weakness, and bleeding. During the examination, she reported feeling weak, shivering, and lacking energy, as well as experiencing pain in the perineum and bleeding. Her obstetric status is P2A0. Her previous delivery occurred 10 years ago via spontaneous labor, similar to the current delivery. During the previous delivery, there were no issues such as those experienced currently. The patient has a history of using an implant contraceptive for 6 years, and has had no complaints.

The second patient, Ms. S, is 24 years old. The patient reported feeling weak and shivering, accompanied by a fever. During the assessment, the patient reported dizziness and weakness upon waking, rapid fatigue, a fever, and bleeding. Obstetric status: P1A0, spontaneous postpartum.

The third patient, Ms. M, is 18 years old and an obstetric status of P1A0, spontaneous postpartum. The patient reported feeling weak and lacking energy when attempting to engage in activities. During the assessment, the patient reported feeling dizzy, nauseous, and vomiting, accompanied by pain in the birth canal.

1. Result

Table 1. Research Subject Assessment Results

Subject No.	Assessment
1	Date: December 29, 2024, at 2:30 p.m. Subjective Data: The patient reported dizziness, weakness, and lack of energy. Objective Data: The patient appears weak, Hb: 6.98 g/dl, CRT > 2 seconds, the patient appears sleepy, conjunctiva is anemic, cold extremities, pale face, BP: 150/90 mmhg, N: 88x/minute, S: 36.5˚C.
2	Date: December 30, 2024, at 11:00 a.m. Subjective Data: The patient reported dizziness, weakness, headache, and blurred vision. Objective Data: The patient appears weak, Hb: 6.96 g/dl, CRT > 2 seconds, the patient appears drowsy, conjunctiva is anemic, cold extremities, pale face, BP: 130/80 mmhg, N: 90x/minute, S: 35.9°C
3	January 18, 2025, at 11:00 a.m. Subjective Data: The patient reported dizziness, weakness, and lack of energy. Objective Data: The patient appears weak, Hb: 6.78 g/dl, CRT > 2 seconds, the patient appears sleepy, conjunctiva is anemic, cold extremities, pale face, BP: 120/70 mmhg, N: 86x/minute, S: 36°C.

Source: Primary data, 2024 and Primary data, 2025

Table 1 shows that all patients exhibited abnormal data, both subjective and objective. The data focused on ineffective peripheral perfusion nursing problems, as indicated by patient complaints such as dizziness, weakness, lack of energy, below-normal hemoglobin levels, anemic conjunctiva, pale face, and cold patient extremities.

Table 2. First Day Evaluation

Subject No.	Assessment
1	December 30, 2024, at 1:00 p.m. Subjective Data: The patient reported reduced dizziness and blurred vision. Objective Data: The patient appeared weak, Hb: 8 g/dl, CRT<2 seconds, the patient appeared sleepy, conjunctival anemia, cold extremities, pale face, BP: 140/80 mmhg, N: 80x/minute, S:37°C
2	December 31, 2024, at 1:00 p.m. Subjective data: the patient said he still felt dizzy and lightheaded when he woke up. Objective Data: The patient appears weak, Hb: 7.88 g/dl, CRT<2 seconds, the patient appears sleepy, conjunctiva anemic , cold extremities, pale face, BP: 100/70 mmhg, N: 84x/minute, S:36.2°C, RR: 20x/minute.
3	January 19, 2025, at 1:00 PM WIB Subjective Data: The patient reports still feeling dizzy and that the chills have decreased.

	Objective Data: patient appears weak, Hb: 7.98 g/dl, CRT < 2 seconds, patient appears sleepy, conjunctiva anemic , cold extremities, pale face, BP: 120/70 mmhg, N: 86x/minute, S: 36.4°C, RR: 20x/minute.

Source: Primary data, 2024 and Primary data, 2025

Table 2 shows that after the nursing intervention involving circulatory care management on the first day, the problem of ineffective peripheral perfusion had not been resolved. However, there was an improvement in the patient's condition, as evidenced by an increase in hemoglobin levels.

Table 3. Final Day Evaluation

Subject No.	Assessment
1	December 31, 2024, at 7:00 p.m. Subjective data: patient reports no dizziness Objective Data: general condition is good, Hb: 12 g/dl, CRT<2 seconds, conjunctiva is pink, BP: 130/70 mmhg, N: 85x/m, S:37.5°C
2	Date: January 1, 2025 at 7:00 p.m. Subjective Data: patient reports no longer feeling dizzy Objective Data: general condition good, Hb: 10 g/dl, CRT<2 seconds, conjunctiva pink in color , BP: 120/80 mm Hg, N: 88x/minute, S:36.4°C
3	Date: January 20, 2025, at 7:00 p.m. Subjective Data: no complaints Objective Data: general condition good, Hb: 10 g/dl, CRT <2 seconds, conjunctiva pink in color , BP: 125/80 mmhg, N: 75x/minute, S:36.6°C

Source: Primary data, 2024 and Primary data, 2025

Table 3 shows that after circulatory management was performed on the final day, all patients showed improvement in both subjective and objective findings. This was evidenced by the absence of complaints of dizziness and blurred vision. Physical examination results also indicated good general condition, a capillary refill time (CRT) of < 2 seconds, pink conjunctiva, and vital signs within normal limits. Although the hemoglobin levels in the second and third patients were not yet within the normal range, they still showed an increase.

2. Discussion

Postpartum anemia is a condition in which a mother's hemoglobin level is below normal after giving birth, usually less than 11 g/dL in the first week postpartum and less than 12 g/dL in the eighth week postpartum (Janah et al., 2023). Postpartum anemia is a condition characterized by a decrease in hemoglobin levels after childbirth, typically caused by blood loss during delivery and iron deficiency that began during pregnancy. This condition is often observed during the first week after childbirth and can affect both the mother's physical and psychological recovery. Postpartum anemia occurs in approximately 50–80% of women after childbirth, and the majority of cases are associated with iron deficiency and peripartum bleeding. This condition leads to fatigue, reduced activity capacity, difficulty concentrating, and a diminished quality of life for the mother (Neef et al., 2024). Postpartum woman with anemia can recover after a few weeks or months after giving birth and do not experience serious symptoms. However, if the recovery process takes longer, mothers will experience symptoms such as depression, cognitive deficits, and fatigue. This condition can cause a

worsening of the immune system and decrease breast milk production, slow wound healing, and increase the risk of mastitis, ductitis, and urinary tract infections (Mintsopoulos et al., 2024)(Selvaraj et al., 2019).

The three patients with postpartum anemia experienced symptoms of dizziness, weakness, headache, blurred vision, drowsiness, cold extremities, anemic conjunctiva, and pale face. Mothers with postpartum anemia often feel tired, exhausted, lethargic, weak, and have difficulty focusing. Moderate anemia: frequent heart palpitations, paleness, easily short of breath even with light activity, and quickly tired even with little activity. Severe anemia: constant fatigue, chills, extreme paleness, rapid heartbeat, shortness of breath, chest pain, and organ dysfunction (Kementerian Kesehatan Republik Indonesia, 2023). In line with other studies, common symptoms of postpartum anemia include: signs and symptoms of anemia such as pale skin or conjunctiva, rapid heartbeat,

Based on the assessment data of the three patients, the nursing problem identified was ineffective peripheral perfusion due to decreased hemoglobin concentration. This was based on the subjective data of the three patients: The patients reported feeling dizzy, weak, and lacking energy. Objective data: the patient appeared weak, drowsy, had anemic conjunctiva, cold extremities, pale skin, and decreased hemoglobin levels. Ineffective peripheral perfusion is a nursing diagnosis that describes a decrease in blood flow to peripheral tissues, resulting in inadequate delivery of oxygen and nutrients at the capillary level. This condition can lead to impaired tissue and organ function if not properly managed (Haugen et al., 2011).

Ineffective peripheral perfusion is a condition in which blood flow to peripheral tissues is insufficient to meet the cells' oxygen and nutrient needs. In postpartum women with anemia, this problem arises due to a reduced oxygen-carrying capacity of the blood, causing peripheral tissues to experience hypoxia. Clinically, this problem is often a priority because it is directly related to the patient's hemodynamic status (Neef et al., 2024). Ineffective peripheral perfusion is a condition in which blood flow to peripheral tissues is insufficient to meet the cells' oxygen and nutrient needs. In postpartum women with anemia, this problem arises due to a reduced oxygen-carrying capacity of the blood, causing peripheral tissues to experience hypoxia. Clinically, this problem is often a priority because it is directly related to the patient's hemodynamic status (WHO, 2023).

Postpartum hemorrhage causes a loss of red blood cells and a decrease in hemoglobin levels, thereby reducing the blood's oxygen-carrying capacity. Tissue hypoxia stimulates activation of the sympathetic nervous system and the release of catecholamines, which cause peripheral vasoconstriction to maintain perfusion of vital organs. This compensatory mechanism explains the appearance of pale skin and cold extremities in patients with postpartum anemia.Decreased tissue oxygenation causes cells to switch to anaerobic metabolism and produce less energy. As a result, patients experience weakness, fatigue, and reduced physical capacity. If hypoxia persists, cellular function and peripheral microcirculation may be further impaired (Neef et al., 2024). Blood volume loss also reduces venous return and cardiac output, leading to increasingly inadequate peripheral perfusion. The hormonal response via the renin–angiotensin–aldosterone system attempts to maintain intravascular volume, but correction of anemia is still necessary to restore optimal oxygen transport (WHO, 2023).

The implementation of comprehensive circulatory care interventions can increase pulse strength and reduce the risk of vascular complications in mothers with mild to moderate postpartum anemia (Putra, 2025). The main principles in the management of postpartum anemia are iron supplementation through health education and information (KIE) and addressing the causes of postpartum anemia, as well as blood transfusions with specific indications. In line with other studies, the management of anemia in postpartum woman

involves oral therapy with amoxicillin and iron tablets, blood transfusions, observation of general condition, bleeding, uterine contractions, nutritional counseling, and proper iron tablet intake, as well as health education (Afria et al., 2024). Correction of anemia is a key component of management. Oral iron supplementation is recommended for mild to moderate anemia, while intravenous iron or blood transfusions are considered for severe anemia or when hemodynamic symptoms are present. This therapy aims to increase hemoglobin levels and oxygen-carrying capacity, thereby improving tissue perfusion (WHO, 2023)

Health education for patients experiencing anemia after childbirth includes advice to consume foods high in iron, such as meat, poultry, fish, and nuts. Increased consumption of vitamin C is also recommended to aid iron absorption. In addition, it is recommended not to consume tea and coffee together with foods containing iron. It is also important to regularly check Hb levels and recognize symptoms of postpartum depression that may be related to anemia. If anemia is not properly treated, it can cause cognitive impairment, decreased activity, and behavioral changes in patients (Nugraha, 2022).

Implementation is the fourth stage of the nursing process, which begins after the nurse has developed a nursing plan (Potter et al., 2021). The nursing care actions that can be performed are circulation care. Based on the plan made, the researcher carried out appropriate nursing interventions to address the nursing diagnosis of ineffective peripheral perfusion due to decreased hemoglobin concentration.

The implementation measures include checking peripheral circulation; identifying risk factors for circulatory disorders; monitoring heat, redness, pain, or swelling in the extremities; avoiding the placement of IVs or blood sampling in areas with limited perfusion; avoiding blood pressure measurements in extremities with limited perfusion; avoiding pressure and tourniquet application on injured areas; preventing infection; providing hydration; recommending a diet high in iron and fruits containing vitamin C; C and regular exercise; recommend a diet program to improve circulation; inform patients of emergency signs and symptoms that must be reported and provide health education for patients with postpartum anemia, namely to consume iron supplements and foods high in iron such as meat, poultry, fish, and nuts (PPNI, 2018). Nonpharmacological interventions include positioning to support blood flow, keeping the extremities warm, gradual mobilization, and education on a diet high in iron and vitamin C to enhance iron absorption. The WHO-recommended bundle approach to managing postpartum hemorrhage emphasizes a combination of medical interventions and circulatory monitoring to improve maternal safety (Holm et al., 2025)

Increased vitamin C intake is also recommended to aid iron absorption (Sembiring & Purba, 2023). In addition, it is recommended to avoid consuming tea and coffee together with foods containing iron. It is also important to have regular hemoglobin and hematocrit level checks and to recognize symptoms of postpartum depression that may be related to anemia. Health education should encourage patients to take iron supplements as recommended by their doctor, such as ferrous sulfate, to help increase hemoglobin levels. One alternative to increase the amount of iron in the blood is to consume fruits that are high in iron and vitamin C. One fruit that contains relatively high levels of iron and vitamin C is dragon fruit, which contains 0.16-0.20 mg of iron, vitamin B1, vitamin B2, and vitamin C (Sulastri et al., 2023). The principle of anemia therapy is to help fulfill iron deficiency by providing health education to patients and their families. Patient 1 and their family initially refused to receive KIE. However, after being given an explanation, the patient allowed KIE to be provided. During KIE, the patient and family focused on listening to the material presented and asked how to treat anemia in postpartum woman. Patients 2 and 3 and their families immediately gave their permission for KIE to be provided. The patients and their

families focused on listening and actively asked questions about the efforts that could be made to prevent anemia and what could increase a person's risk of anemia. The next day, the patients asked their families to provide them with foods high in iron, such as spinach, broccoli, and fruits such as dragon fruit. During the implementation of the intervention for all patients, no adverse or unexpected events occurred—neither for the patients, their families, nor the healthcare workers providing the nursing care.

From the results of KIE, it can be concluded that consuming legumes can help improve ineffective peripheral perfusion (Nurakila, 2023). Therefore, with proper treatment of anemia, it is hoped that recurrence of anemia in the future can be prevented (Nugraha, 2022). Prevention and management of anemia include increasing the consumption of nutritious foods, consuming foods that contain iron, animal-based foods such as meat, fish, chicken, liver, and eggs, and plant-based foods such as dark green vegetables, legumes, and tempeh. Eating vegetables and fruits that are rich in vitamin C is very beneficial for increasing iron absorption in the intestine (Kementerian Kesehatan Republik Indonesia, 2023). From the results of KIE administration, it can be concluded that consuming legumes can help improve ineffective peripheral perfusion (Nurakila, 2023). Therefore, with proper treatment of anemia, it is hoped that recurrence of anemia in the future can be prevented (Nugraha, 2022). Prevention and treatment of anemia include increasing consumption of nutritious foods, consuming foods containing iron, animal-based foods such as meat, fish, chicken, liver, and eggs, and plant-based foods such as dark green vegetables, nuts, and tempeh. Eating vegetables and fruits that are rich in vitamin C is very beneficial for increasing iron absorption in the intestines (Kementerian Kesehatan Republik Indonesia, 2023).

The evaluation stage is a systematic and planned comparison of the patient's health with predetermined goals, carried out continuously with the involvement of the patient, family, and other health workers. In discussing nursing care evaluation, the SOAP system is used (Setiadi, 2021). After circulatory management was implemented, all patients showed improvement in both subjective and objective findings. None of the patients reported dizziness or blurred vision. Physical examination results also indicated good general condition, a capillary refill time (CRT) of < 2 seconds, pink conjunctiva, and vital signs within normal limits. However, the second and third patients differed in that their hemoglobin levels were not yet within the normal range, although these levels continued to show an increase.

Based on the evaluation results, the nursing diagnosis of ineffective peripheral perfusion due to decreased hemoglobin concentration was resolved in the first patient. Meanwhile, in the second and third patients, hemoglobin levels had not yet reached normal levels despite an increase. According to other studies, there are several factors that can influence hemoglobin levels. One of these is educational level. The second and third patients had a lower educational level than the first patient, specifically a high school education. A person’s educational level can determine their ability to receive and understand information. Someone with a higher level of education will receive and understand information better than someone with a lower level of education (Syariena., Hidayanti, H., Usman, 2024). Mothers who are better informed about health issues are more likely to adopt healthier behaviors to prevent postpartum anemia (Sumihartini, N., 2022). However, all three patients were discharged, allowing them and their families to continue following the dietary recommendations for circulatory improvement as previously communicated by the researcher. By continuing these dietary recommendations for circulatory improvement, it is hoped that hemoglobin levels will reach normal levels.

D. CONCLUSION AND SUGGESTIONS

The nursing problem "Ineffective Peripheral Perfusion" was selected as the primary diagnosis for postpartum women with anemia due to bleeding. This diagnosis was chosen because a decrease in hemoglobin levels directly reduces the blood's capacity to carry oxygen to peripheral tissues, leading to clinical signs such as pallor, cold extremities, delayed capillary refill, weakness, and easy fatigability, indicating that impaired peripheral tissue perfusion is more prominent than other nursing problems.

In conclusion, it is recommended that nurses in maternity care settings strengthen early screening and continuous monitoring of peripheral perfusion in postpartum women, particularly those with anemia or a history of postpartum hemorrhage, by implementing standardized assessments, timely circulation-focused interventions, nutritional education, and close collaboration with physicians in anemia management and transfusion therapy. Hospitals should also develop clinical protocols and provide ongoing training for nurses to improve competence in detecting and managing ineffective peripheral perfusion. Furthermore, future studies involving larger samples and longer follow-up periods are recommended to evaluate the long-term effectiveness of nursing interventions and to generate findings that are more generalizable to the wider postpartum population.

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