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Nursing Care For Heart Failure with Nursing Intervention in The Form of Heart Diet Education For Chf Patients at Menggala Regional General Hospital

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ABSTRACT

Backround and objective: Patients with congestive heart failure (CHF) generally experience shortness of breath, which can cause a decrease in blood flow throughout the body. CHF patients can be treated by increasing contractility or systemic blood flow, providing rest time for patients, placing them in a semi-Fowler position, providing oxygen therapy as needed, reducing fluid and salt intake, and recording fluid balance. The subjects of this study were two patients who received treatment with a diagnosis of congestive heart failure (CHF) and experienced problems with decreased cardiac output. The complaint that occurred in both patients was shortness of breath due to impaired cardiac contractility, which caused lower cardiac output, resulting in decreased blood flow throughout the body. The objective of this study was to determine the effectiveness of applying cardiac diet nursing interventions in CHF patients undergoing treatment. **Result:** The results of the assessment of two patients with CHF who were given nursing care with health education about a low-salt diet and collaborative therapy administration. **Conclusion:** CHF patients can be treated by identifying the primary signs and symptoms of decreased cardiac output, monitoring TTV, monitoring fluid balance, and providing nursing care with health education about a low-salt diet and collaborative therapy administration.

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Introduction

Patients with CHF generally experience shortness of breath, which can cause a decrease in blood flow throughout the body. For patients with congestive heart failure, treatment plans and measures that can be implemented include increasing contractility or systemic blood flow, allowing the patient to rest, placing them in a

semi-Fowler position, providing oxygen therapy as needed, reducing fluid and salt intake, and recording fluid balance.

From the assessment results, two cases were obtained from two patients. Both patients complained of shortness of breath, weakness, increased shortness of breath during activity, and edema in both legs. The nursing diagnosis was congestive heart failure (CHF), namely a decrease in cardiac output due to changes in preload. Congestive heart failure (CHF) is the inability of the heart to pump blood adequately to meet the oxygen and nutrient needs of tissues (Kasron, 2021).

On physical examination and observation, patient 1 appeared short of breath, using accessory breathing muscles, RR: 26x/minute, enlarged jugular veins, edema in both legs, fluid intake greater than fluid output, cold extremities, CRT < 2 seconds. while in patient 2, the patient appeared short of breath, using accessory breathing muscles, RR: 25x/minute, enlarged jugular veins, edema in both legs, fluid intake greater than fluid output, cold extremities, CRT > 2 seconds, shortness of breath increased with activity.

On physical examination and observation, patient 1 appeared short of breath, using accessory breathing muscles, RR: 26x/minute, enlarged jugular veins, edema in both legs, fluid intake greater than fluid output, cold extremities, CRT < 2 seconds. while in patient 2, the patient appeared short of breath, using accessory breathing muscles, RR: 25x/minute, enlarged jugular veins, edema in both legs, fluid intake greater than fluid output, cold extremities, CRT > 2 seconds, shortness of breath increased with activity.

Objective

The purpose of this study was to determine the effectiveness of applying cardiac diet nursing interventions in CHF patients undergoing treatment.

Method

This research method applies a descriptive approach using a case study method with two patients diagnosed with congestive heart failure (CHF) and experiencing decreased cardiac output at the Menggala Regional General Hospital as the research subjects. The respondents who were selected as patients were Mr. S, aged 64 years old, male, and Mrs. J, aged 56 years old, female. The case management period was from October 19, 2025, to October 31, 2025.

Results

The results of physical examination and observation revealed that there were two patients diagnosed with CHF. Patient 1 is Mr. S, 64 years old, male, admitted to the hospital on October 19, 2025, with a primary medical diagnosis of congestive heart failure (CHF) with complaints of shortness of breath accompanied by chest heaviness, increased shortness of breath during activity, and weakness. Patient 2 is Mrs. J, 56 years old, female, admitted to the hospital on October 28, 2025, with a medical diagnosis of Congestive Heart Failure (CHF), complaining of continuous shortness of breath, worsening during activity, accompanied by headaches, weakness, and nausea.

The complaints experienced by both patients align with the opinion expressed by Kasron (2021) that in diseases with CHF, the general impact is shortness of breath due to impaired cardiac contractility, which causes a lower cardiac output, leading to reduced blood flow throughout the body. This can result in effects such as dyspnea,

orthopnea, exertional dyspnea, and paroxysmal nocturnal dyspnea (PND), ascites, and even cardiogenic shock and decreased oxygen saturation.

The examinations performed on both patients were laboratory tests, chest X-rays, and ECGs. According to the Indonesian Nursing Diagnosis Standards (SDKI), diagnosis is based on major and minor data. In this case, the author believes that the data for patients 1 and 2 support this diagnosis. For patient 1, the major data include complaints of shortness of breath, weakness, edema in both legs, and enlarged jugular veins. The minor data include cold extremities. For patient 2, the major data include shortness of breath, weakness, edema in both legs, and enlarged jugular veins, while the minor data include cold extremities and a capillary refill time (CRT) > 2 seconds. Furthermore, the nursing interventions taken are in accordance with the patients' needs, particularly in cardiac care interventions. Interventions in this case included independent, therapeutic, educational, and collaborative interventions. The educational intervention in this study used a booklet aimed at increasing the knowledge of both the patient and their family.

The implementation involved identifying the primary signs and symptoms of decreased cardiac output, monitoring vital signs, monitoring fluid balance, providing health education on a low-salt diet using the booklet, and collaborating on therapy administration.

Discussion

The management of heart failure patients cannot be separated from the role of nurses, who are tasked with providing nursing care based on nursing methods and processes, starting from the assessment stage, diagnosis, intervention, implementation, to evaluation. In addition, nurses also function as educators by providing health education to patients and their families (Nursalam, 2021). Diet education is defined as teaching the amount, type, and schedule of food intake programmed to achieve optimal health (SIKI, 2018). One type of diet education that nurses can provide to patients and families is education on salt and fluid restriction, in order to reduce the amount of fluid and salt intake in the body. According to a study conducted by Yuliana (2021) entitled The Relationship between Medication Adherence and Low-Salt Diet on Readmission Rates in Heart Failure Patients at Depok City Hospital, the results showed that there was a relationship between medication adherence and low-salt diet on readmission rates in heart failure patients with a p-value of 0.000 in the first, second, and third years.

Preliminary studies conducted by researchers show that the number of patients treated at the Menggala regional public hospital in the last three months from June to August was 115 patients diagnosed with CHF. In interviews conducted with CHF patients undergoing treatment, it was found that CHF patients were not given education about what they could and could not eat during treatment, either in the hospital or at home. As a result, patients and their families found it difficult to control the patient's diet.

There are five stages in the nursing process for treating CHF patients, namely nursing assessment, determining nursing diagnoses, implementing nursing interventions, and implementation and evaluation. In the nursing assessment stage, patient 1, Mr. S, a 64-year-old male, was admitted on October 19, 2025, complaining of shortness of breath accompanied by chest heaviness, increased shortness of breath during activity, and weakness. Meanwhile, patient 2, Mrs. J, a 56-year-old female, was

admitted to the hospital on October 28, 2025, complaining of continuous shortness of breath, which worsened during activity, accompanied by headaches, weakness, and nausea. The complaints experienced by both patients align with the opinion expressed by Kasron (2021) that in diseases with CHF, the general impact is shortness of breath due to impaired cardiac contractility, which causes a lower cardiac output, leading to reduced blood flow throughout the body. This can result in effects such as dyspnea, orthopnea, exertional dyspnea, and paroxysmal nocturnal dyspnea (PND), ascites, and even cardiogenic shock and decreased oxygen saturation.

On physical examination and observation, patient 1 appeared short of breath, using accessory breathing muscles, RR: 26x/minute, enlarged jugular veins, edema in both legs, fluid intake greater than fluid output, cold extremities, CRT < 2 seconds. while in patient 2, the patient appeared short of breath, using accessory breathing muscles, RR: 25x/minute, enlarged jugular veins, edema in both legs, fluid intake greater than fluid output, cold extremities, CRT > 2 seconds, shortness of breath increased with activity.

Both patients had almost identical examination results. According to Aspiani's theory (2019), left heart failure causes dyspnea (shortness of breath), decreased saturation levels, and inadequate tissue perfusion, while right heart failure causes lower extremity edema, weight gain, jugular vein distension, and weakness.

The supporting examinations performed on both patients were laboratory tests, chest X-rays, and ECGs. According to Theory (Aspiani, 2020), supporting examinations that can be performed for congestive heart failure include laboratory tests, chest X-rays, ECGs, and echocardiography. In the case of the two patients, echocardiography was not performed because they had not yet received a schedule for the echocardiography..

According to researchers, the complaints obtained in the assessment were consistent with the clinical manifestations of patients diagnosed with congestive heart failure (CHF), and to support the examination results, further examinations such as echocardiography were required.

The second stage is nursing diagnosis. Nursing diagnosis is a clinical assessment of the patient's response to health problems (PPNI, 2017). According to SDKI, nursing diagnoses that may arise in patients with congestive heart failure (CHF) are: decreased cardiac output, b.d preload changes (D.0008), complaints in patient 1, shortness of breath, worsening shortness of breath during activity, feeling weak, edema in both legs, enlarged jugular veins, BP: 144/89 mmHg, pulse 98 bpm, respiration 26 bpm, cold extremities, while in patient 2, the patient reports shortness of breath and weakness, with shortness of breath felt continuously. Shortness of breath worsens with activity, edema in both legs, enlarged jugular veins, CRT > 2 seconds, cold skin, BP: 154/101 mmHg, pulse 99 bpm, respiration 25 bpm, SpO2: 98%.

According to SDKI (Indonesian Nursing Diagnosis Standards), diagnosis is based on major and minor data. In this case, the author believes that the data on patients 1 and 2 supports this diagnosis, namely in patient 1, major data (the patient complains of shortness of breath, weakness, edema in both legs, enlarged jugular veins) and minor data (cold extremities). For patient 2, the major data include (the patient complains of shortness of breath, weakness, edema in both legs, and enlarged jugular veins), and the minor data include (cold extremities, CRT > 2 seconds). This is consistent with the SDKI, which states that a diagnosis of decreased cardiac output

due to changes in preload is characterized by fatigue, decreased/increased blood pressure, and pale skin color.

According to researchers, the nursing diagnosis that has been established is appropriate, based on what has been found in the assessment, then grouped and analyzed, followed by the establishment of the nursing diagnosis.

In the third stage, nursing intervention based on the established nursing diagnosis, the author will discuss the planning that will be carried out for the patient.

Nursing interventions based on Indonesian nursing intervention standards (SIKI) for all established nursing diagnoses. For the diagnosis of Decreased Cardiac Output due to Changes in Preload, the following applies: The outcome criteria (cardiac output L.02008) are based on the Indonesian Nursing Outcome Standards (SLKI), namely decreased shortness of breath, decreased edema, decreased fatigue, improved blood pressure, with planning (Cardiac Care I.02075) Identification of primary signs/symptoms of decreased cardiac output, Monitor fluid intake and output, position the patient in a semi-Fowler/Fowler position, administer oxygen to maintain oxygen saturation >94%, provide an appropriate cardiac diet (e.g., limit sodium intake), monitor fluid balance, monitor complaints of chest pain, encourage gradual physical activity, collaborate on the administration of antiarrhythmics, if necessary.

According to researchers, nursing interventions were carried out according to patient needs, especially in cardiac care interventions. Interventions in this case included independent, therapeutic, educational, and collaborative interventions. Educational interventions in this study used booklets aimed at increasing the knowledge of both patients and their families.

The fourth stage is nursing implementation. Implementation is carried out after nursing interventions have been developed in accordance with standards. Nursing actions were carried out on both patients at different times. Patient 1 received nursing care from October 20, 2025, to October 22, 2025, and patient 2 received nursing care from October 29, 2025, to October 31, 2025.

Based on the interventions that have been made, the actions taken on the nursing problem of decreased cardiac output b.d. Preload changes, namely on patient 1 on October 20, 2025, actions were taken to identify the primary signs and symptoms of decreased cardiac output, measure the patient's vital signs, monitor the patient's fluid intake and output, administer oxygen at 3 lpm as needed, position the patient in a semi-Fowler position, encourage the patient to gradually increase activity, and educate the patient and family on how to measure the patient's intake and output. The objectives were to measure the patient's fluid balance, educate the patient and family about a low-salt diet, reduce daily salt intake, and only eat what was provided by the hospital during inpatient care. Collaborate with the doctor on administering therapy, namely omeprazole 1x40mg/IV, furosemide 3x40mg/IV, and aspilet 1x80mg/Po, as well as collaborating on administering a cardiac diet to the patient.

On day 2, an evaluation of the primary signs and symptoms of decreased cardiac output was performed, vital signs were measured, the patient's fluid intake and output were monitored, oxygen was administered at 3 lpm as needed, the patient was placed in a semi-Fowler position, and the patient was encouraged to gradually increase activity. Educating the patient and family about the cardiac diet using a booklet and Recommending consumption of food provided by the hospital, and collaborating with the doctor on the administration of therapy, namely omeperazole

1x40mg/IV, and Furosemide 3x40mg/IV aspilet 1x80mg/Po, as well as collaborating on the administration of a cardiac diet to the patient. On day 3, an evaluation of primary signs and symptoms of decreased cardiac output was performed, vital signs were measured, patient fluid intake and output were monitored, the patient was positioned in a semi-Fowler position, the patient was advised to gradually resume activities, and the patient and family were advised to only consume what was provided by the hospital, and collaborating with the doctor on the administration of therapy, namely omeprazole 1x40mg/IV, furosemide 3x20mg/IV, aspilet 1x80mg/Po, and collaborating on the administration of a cardiac diet to the patient.

Patient 2 underwent treatment on October 29, 2025. The treatment included identifying the primary signs and symptoms of decreased cardiac output, measuring the patient's vital signs, monitoring the patient's fluid intake and output, administering oxygen at 3 lpm as needed, positioning the patient in a semi-Fowler position, and encouraging the patient to gradually increase activity. educating the patient and family on how to measure the patient's intake and output in order to assess the patient's fluid balance. Educating the patient and family about a low-salt diet, reducing daily salt intake, and only eating what is provided by the hospital during inpatient care, and collaborating with the doctor on therapy, namely omeprazole 1x40mg/IV and furosemide 3x20mg/IV, as well as collaborating with a nutritionist on a cardiac diet.

On day 2, an evaluation was conducted on the primary signs and symptoms of decreased cardiac output, measuring the patient's vital signs, monitoring the patient's fluid intake and output, administering oxygen at 2 lpm as needed, beginning to reduce the need for supplemental oxygen, positioning the patient in a semi-Fowler position, and encouraging the patient to gradually increase activity. The patient and family were educated about the cardiac diet using a booklet and advised to consume food provided by the hospital. Therapy was administered in collaboration with the doctor, namely omeprazole 1x40mg/IV and furosemide 3x20mg/IV, as well as collaboration with a nutritionist for the cardiac diet. On day 3, an evaluation was conducted on the primary signs and symptoms of decreased cardiac output, measuring the patient's vital signs, monitoring the patient's fluid intake and output, positioning the patient in a semi-Fowler position, encouraging the patient to engage in gradual activities, recommending the consumption of food provided by the hospital, and collaborating with the doctor on the administration of therapy, namely omeprazole 1x40mg/IV, and furosemide 3x20mg/IV, as well as collaborating in the provision of a cardiac diet for the patient.

The implementation provided by the researcher to both patients was in accordance with the patients' needs and the previously established intervention. This is in line with the findings of Kasron (2021), that non-pharmacological management of CHF patients involves a sodium-restricted diet (<4g/day) to reduce edema in the body. This is consistent with the research conducted by Yuliana (2021), which found a relationship between medication adherence and a low-salt diet and the incidence of readmission in heart failure patients.

According to researchers, health education is conducted so that patients can independently perform health care while hospitalized or receiving care at home, and so that there is no recurrence caused by excess fluid in the body, which can cause shortness of breath.

The fifth stage is evaluation. Nursing evaluation is conducted after nursing interventions have been administered. The purpose of evaluation is to assess and monitor the quality of nursing care that has been provided to patients (Setiadi, 2020). In this study, evaluation was conducted at the end of each shift using the SOAP (Subjective, Objective, Assessment, Planning) method.

The evaluation results for patient 1 with a nursing diagnosis of decreased cardiac output due to changes in preload on day 3 showed changes, with the patient subjectively reporting that their weakness had decreased, their shortness of breath had decreased, and they had consumed 1 portion of the food provided. Objective data obtained included reduced shortness of breath, no need for supplemental oxygen, decreased edema in the legs, gradual activity, fluid balance of -700 ml/24 hours, The patient understood and could state the daily salt intake allowed, the patient only consumed the hospital diet, and finished 1 portion of the provided meal, BP: 140/82 mmHg, HR: 86 beats/minute, RR: 20 breaths/minute, T: 36.3°C, and SpO2: 99%. Assessment of decreased cardiac output, with plans to continue the intervention that has been made. Meanwhile, in patient 2, an evaluation on day 3 revealed subjective data that the patient reported reduced shortness of breath and reduced cough with phlegm. Objective data showed that the patient's shortness of breath had decreased, the patient was not using oxygen, edema had begun to decrease, fluid balance was -500ml/24 hours, the patient was not using oxygen, and was gradually increasing activity. The patient understood and could state the amount of salt allowed per day. The patient only ate the hospital diet and finished 1 portion of the provided meals. BP: 133/81 mmHg, HR: 78 beats/minute, RR: 20 breaths/minute, T: 36.4°C, SpO2: 99%. Assessment of decreased cardiac output, with the plan being to continue the interventions that have been made.

According to the researcher, the evaluation conducted in this case was in line with the objectives set by the researcher, and patients were able to follow what had been taught to them. This was possible due to the increased knowledge of both patients and their families regarding the care of patients with CHF.

Conclusion

The results of the assessment obtained from two similar cases, namely patient 1 on October 20, 2025, and patient 2 on October 29, 2025, showed that the main complaints felt by both patients were shortness of breath, weakness, increased shortness of breath when active, and edema in both legs.

The primary nursing diagnosis obtained for Patient 1 and Patient 2, with the medical diagnosis of Congestive Heart Failure (CHF), was the same: decreased cardiac output due to changes in preload.

The nursing interventions applied, either independently or collaboratively, in this final scientific work were cardiac care nursing interventions. The implementation involved identifying primary signs and symptoms of decreased cardiac output, monitoring vital signs, monitoring fluid balance, providing health education on a low-salt diet using booklets, and collaborating on therapy administration.

The evaluation results were compiled by researchers for patient 1 and patient 2 during their 3-day hospital stay in SOAP format. The final evaluation results of the treatment undergone by both patients showed that they understood the daily salt restrictions that they were allowed to consume and were able to follow the diet as instructed.

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